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Progressive Multifocal Leukoencephalopathy As A Stroke Mimic

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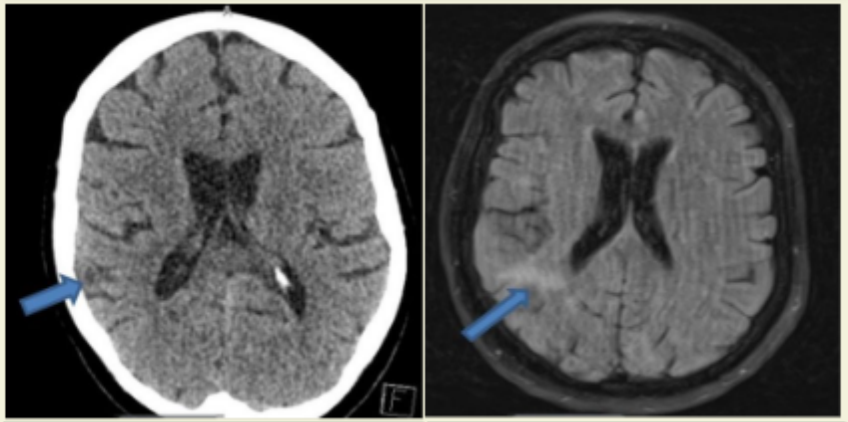
Introduction /

- **Progressive multifocal leukoencephalopathy** (PML) is a rare demyelinating disorder of the central nervous system caused by reactivation of **John Cunningham (JC) virus** in immunocompromised patients.
- It most commonly occurs in advanced HIV infection and carries a high mortality despite treatment.

Case Description

- A 56-year-old previously healthy woman presented with a two-week history of progressive left-sided weakness and numbness, initially in the lower leg then involving the entire left side, resulting in wheelchair dependence. Examination showed left visual inattention, hemiparesis (power 2/5), and a positive Babinski sign on the left, with preserved reflexes and no cranial nerve or speech deficits.
- CT head suggested a hypodense area in right posterior temporal region. She was treated as subacute ischaemic stroke initially but the symptoms became progressive.
- Repeat contrast MRI showed diffuse white-matter changes in temporal area concerning for an infiltrative process.
- HIV testing was positive, and CSF PCR confirmed JC virus, establishing a diagnosis of **progressive multifocal leukoencephalopathy (PML).** Despite antiretroviral therapy, the patient deteriorated and sadly passed away 4 months after the symptom onset.

Investigations



CT Head - patchy hypodense area in right posterior temporal region and parietal gyrus

MRI head - increasing diffusion restriction at white matter around the right parietal gyrus

Discussion

- Discordance between clinical findings and radiology prompted multidisciplinary discussion.
- Discovery of HIV dramatically shifted diagnostic direction from stroke to opportunistic infection.
- PML remains a devastating diagnosis even with early ART initiation.
- Highlights the need for early HIV testing in unexplained neurological presentations.

Lumbar puncture

Test	Result	Units	Reference range
Appearance	Clear color	N/A	N/A
WBC	0	cells/cumm	<5
Red cell	3	cells/cumm	0
Glucose	2.6	mmol/L	2.5-4.5
Protein	0.43	g/L	0.15-0.6
CSF culture	No organism	N/A	N/A
Mycobacterium	Not isolated	N/A	N/A
Enterovirus RNA	Not detected	N/A	N/A
VZ DNA	Not detected	N/A	N/A
BK virus RNA	Not detected	N/A	N/A
Parechovirus RNA	Not detected	N/A	N/A
JC virus DNA	DETECTED	N/A	N/A

References

1. Pathophysiology of progressive multifocal leukoencephalopathy. https://pmc.ncbi.nlm.nih.gov/articles/PMC3072716/

2. Progressive multifocal leukoencephalopathy in a HIV patient: A case report and literature]- https://pubmed.ncbi.nlm.nih.gov/37564607/

3. Berger JR, Aksamit AJ, Clifford DB, Davis L, Koralnik IJ, Sejvar JJ, Bartt R, Major EO, Nath A (2013) PML diagnostic criteria: consensus statement from AAN Neuroinfectious Disease Section. Neurology 80(15):1430– 14. https://www.neurology.org/doi/10.1212/WNL.0b013e31828c2fa14d.

Improving routine management and screening of patients with hereditary haemorrhagic telangiectasia (HHT) in Cornwall

Dr A Gilliat[1], Dr A Forbes[1]

1. *Royal Cornwall Hospitals NHS Trust*

Background

HHT is a rare inherited autosomal dominant condition resulting in abnormal blood vessels. Its clinical manifestations mainly include epistaxis and arteriovenous malformations (AVMs) of varying severities. Screening for AVMs, blood test monitoring and risk reduction advice are essential to prevent further complications and improve patient outcomes. However, co-ordinating a unified approach across multiple specialities in non-HHT specialist centres such as Cornwall creates an obstacle. The European Reference Network for Rare Vascular Diseases (VASCERN) expert group created outcome measures to address these difficulties for local teams to ensure high quality patient care.

VASCERN Primary Outcome Measures

1. At least **90%** of definitive HHT patients should have a screen for pulmonary AVMs
2. At least **90%** of definitive HHT patients should have received nosebleed advice in writing
3. At least **70%** of definitive HHT patients should have an assessment of iron deficiency anaemia (IDA) at each consultation
4. **100%** of patients with PAVMs should have written advice on antibiotics prior to dental and surgical procedures
5. **100%** of pregnant women with PAVMs identified by CT scan/imaging should be provided with advice on PAVM/HHT pregnancies

Aim: To compare our current practice in Cornwall with these outcome measures, identifying our gaps and co-ordinating a unified approach to improve care for our HHT patients.

Materials and methods

Inclusion criteria

1. HHT diagnosis based on clinical diagnosis +/- genetic testing
2. Cornwall resident
3. Under current routine follow up with haematology department

19 patients

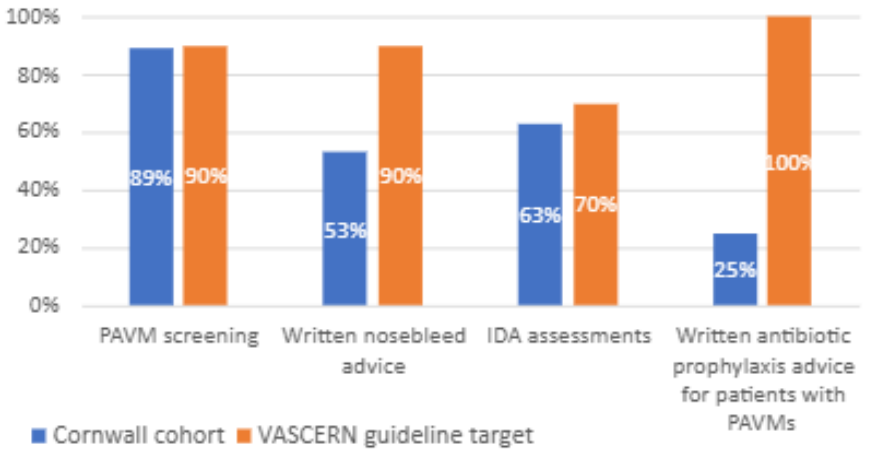
Source of data

Clinic letters (all specialities including ENT)
Imaging
Blood results

Results and discussion

Graph 1 summarises the comparison of Cornwall cohort percentages to the VASCERN outcome measure targets. There was no Cornwall cohort of pregnant patients. No targets were met although PAVM screening and IDA were closest. The largest gaps were nosebleed advice and written prophylactic antibiotic advice. Imaging and blood test data being easily located on clinical systems likely influence their higher percentages. Identifying provision of written advice is challenging if not documented in clinic letters. 8/10 patients provided with documented nosebleed advice came from ENT clinics, highlighting multiple specialty involvement. Lack of written prophylactic antibiotic advice likely reflected unclear responsibility, given PAVM treatment is not provided locally.

Graph 1 comparing Cornwall cohort percentages to VASCERN guideline target for outcome measures for HHT



Conclusion

To address these gaps and barriers, we have produced a patient information leaflet working with the haematology, ENT and microbiology departments. Our aim is to unify essential information for patients with HHT across multiple specialties with the future goal to complete a second audit cycle to assess the improvement for patients in Cornwall.

References

1. Shovlin C. Hereditary haemorrhagic telangiectasia (HHT): Routine care including screening for asymptomatic AVMs. UpToDate, Connor RF (Ed), Wolters Kluwer 2024 [accessed 29/8/25]
2. Shovlin C, Buscarini E, Sabba C, Mager H, Kjeldsen A, et al. The European Rare Disease Network for HHT Frameworks for management of hereditary haemorrhagic telangiectasia in general and speciality care. European Journal of Medical Genetics. 2022; 65: 104370
3. Shovlin C, Buscarini E, Kjeldsen A, Mager H, Sabba C et al. European Reference Network For Rare Vascular Diseases (VASCERN) Outcome Measures For Hereditary Haemorrhagic Telangiectasia (HHT). OrphanetJournal of Rare Diseases.2019; 13: 136

ReSPECT Forms on Discharge as a Representation of DNACPR/TEP Decisions During Admission

A Retrospective Audit from a UK District General Hospital

Elhawary A, Chima O, Majeed M, Razik A, Vangani B, McCallum D, Khoso E, Fatima M, Almzaini O, Arefin S, Hossain M, Chohan B

Introduction

The Recommended Summary Plan for Emergency Care and Treatment (**ReSPECT**) process records both clinical recommendations and patient preferences to guide emergency decision-making across care settings[1,2].

During hospital admissions, DNACPR and treatment escalation plans (TEPs) are frequently completed. However, their translation into ReSPECT forms at discharge is poorly studied.

Inadequate documentation risks[3]:

- Fragmented care
- Inappropriate treatment plans
- Unnecessary readmissions
- Reduced patient autonomy

Aim: To assess how often inpatient DNACPR/TEP decisions are documented in ReSPECT forms on discharge and evaluate the completeness of these records.

Methodology

Design: Retrospective audit of discharges in April 2025.
Setting: UK District General Hospital.
Population: 1,137 adult inpatients discharged after ≥1 day (obstetrics/midwifery excluded).

Data collected:

- DNACPR/TEP status prior to admission
- DNACPR/TEP decisions made during admission
- Presence of a ReSPECT form at discharge
- Completeness of ReSPECT documentation (all sections)

Analysis: Identification of missed opportunities where DNACPR/TEP decisions were not translated into ReSPECT on discharge.

Results

Figure 1. Patient flow from discharge to ReSPECT form completion, highlighting missed opportunities.

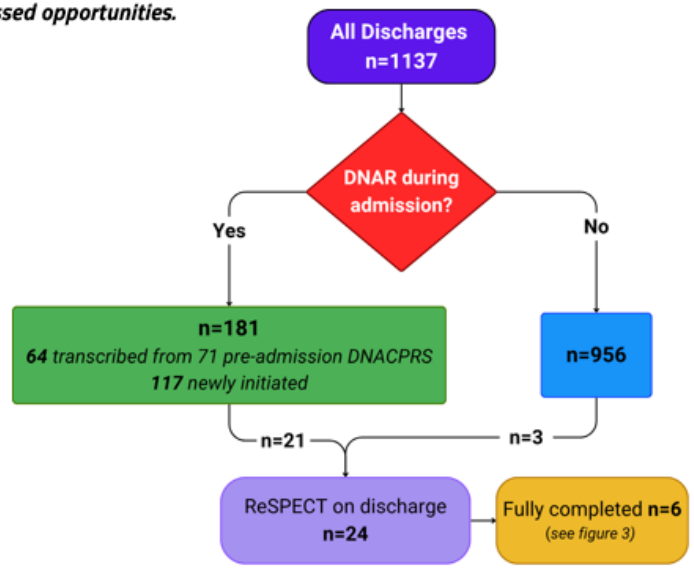


Figure 2: Proportion of ReSPECT forms on discharge and missed opportunities.

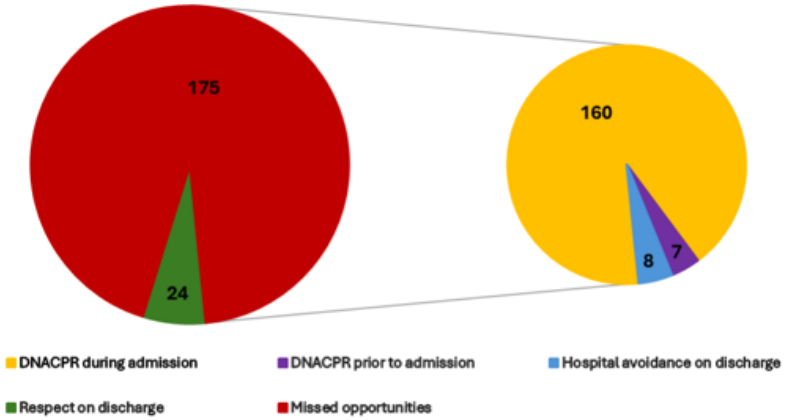
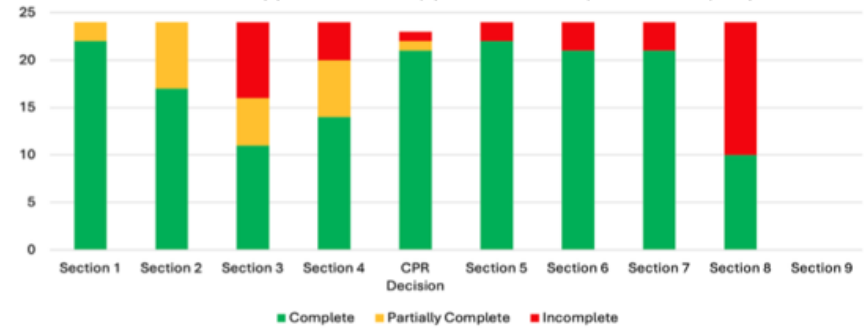


Figure 3: Completeness of ReSPECT form sections at discharge (n=24).

Note: Section 9 was not applicable for any patients as they were newly implemented.



Conclusion

There is a substantial gap between in-hospital DNACPR/TEP decisions and their documentation in ReSPECT forms at discharge. We estimate 175 missed opportunities for ReSPECT documentation. Having found 24 patients discharged with a ReSPECT form from a potential 199 in-hospital DNACPR/TEPs, and 75% of these being incomplete, there is considerable scope for improvement

Ensuring ReSPECT completion at discharge would help to:

- ✓ Improve continuity of care[1,2]
- ✓ Support personalised decision-making[4]
- ✓ Align practice with national end-of-life priorities[4,5]

Discussion

Clinicians appeared to prioritise treatment recommendations while often neglecting patient values, with Section 8 ("Wishes and Fears") being frequently omitted. Variability in DNACPR practices suggest challenges in clinician confidence, time constraints and documentation processes[6,7].

Suggested recommendations:

- ❖ Research into barriers to ReSPECT completion
- ❖ Staff education and training
- ❖ Electronic prompts within discharge systems
- ❖ Multidisciplinary review at discharge planning

References

1. Hawkes C, et al. Development of the Recommended Summary Plan for Emergency Care and Treatment (ReSPECT). Resuscitation. 2020;148:98–107.
2. Perkins GD, et al. Evaluation of the Recommended Summary Plan for Emergency Care and Treatment. National Institute for Health and Care Research; 2022.
3. Do-not-attempt-cardiopulmonary-resuscitation decisions: an evidence synthesis. Health Serv Deliv Res. No. 4.11. [Institutional synthesis].
4. Resuscitation Council UK. Policy Briefing: ReSPECT (Recommended Summary Plan for Emergency Care and Treatment). March 2023.
5. Freeman K, Field RA, Perkins GD. Variation in local trust Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) policies: a review of 48 English healthcare trusts. BMJ Open. 2015;5(1):e006517.

Closing the Loop: An Audit Enhancing Use of a Digital AKI Bundle

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Royal College of Physicians

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BACKGROUND

- Initial data revealed a concerning deficit in the use of a digital Acute Kidney Injury (AKI) bundle on the Acute Medicine Unit (AMU), risking inconsistent patient care.
- The bundle prompts clinicians to follow evidence-based guidelines for AKI management, ensures timely and accurate coding and automatically includes the diagnosis in discharge summaries, to align with NICE quality standards[1].

AIM

To increase completion of AKI bundles on AMU to >80% within two months

METHODS

1. Identified barriers to using the bundle and possible interventions with a driver diagram(Fig 1)
2. Design of a closed loop audit to assess the impact of the intervention using a PDSA tracker[2]
3. Data on AKI bundle use collected using a live run chart(Fig 2)
4. Delivered a teaching session to emphasise the importance of AKI management, correct use of the bundle, and its role in improving patient care

Fig 1: Driver diagram

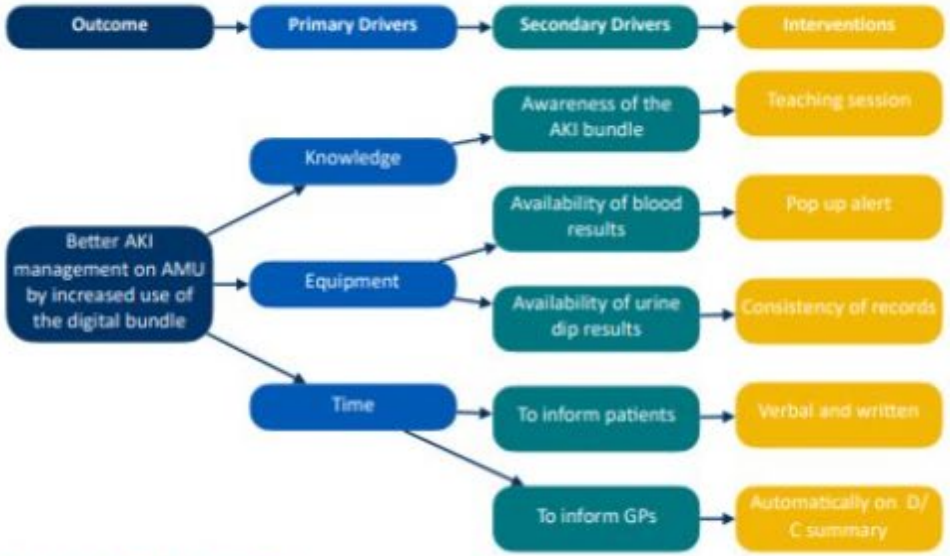
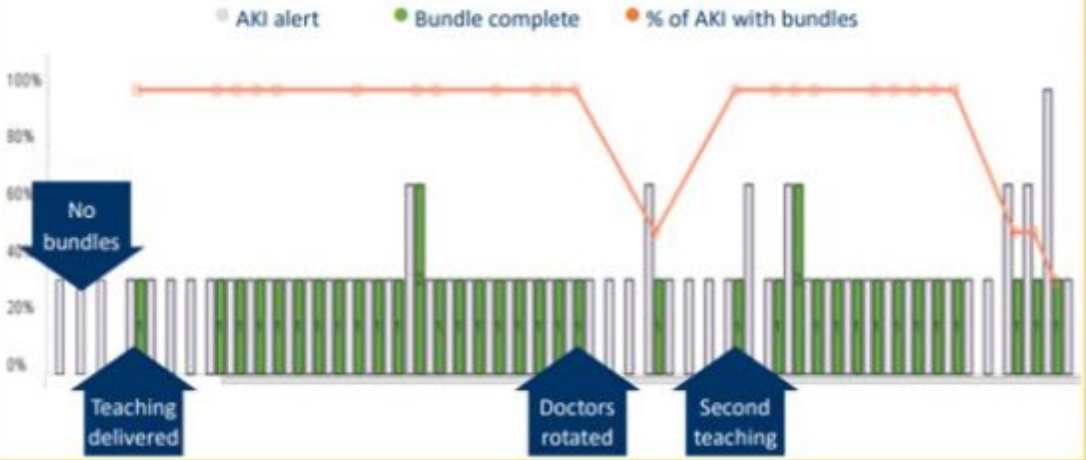


Fig 2: Live run chart of results



RESULTS

Bundle completion rates hit 100% following the teaching session

DISCUSSION

- The teaching sessions were easy to deliver and well received. A rapid, substantial improvement was made by this simple intervention, ensuring all AKI's were managed in alignment with best-practice.
- For the two month period that the bundles were used, all patient's with an AKI had the diagnosis recorded and patients and their GP's were informed via their discharge summary.
- The improvement was not sustained when resident doctors rotated, a second cycle was carried out with the new cohort, and compliance was restored to 100% once again.

CONCLUSION

- The audit achieved its aim: delivering a teaching session increased completion of the AKI bundle to 100%.
- The need for repeated teaching sessions shows that a more sustainable approach was needed to improve patient care in the long term.

NEXT STEPS...

- Appoint non-rotating "AKI champions" within AMU
- Incorporate AKI teaching into induction sessions
- Expand the audit to other wards
- Develop an on-screen pop reminder

REFERENCES

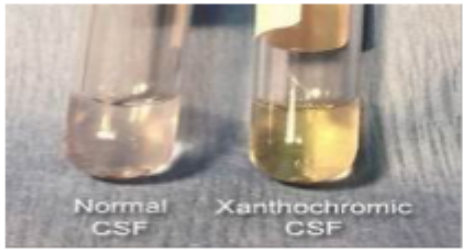
1. Acute Kidney Injury Quality Standard: 2023 https://www.nice.org.uk/guidance/qs76 [Accessed 31 August 2025]
2. Institute for Healthcare Improvement (2024). *Plan-Do-Study-Act (PDSA) Worksheet | Institute for Healthcare Improvement*. [online] www.ihi.org. Available at: https://www.ihi.org/resources/tools/ plan-do-study-act-pdsa-worksheet.

Optimizing The Use of CSF Xanthochromia : A QIP of clinical indications

A Shahata, A Keshta, M Ali, S Puravady, M Nasher

Background

- Xanthochromia is a yellow discoloration of cerebrospinal fluid (CSF).
- It results from RBCs breakdown and bilirubin release

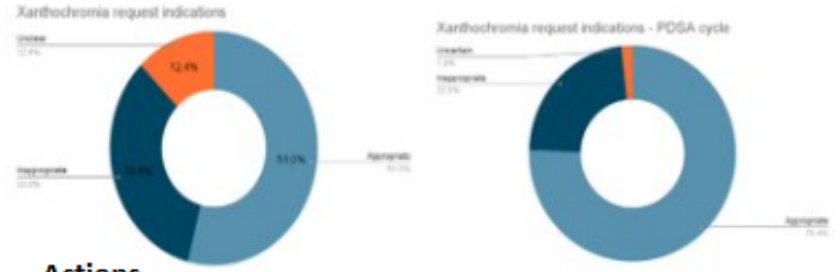


- It's indicated in case of clinical suspicion of Sub Arachnoid Hemorrhage with negative non contrast CT head ,and after 12 hours of headache onset(1).
- Previous data from the Lab team showed significant number of unjustified requests .

Methodology

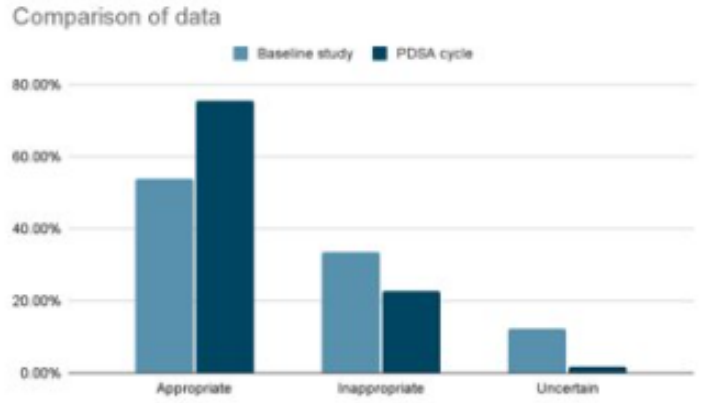
- **Data Collection:** Retrospective analysis for base line data and prospective analysis for PDSA cycle data.
- **Study duration:** Baseline audit: 1st June 2024 – 31st Dec 2024, N = 137 and PDSA cycle: Jan 2025 –March 2025, N = 57.
- **Inclusion Criteria:** All CSF requests that included xanthochromia.
- **Data sources:** Electronic patient records , Laboratory database and Clinical notes.
- **Analysis:** Percentage of appropriate vs. inappropriate requests.

Results



Actions

- Sessions through AMU, Foundation and IMT teaching days.
- Raising awareness of inappropriate xanthochromia requests using results from our baseline study.
- Teaching was incorporated into sessions on how to perform LPs.



Conclusion

- Inappropriate xanthochromia testing leads to significant clinical, logistical, and patient-related harms.
- Reducing number of inappropriate testing result in reduction of :
  1. False positive tests in traumatic LP.
  2. Lab stuff workload (1 hour per test).
  3. Unnecessary expenses (35 pounds per test).

Future

- We aim to continue educating clinical teams through teaching days.
- Potential second intervention: Stocking separate LP packs labelled according to indications and contains flow chart to decide needed samples.

References :

1) https://www.nice.org.uk/guidance/ng228/chapter/Recommendations#assessment-and-diagnosis (1.1.13)

Severe Pectus Excavatum–Induced Ventricular Arrhythmia & Cardiac Arrest in a Teenager

Authors: Abdalla Reda Mahmoud, Urshila Ramah, Mohamed Ahmed, Periklis Perikleous, Ian Hunt

Introduction:

Pectus excavatum is the most common congenital chest wall deformity, characterized by an inward depression of the sternum [1]. It affects approximately 1 in 400 live births, with a male predominance [2]. While many patients are asymptomatic or present with cosmetic concerns, severe cases may lead to cardiopulmonary compromise, including arrhythmias, right heart compression and exercise intolerance [3]. Rarely, PE may precipitate malignant arrhythmias and cardiac arrest. **We present the case of a teenager who developed ventricular fibrillation (VF) cardiac arrest secondary to severe PE.**

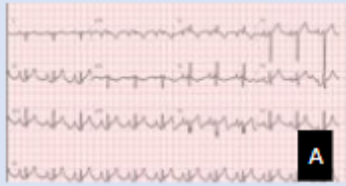
Case presentation & Discussion

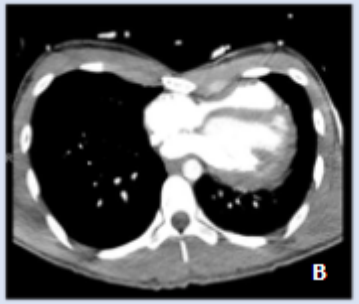
A 17-year-old male collapsed at a construction site with VF arrest. He achieved return of spontaneous circulation after 14 minutes of Advanced Life Support. On admission, he was intubated for low Glasgow Coma Scale. Examination revealed severe PE. The collateral history from his parents revealed that he had been complaining of palpitations for the past 2 weeks and worsening tiredness on physical exertion for the past few months, but he never had any previous episodes of syncope.

Investigations demonstrated elevated troponin (16,000 ng/L), right bundle branch block with right axis deviation on ECG and CTPA findings of pericardial agenesis, right ventricular dilatation, prominent pulmonary artery, and severe PE (Haller index 3.9) (Figure 1). Echocardiography revealed impaired left ventricular systolic function (ejection fraction 45–50%) with extracardiac compression of the right atrium and ventricle (Figure 1C). Cardiac MRI excluded arrhythmogenic right ventricular cardiomyopathy, and Holter monitoring showed ventricular ectopics only.

The patient underwent minimally invasive repair of PE (Nuss procedure) with pericardial patch, relieving cardiac compression. Intraoperatively, a deep asymmetric deformity with left-sided pericardium was confirmed. Due to his VF arrest, a prophylactic single-lead implantable cardioverter defibrillator (ICD) was inserted. Post-operative imaging confirmed satisfactory device and bar position (Figure 2). He recovered well and was discharged home within days.

This case demonstrates the life-threatening potential of severe PE. Mechanical compression of the right heart chambers likely precipitated arrhythmia and cardiac arrest. Surgical correction, combined with ICD implantation, was both therapeutic and preventive. Multidisciplinary evaluation was essential in decision-making.





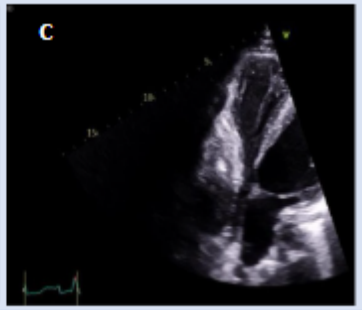
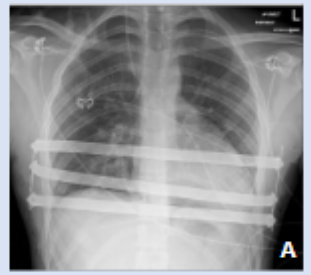
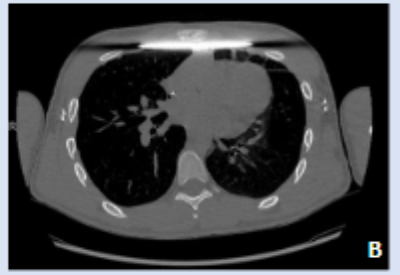


***Figure 1**: Investigations admission. A : ECG with paramedics. B: Cross-sectional image of CT chest on admission C: Apical four chamber view on cardiac echo showing RV compression.*

***Figure 2**: Post operative images. A: Chest Xray done after the Nuss procedure. B: CT scan chest showing Nuss fixation in situ.*





Conclusion

Severe pectus excavatum can extend beyond cosmetic implications to cause malignant arrhythmias and cardiac arrest. Early recognition of symptoms, thorough diagnostic evaluation, and timely multidisciplinary intervention are critical. Definitive surgical correction and arrhythmia protection strategies can be lifesaving in young patients with severe PE.

*References: **[1]** Langan PR, Pectus excavatum, Radiology Case Reports, Vol 6, Issue 1, 2011; **[2]** Diseases of the chest wall. UpToDateONLINE 18.1[Updated 2009 Dec 21]; **[3]** Moossdorff M, Maesen B, et al. (2021). Case report: ventricular fibrillation and cardiac arrest provoked by forward bending in adolescent with severe pectus excavatum. European Heart Journal*

NHS
St George's University Hospitals
NHS Foundation Trust

EVERY HOUR COUNTS: A TWO CYCLE AUDIT ON MRI COMPLETION WITHIN 24 HOURS FOR SUSPECTED MALIGNANT SPINAL CORD COMPRESSION(MSCC)

INTRODUCTION

MSCC is a medical emergency needing MRI within 24 hours ; this audit addressed MRI timeliness and effects of improvement

A two-cycle audit of 74 suspected MSCC cases assessed MRI completion within 24 hours before and after trust-wide educational interventions

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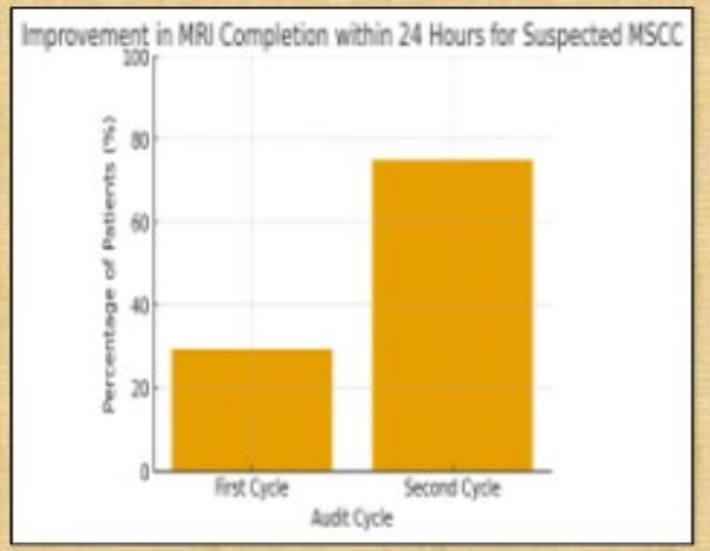
RESULTS AND DISCUSSIONS

MRI compliance within 24 hours from 29.4% to 75% after educational interventions , highlighting the effectiveness of simple awareness measures timely MSCC management



CONCLUSION

Focused education improved MRI compliance to 75%, emphasizing the need for continued training and rapid access

PRESENTED BY - Dr MARIYA MANZOOR

CO AUTHORS - ABIR AIJAZ, MANZROOR WANI, ABDUL BHAT , AMIT BADSHAH

BLEEP RESPONSE TIME AUDIT - AN INSIGHT INTO TRADITIONAL SYSTEM FOR CALLING DOCTORS

NHS
University Hospitals Bristol and Weston
NHS Foundation Trust

The Legacy:

For over 50 years, the bleep (pager) system has been the backbone of urgent communication in NHS hospitals.

The Reality:

- Reliable, but outdated and costly (£6.6 million annually)
- Dependent on a single supplier – limited competition
- Average response time: **35 seconds**
- Issues with response consistency and communication etiquette
- No secure data transfer or group messaging

The Future:

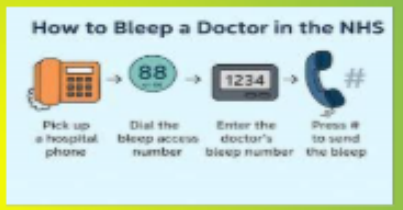
With secure digital apps now available, the NHS must modernise communication-balancing data security, infrastructure needs, and financial sustainability to deliver safer, smarter, and faster care

🚀 The Future Ahead:

- Move toward secure digital messaging platforms.
- Enable group chats, message tracking, and data security.
- Ensure training, governance, and strong infrastructure for rollout.
- Adopt a phased transition - pilot, evaluate, expand.
- Goal: a modern, efficient, and safer NHS communication system

🌐 Vision:

Smarter Connections. Faster Responses. Safer Care



📡 Signal Lost, Safety Found!

- Our audit uncovered "bleep blackout zones" within the hospital—areas like the doctors' mess and certain corridors where signals dropped out. These communication blind spots posed a potential risk to patient safety.
- We immediately alerted the IT team to address the issue and provided doctors with additional pagers as a temporary fix.
- Though short-term, this quick action kept communication flowing and safeguarded patient care while long-term solutions are developed.

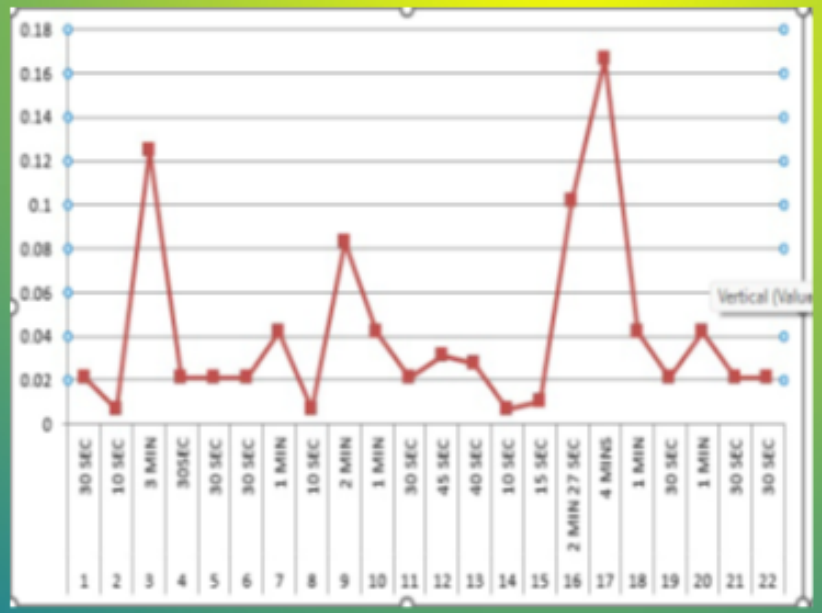
We audited **bleep response times and etiquette** in an acute care setting.

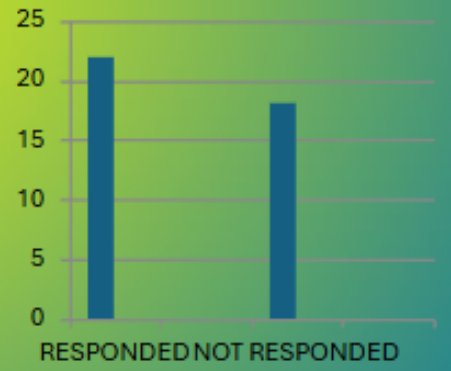
👉 **40 doctors** from different specialties were contacted during one working day.

✅ All were confirmed on duty and present in the hospital.

⏱️ **Average response time:** 35 seconds but with big variations!

💬 **Professional etiquette** was hit and miss , many didn't identify their **name, grade, or department** when replying.





Takeaway

While bleeps connect us quickly, communication standards and consistency still need a serious upgrade

PRESENTED BY Dr Abir Aijaz
CO AUTHORS – Dr Abdul Bhat, Dr Amit Badshah

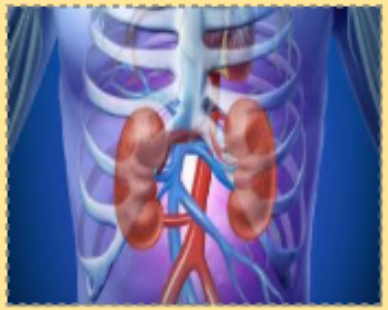
Improving Compliance with Trust Guidelines for Management of Acute Kidney Injury in Hospitalized Patients

Introduction

AKI is a major cause of inpatient morbidity and mortality, affecting up to 1 in 5 emergency admissions with renal dysfunction.

NHS guidelines exist to standardize AKI recognition and management, but real-world adherence remains inconsistent.

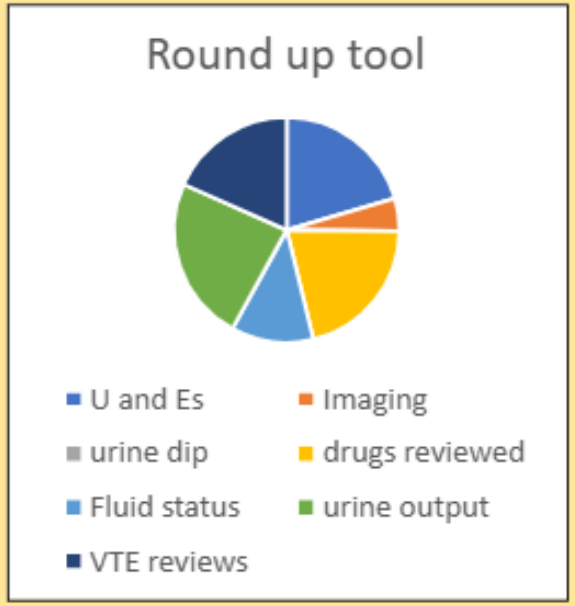
This QI project at Weston General Hospital assessed compliance with local AKI guidelines and evaluated the "Round Up Tool" checklist for improving systematic care.



Material/Methods/Audit process

40 AKI cases reviewed via CareFlow to assess documentation and compliance with trust standards.

"Round Up Tool" checklist introduced during ward rounds to support teams and align care with the AKI bundle.



Results

- Fluid status documented in only 50% – key gap in optimizing renal perfusion.
- Obstructive causes considered in 17% – risk of missed reversible AKI.
- Medication review omitted in 20% – potential nephrotoxic exposure.
- "Round Up Tool" used in only 10% – low uptake despite availability.

CONCLUSION

Inconsistent adherence to AKI protocols despite some good practices.

Low "Round Up Tool" use indicates workflow and cultural barriers.

Next steps: staff education, checklist integration, EPR prompts, and re-audit.

Goal: standardized care to improve outcomes and align with national standards.

PRESENTED BY – Dr Hadiya Chisti

CO AUTHORS – Dr Abir Aijaz , Dr Abdul Bhat , Dr Amit Badshah, Azhar Hafiz Baba

From Oversight to Optimization: A Two-Cycle Audit on Iron Screening in Heart Failure With Reduced Ejection Fraction [HFrEF]Patients

NHS University Hospitals Bristol and Weston NHS Foundation Trust

Background

Heart Failure (HF) → major global health burden.

Recurrent hospitalisations ↑ morbidity, mortality, and healthcare costs.

Iron deficiency (±anaemia) common affects ~50% of HF patients.

Audit Aim

Assess compliance with trust & national HF guidelines.

Implement interventions to enhance adherence and patient outcomes.

MATERIAL METHODS

Patient Selection

Inclusion: HF admissions referred to cardiology

Exclusion: HFpEF (**EF >50%**)

Identification: Echo confirmed **HFrEF (EF <50%)**

Targeted Interventions

- Clinician education sessions
- Trust-wide guideline reminders
- Educational pamphlets on IV iron use

Study Design & Timeline

Type: Retrospective review

Cycle 1: Sept 2023 – Feb 2024

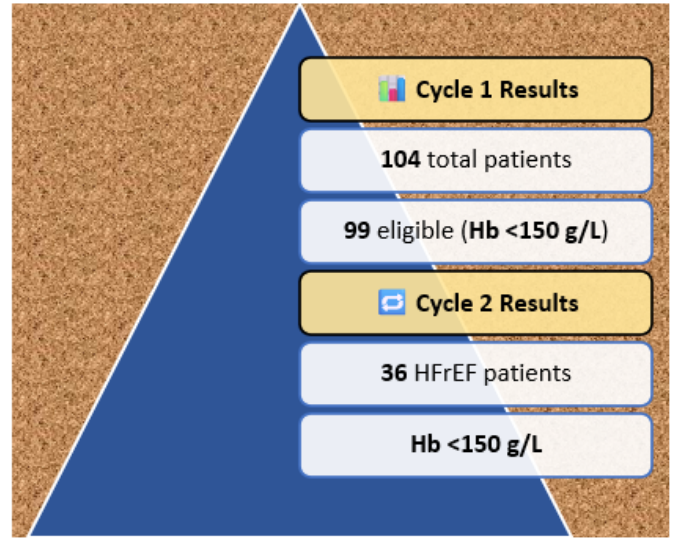
Cycle 2: Apr – Jun 2024

Results

Cycle 1: 35% compliance (35/99 patients tested)

Anaemic patients: 41% tested; 60% had iron deficiency

Cycle 2: 89% compliance (32/36 patients tested)



Conclusion & Learning

- **Targeted education** markedly improved iron screening in HF.
- **Routine iron assessment** should be standard in HFrEF care.
- **Ongoing audits** sustain compliance and optimise patient outcomes.

Data Collected

- Haemoglobin (Hb)
- Iron studies
- Iron deficiency status

PRESENTED BY : Dr Abir Aijaz

CO AUTHORS – Dr Abdul Bhat, Dr Amit Badshah, Dr Suhib Abushihab, Dr Fahad Mir

The Sepsis Impostor: Myocardial Failure Triggering Multiorgan Ischemia

NHS University Hospitals Bristol and Weston NHS Foundation Trust

Author: Dr. Akbar Khan

Affiliations: University Hospitals Bristol and Weston NHS Foundation Trust (UHBW)

Dr. Abir Aijaz, Dr. Akbar Khan, Dr. Bhavna Murugesh, Dr. Abdul Bhat, Dr. Amit Badshah, Dr. Muhammad Badar Khalid

INTRODUCTION

St-elevation with new-onset left bundle branch block (LBBB) typically triggers an urgent STEMI pathway. However, not all cases reflect coronary occlusion. We describe a rare presentation where acute cardiac dysfunction, masquerading as sepsis, drove systemic ischaemia across multiple organs. This case highlights the diagnostic challenge of distinguishing true STEMI from myocarditis and stress cardiomyopathy, and the downstream impact of hypoperfusion on liver and kidney function.

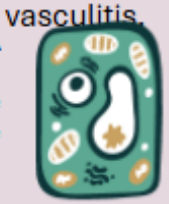
UNIQUE NATURE

This case is notable for three reasons:

1.STEMI mimicry: Despite classic ECG changes, the absence of chest pain, modest troponin rise, and global hypokinesia pointed away from ACS.

2.Sepsis-like profile: The patient presented with encephalopathy, multiorgan dysfunction, and raised lactate ,features easily misattributed to infection or vasculitis.

3.Autoimmune distraction: A positive p-ANCA nearly led to a misdiagnosis, illustrating the danger of anchoring on single abnormal results.



CASE PRESENTATION

64-year-old woman

Presenting Symptoms

Initial Observations

ECG Findings

Medical History
1. Seronegative rheumatoid arthritis
2. Hypothyroidism
3. Migraine

- Acute occipital headach
- Vomiting Confusion
- No chest pain

- Hypotension: 95/50 mmHg
- Preserved oxygen saturation
- Mild tachypnoea

- New Left Bundle Branch Block (LBBB)
- Anterior ST elevation (V2–V4)

LABORATORY INVESTIGATIONS

Hepatic Injury (Ischaemic Hepatitis)	Renal Injury	Cardiac Markers(Troponin)	Metabolic (Lactate)	Immunology (p-ANCA)	Cardiac Imaging (Echocardiography)	Other Investigations
ALT >1079 U/L, AST >1800 U/L	Creatinine 136 µmol/L (acute kidney injury)	Peak 53 ng/L (modest elevation)	4.5 mmol/L	Positive	Ejection Fraction 32%, Global LV hypokinesia, **No regional wall motion abnormality**	Neuroimaging: Unremarkable, CSF studies: Unremarkable

After multidisciplinary review, this was reinterpreted not as acute coronary syndrome or systemic vasculitis, but as acute cardiac dysfunction likely myocarditis or stress cardiomyopathy driving multiorgan hypoperfusion. Supportive therapy was provided, methotrexate/ withheld, and immunosuppression avoided. The patient improved without PCI or steroids.

LEARNING POINTS

1.Cardiac Failure as Sepsis MimicAcute cardiac failure can masquerade as sepsis when hypoperfusion drives liver, kidney, and brain injury.

2. STEMI mimics such as myocarditis and Takotsubo cardiomyopathy must remain central in the differential when ST elevation occurs with normal coronaries.

3.Autoimmune Markers CautionAutoimmune markers may mislead; clinicopathological context is paramount.

4.Role of Early ImagingEarly echocardiography and multidisciplinary collaboration are critical in preventing unnecessary invasive interventions or immunosuppression.

CONCLUSION

This case represents a rare form of ischaemia-driven multiorgan insult mimicking sepsis, where acute left ventricular dysfunction created a systemic shock state. The lesson lies in recognising the heart not only as the source of symptoms but also as the failing pump precipitating distant organ injury. Careful interpretation of investigations and collaborative decision-making ensured correct diagnosis and recovery

REFERENCES

- Caforio ALP, et al. Current state of knowledge on aetiology, diagnosis, management, and therapy of myocarditis. *Eur Heart J.* 2013;34(33):2636–2648.
- Lyon AR, et al. Stress (Takotsubo) cardiomyopathy—\a novel pathophysiological hypothesis to explain catecholamine-induced acute myocardial stunning. *Nat Clin Pract Cardiovasc Med.* 2008;5(1):22–29.
- Nishimura RA, et al. ST elevation with normal coronaries: The dilemma of myocardial infarction mimics. *Circulation.* 2017;135(14):1231–1235.
- NICE CKS. Chest pain - acute. 2023.
- RCEM Guidelines. STEMI – Acute Management. 2023.

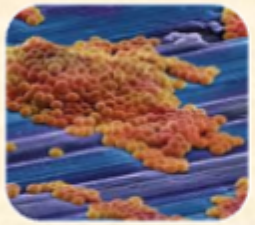
Microbiological Spectrum and Antimicrobial Resistance in Critically Ill Patients: A Six-Year Experience from a Tertiary Care Hospital ICU

INTRODUCTION

Hospital-acquired infections cause major illness and death in ICU patients with prolonged stays, ventilation, or catheter use.

These factors increase risk of bloodstream, urinary, and ventilator-associated infections.

The study analyses MDRO trends and microbial patterns in ICU patients over six years.



MATERIALS AND METHODS

Study Design: Retrospective analysis of 400 ICU patients (Jan 2017–Dec 2022).

Data Collected: Demographics and culture results from blood, urine, and endotracheal aspirates (>72 hrs after ICU admission).

Methods: Standard microbiological techniques used; results presented as frequencies and percentages.

INCLUSION CRITERIA

1. Patients ≥14 years of age.
2. ICU stay of at least 72 hours.
3. Availability of all three culture reports (blood, urine, endotracheal aspirate).

EXCLUSION CRITERIA

1. Patients with incomplete or missing records.
2. Patients discharged or deceased within 72 hours.
3. Patients with documented infections prior to ICU admission.

RESULTS

Patients: 400 total (52% male, mean age 47 years).

Positive cultures: 249 (62%).

Blood: 25% positive ,mainly *Staphyloc occus spp.*, including MRSA (3.5%).

- Blood: Gram-positive cocci dominate
- Urine: Yeast frequently isolated
- Respiratory: Gram-negative bacilli lead
- ⚠ Resistance Alert: MRSA & Acinetobacter prevalent
- Action: Strengthen surveillance, infection control & antibiotic stewardship

HIGHLIGHTS

Pathogen patterns varied by site, with Staphylococcus dominating blood infections and Acinetobacter baumannii prevalent in respiratory samples.

The persistence of MDROs and high urinary yeast rates underscore the need for stronger antibiotic stewardship and infection control.

COAUTHORS: Abir Aijaz, Mohd Mubarik Naqash, Irfan Ali, Burhan Shoaib

PRESENTED BY : Dr Judat Tasawoor

The diagnosis, management and outcome of bone and joint tuberculosis infections in UK adults

S. Al-Biatty, F. McGill, C. Hall

Royal College of Physicians

NHS The Leeds Teaching Hospitals NHS Trust

Introduction

- Extrapulmonary tuberculosis (TB) involving the musculoskeletal system – bone and joint TB (BJ TB) - occurs in around 5% of cases; the spine is the most common site.
- Uncertainty exists regarding the optimal duration of anti-tuberculous treatment for BJ TB. The World Health Organisation stipulates 6-12 months[1]; the American Thoracic Society 9-12 months[2]; national Indian guidelines 12-18 months[3]; and UK national guidelines six months provided there is no central nervous system involvement[4].

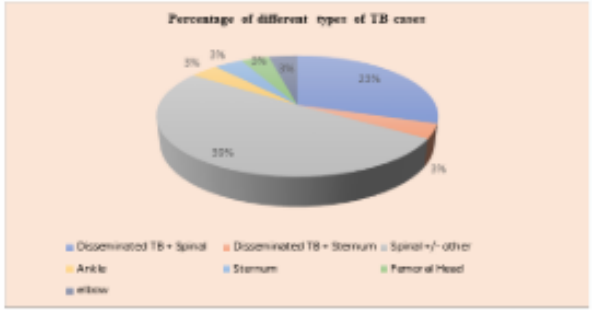
Methods

- Retrospective cohort study of all cases of BJ TB managed in the TB service in Leeds, UK between 2016 and 2023.
- Cases were identified from local TB case notification records.
- Data regarding patient demographics, care pathway, microbiological and radiological results, management and outcome were obtained from electronic health records.

Patient demographics

- 31 cases of BJ TB were identified.
- The mean age of our patient cohort was 38 years. 77.4% were male and 22.6% were female. 39% had recently arrived in the UK and the majority of patients were not born in the UK (Fig 1).

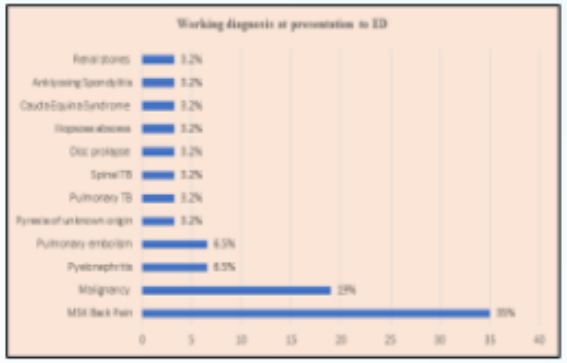
Fig 1: Type of bone & joint infections in our patient cohort



Pathway to Diagnosis

- Most patients presented to primary care in the first instance. The most common symptom elicited from the General Practitioner's (GP's) history was *'unresolving back pain'* (23%). The mean number of primary care consultations to referral to the TB service was 4.6 in the case of spinal TB and 3.5 in the case of other BJ TB sites.
- Many patients presented to the emergency department, with a variety of differential diagnoses ensuing (Fig 3). The most common of which was musculoskeletal back pain (35%) and malignancy (19%).
- The average time from the onset of symptoms to first imaging was 5.2 months for spinal TB and 6.8 months for other BJ TB sites.

Fig 2: Differential diagnoses in patients with spinal TB presenting to the emergency department



Clinical data

- 68% of cases were microbiologically proven; 83% of which were fully sensitive M. TB. There were two cases of MDR-TB and three cases of mono-resistant disease to rifampicin, isoniazid and pyrazinamide. Positive histology was found in 39% of cases.
- The most common type of BJ infection was spinal TB (39%)with the most common site being the thoracic spine (29%).There were seven other cases which involved the spine inthe setting of disseminated TB.
- 61% of cases presented with a collection/abscess. Psoas muscle involvement was present in 19% of cases while spinal cord compression was found in 16%.
- The standard duration of treatment in our cohort was 12 months; mean duration in the cohort was slightly longer due to the MDR-TB cases. A repeat MRI was asked for by the clinician in 68% of cases. 58% had orthopaedic/surgical intervention (other than a biopsy) with spinal fusion being the most common procedure at 12.9% (almost a quarter of cases of spinal TB required fusion).

Management outcomes

6 months into treatment

- 41% of patients had no symptoms; 33% had mild back pain/stiffness. 54% of patients had an element of restriction of movement. 11 patients were noted to use analgesia. The mean weight change from the start of treatment was +3.7kg in the case of spinal TB and +5.78kg in the case of other BJ TB infections.

12 months into treatment

- Twenty patients (65%) reached either clinical and/or radiological resolution at 12 months. One patient had ongoing pain, and another had poor response to treatment. There were no deaths in this cohort.

To date, no cases of relapse after completion of treatment had occurred in this cohort.

Conclusion

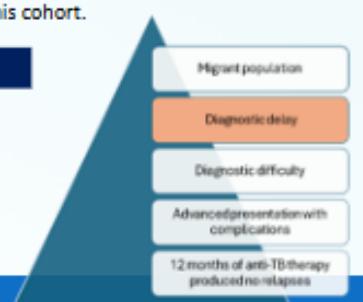


Figure 3. Main study findings

Diagnostic Delay

- There are clear challenges in our patient group. Many are migrants from countries endemic with TB. Patients would present multiple times to their health practitioner with delays in waiting for musculoskeletal referrals and physiotherapy services, for example, in the community.
- We divided delay into patient, diagnostic and treatment delays.
- How did our cohort fair as compared to UK national statistics where the median diagnostic delay in 2021 for Pulmonary TB was 76 days. The median diagnostic delay for our spinal TB group was 157 and our non-spinal TB 240 days .

Recommendations

- Further studies focused on the drivers of delayed diagnosis of BJ TB would be helpful with a view to reducing time to diagnosis. The bulk of the delay in our cohort occurs in primary care i.e. from onset of symptoms to suspicion of osteoarticular TB.
- The existing policy to treat BJ TB for 12 months in Leeds is based on previous data showing relapses with 6 months of treatment; however, given the conflicting international guidelines further studies are needed to understand the optimal duration of treatment. For example, whether treatment for nine months would have similar outcomes.

References:

1. World Health Organization. WHO operational handbook on tuberculosis. Module 4: drug-susceptible tuberculosis treatment. Accessed online at: 9789240050761-eng.pdf (who.int) 30/11/23

2. Infectious disease society of America. ATS/CDC/IDSA Guidelines for Treatment of Drug-Susceptible Tuberculosis (idsociety.org) 26/02/2024

3. Ministry of Health and Family Welfare, India. Training module on extrapulmonary tuberculosis 2023. Accessed online at Training Module on Extrapulmonary TB :: Ministry of Health and Family Welfare (tbcindia.gov.in) 30/11/23

4. National Institute for Health and Care Excellence. Guideline NG33: Tuberculosis. Published 13 January 2016. Accessed online at: Recommendations | Tuberculosis | Guidance | NICE 30/11/23

- This poster was shown at the BCCMID 2024 [illegible] conference

✨ An Atypical Presentation of Osimertinib-Induced Pneumonitis with Asymmetrical Radiographic Findings ✨

Ali Hassan[1] (Presenting Author), Ihsan Ullah[2], Nasir Majeed[3] [1]University Hospitals of Morecambe Bay NHS Foundation Trust [2]Manchester University NHS Foundation Trust [3]Blackpool Teaching Hospitals NHS Foundation Trust

Background:

- Osimertinib is a highly effective first-line treatment for advanced EGFR mutation-positive lung cancer.
- Drug-induced pneumonitis is a rare but potentially lethal complication of this treatment.
- We present a case of severe Osimertinib-induced pneumonitis with **an atypical, asymmetrical radiological pattern**.

Case Report:

Presentation:

•A 68-year-old male with EGFR-positive lung adenocarcinoma, post VATS left upper lobectomy, presented with two weeks of dyspnoea, dry cough, and loss of appetite.

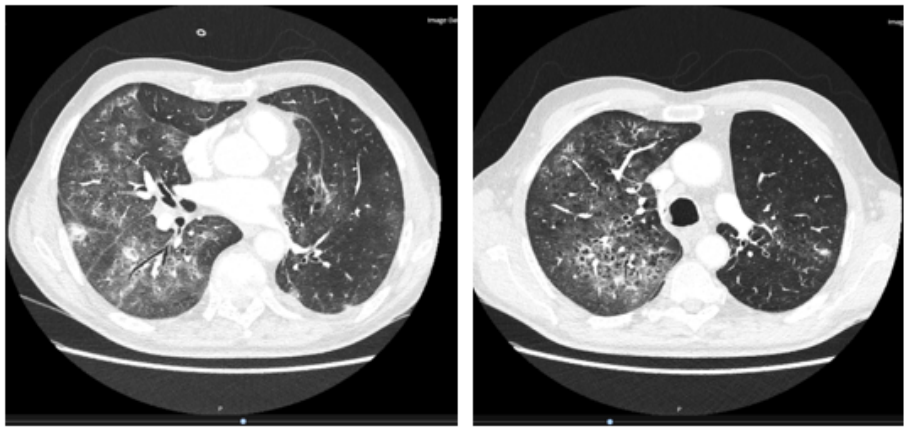
• He began adjuvant Osimertinib three months ago after postoperative histology identified an EGFR Exon 19 mutation.

On Examination:

Dyspnoeic and profoundly hypoxic
15 Litres NRM to maintain saturations.
Afebrile

Work Up:

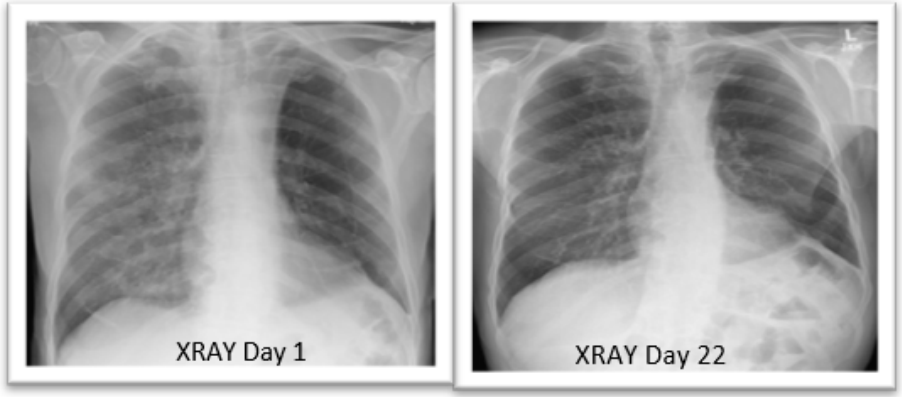
Procalcitonin: <0.03
Mild raised CRP: 20
B- Glucan: Negative
Serum PCP PCR: Negative
Atypical Pneumonia Screen: Negative



A CTPA excluded pulmonary embolism but identified new multifocal, patchy, peri-bronchovascular ground-glass consolidations. These consolidations were asymmetrical, predominantly involving the right lung, and were highly suggestive of drug-induced pneumonitis.

Treatment & Outcome:

The patient was admitted to the Intensive Care Unit and initiated on high-flow nasal oxygen therapy.
High-dose Methylprednisolone (2 mg/kg) was administered alongside prophylactic antibiotics.
Rapid Response: Significant improvement in oxygen requirements was observed within **two days**.
He received 3 days of Methylprednisolone and was started on tapering dose of prednisolone after that.
By Day 4, the patient was transitioned to a 2L nasal cannula and was subsequently discharged on Day 8 with complete symptom resolution.



Discussion and Conclusion:

- Maintain a **high index of suspicion** for DIP in any patient receiving Osimertinib who develops new or worsening respiratory symptoms, particularly when infection is not evident.
- **Early recognition** and the **timely administration of high-dose methylprednisolone** are essential to avoid fatal complications.
- Drug-induced pneumonitis generally exhibits a **symmetrical distribution**.
- This case emphasizes that **asymmetrical or unilateral presentations may also occur**, presenting a significant diagnostic challenge for healthcare providers.

Reference: Sato, Yuki et al. "Drug-Related Pneumonitis Induced by Osimertinib as First-Line Treatment for Epidermal Growth Factor Receptor Mutation-Positive Non-Small Cell Lung Cancer." CHEST, vol. 162, no. 5, pp. 1188-1198.

CNS Rickettsial Infection Beyond the Brain :

Case Series Highlighting Ocular and Renal Manifestations

Dr. Alisha Musthafa[1], Dr Rajiv Motiani | Maidstone and Turnbridge Wells NHS Trust, Maidstone, UK | NEO hospital, Noida, India.

Aim:

Highlight atypical ocular and renal manifestations and the value of early therapy.

Introduction:

- Rickettsial diseases are increasingly recognised across India, with presentations ranging from febrile illness to severe multi-organ dysfunction.
- Neurological complications, including meningoencephalitis, remain under-reported and may mimic other infectious or inflammatory conditions, delaying diagnosis and treatment.[1,2]
- Early initiation of doxycycline is critical to reducing morbidity and mortality.[3]

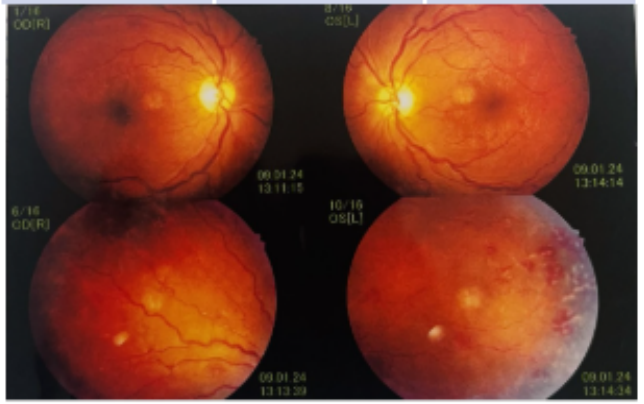
Case 1:

- A 12-year-old girl presented with fever, photophobia, headache, vomiting, and neck rigidity. Initial testing suggested typhoid fever. MRI brain was unremarkable, but cerebrospinal fluid (CSF) analysis revealed pleocytosis with elevated protein and low glucose. Multiplex PCR detected Rickettsia spp. Ophthalmological review showed bilateral retinal haemorrhages. Broad-spectrum antimicrobials were replaced with intravenous doxycycline, resulting in full recovery.

Case 2:

- A 38-year-old man presented with fever, altered sensorium, aphasia, anuria, and metabolic acidosis. Investigations demonstrated acute kidney injury with raised creatinine and blood urea. CSF analysis revealed lymphocytic pleocytosis with raised protein; PCR confirmed Rickettsia spp. He responded rapidly to intravenous doxycycline, with both neurological and renal parameters normalising within five days

Feature	Case 1: 12 y F	Case 2: 38 y M
Presentation	Fever, photophobia, headache, vomiting, neck rigidity	Fever, altered sensorium, aphasia, anuria, backache
Ocular	Bilateral retinal haemorrhages	Normal fundus
Renal	Normal	AKI (↑ creatinine & urea)
CSF	287 cells/mm³, ↑protein, ↓glucose, PCR +Rickettsia spp.	55 cells/mm³, ↑protein, normal glucose, PCR +Rickettsia spp.
MRI Brain	Normal	Normal
Treatment	Doxycycline IV	Doxycycline IV
Outcome	Full recovery	Full recovery



Discussion:

- These cases demonstrate the diverse neurological and systemic involvement of rickettsial disease.
- Vasculitic injury to cerebral endothelium underlies meningoencephalitis, with manifestations ranging from meningism and seizures to visual deficits.[3,5,6] Ocular involvement, such as retinal haemorrhages, is uncommon but documented in association with CNS infection.[7]
- Renal dysfunction, including acute kidney injury, has also been described in severe rickettsial disease and may complicate recovery if not promptly treated.
- The rarity of combined neurological, ocular, and renal complications highlights the importance of maintaining a high index of suspicion.
- PCR of CSF, while not widely available, is a valuable diagnostic adjunct alongside serological assays.[1,2]
- These cases also reinforce the necessity of empiric doxycycline therapy in suspected rickettsial infections, as delayed initiation is associated with poor outcomes.[4,6]

Conclusion:

- Rickettsial meningoencephalitis, though rare, should be considered in unexplained neuro-ophthalmologic or renal presentations in endemic areas. Our series illustrates the value of early doxycycline therapy and highlights the role of advanced diagnostics in confirming atypical cases.
- Increased awareness of these multi-system manifestations can facilitate earlier recognition and improve patient outcomes.

References:

1. Rathi N, Rathi A. Rickettsial infections: Indian perspective. Indian Pediatr 2010;47:157-64.
2. Rolain JM, Parola P, Cornet JP, Raoult D. Diagnosis of Mediterranean spotted fever by real-time PCR. Clin Infect Dis 2004;38:1428-34.
3. Woods ME, Olano JP. Host defences to *Rickettsia rickettsii* infection contribute to increased microvascular permeability in human cerebral endothelial cells. J Clin Immunol 2008;28:174-85.
4. Tikare NV, Shahapur PR, Bidari LH, Mantur BG. Rickettsial meningoencephalitis in a child: a case report. Trop Doct 2010;40:198-200.
5. Kulkarni R, Khadse S, Kipkar A, Valvi C, Mahajan R. Rickettsial fever with ARDS and meningo-encephalitis: a case report. Paediatr Infect Dis 2013;5:75-7.
6. Shaked Y. Rickettsial infection of the central nervous system: the role of prompt antimicrobial therapy. QJM 1991;79:301-8.
7. Jena SS, Satapathy S, Misra S, Sahu BK. Meningo-encephalitis due to spotted fever group Rickettsia: a rare case report with serial follow-up MRI. Neurol India 2022;70:412-4.

Less Is More: A Two-Cycle Audit on Compliance with NICE Guidelines for Once-Daily Oral Iron Therapy

Amir Hassan: IMT 2 Sheffield Teaching Hospital, **Gurjit Singh**: Consultant Gastroenterology Bassetlaw District General Hospital.

INTRODUCTION

- Iron Deficiency Anemia (IDA) is common in hospitalized patients.
- Traditionally treated with split doses (BD/TDS) of oral iron.

New evidence supports once-daily dosing:

Equal Efficacy | Fewer Side Effects | Better compliance

Mechanism:

Hepcidin inhibits iron absorption, levels rise after each iron dose → reduced fractional absorption with multiple daily doses.

AIM AND AUDIT STANDARD

- To assess compliance with NICE guidance on once-daily or iron prescribing.
- To implement interventions to improve prescribing practic

NICE Guideline: 65 mg elemental iron (Ferrous Sulfate 200 mg) once daily on an empty stomach.

METHODOLOGY

Design: Prospective two-cycle clinical audit

Cycles: Cycle 1: 3 months, Cycle 2: 2 months

Sample Size: 80 patients per cycle

Inclusion: Inpatients prescribed oral iron

Data Source: Electronic records (WellSky)

Tool: Audit proforma: compliance (Yes/No) + comment

RESULTS

Cycle	Compliant	Non-Compliant
1	62.5%	37.5%
2	75%	25%

➡ 12.5% increase in compliance with NICE

Source of Compliance	Cycle 1	Cycle 2
Started in Hospital	34 (68%)	36 (60%)
Already OD at Home	12 (24%)	13 (21.7%)
Changed from BD to OD	4 (8%)	11 (18.3%)

Comment: Resident doctor awareness increased after 1st cycle= **Compliance improved, especially in patients adjusted during admission (8% → 18.3%).** Non compliance decreased by 12.5% in 2nd cycle.

References:
Stoffel N et al. *Haematologica* 2017;102(4):646–652.
NICE CKS: *Anaemia – Iron Deficiency* (2024).

INTERVENTION AFTER 1ST CYCLE

✅ **Education:**
- Presented findings at clinical governance
- Circulated summary to pharmacy
- Included reminders in junior doctor induction

✅ **System Improvements:**
- Advocated for changes in WellSky defaults
- Improved documentation during admission & discharge

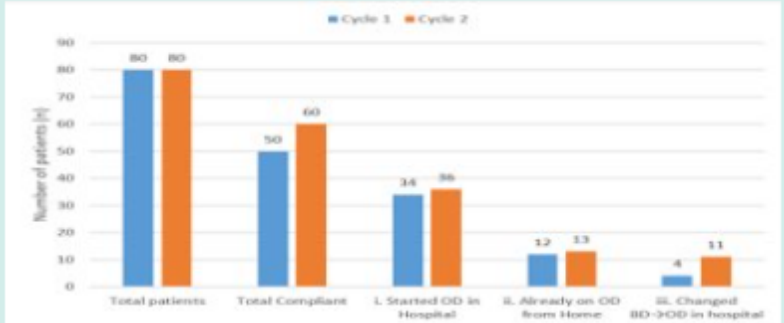


Fig 1: Compliance Comparison & Breakdown of Compliance Reasons (i, ii, iii) by each cycle.

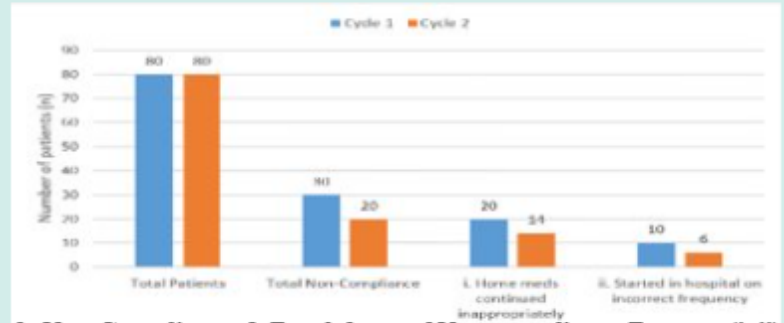


Fig 2: Non-Compliance & Breakdown of Non-compliance Reasons (i, ii) by each cycle

This audit highlights the impact of education, governance, and system changes, with continued focus needed on medication reconciliation and prescriber awareness.

EFFECT OF ATORVASTATIN AND ROSUVASTATIN ON LIPID PARAMETERS AND INFLAMMATORY BIOMARKERS IN PATIENTS WITH ACUTE CORONARY SYNDROME A SYSTEMATIC REVIEW AND META-ANALYSIS

Authors

Aruba Sohail[1], Aiman Khurshid[1], Maman Khurshid[1], Mir Umer Farooq Alam[2]

Affiliations

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[2] The Stoke Mandeville Hospital, Thames, United Kingdom
[3] Griffin Hospital, Connecticut, USA

Introduction

Acute Coronary Syndrome (ACS) remains a major cause of cardiovascular morbidity and mortality. Statins are central to ACS management, lowering LDL-C and inflammatory biomarkers such as CRP, thereby reducing recurrent cardiovascular events. Atorvastatin (lipophilic) and rosuvastatin (hydrophilic) differ in pharmacological properties, but their comparative effectiveness in ACS remains unclear. Previous trials have been limited by small sample sizes and heterogeneous results. This meta-analysis evaluates and compares the impact of both statins on lipid parameters and inflammatory markers in ACS patients.

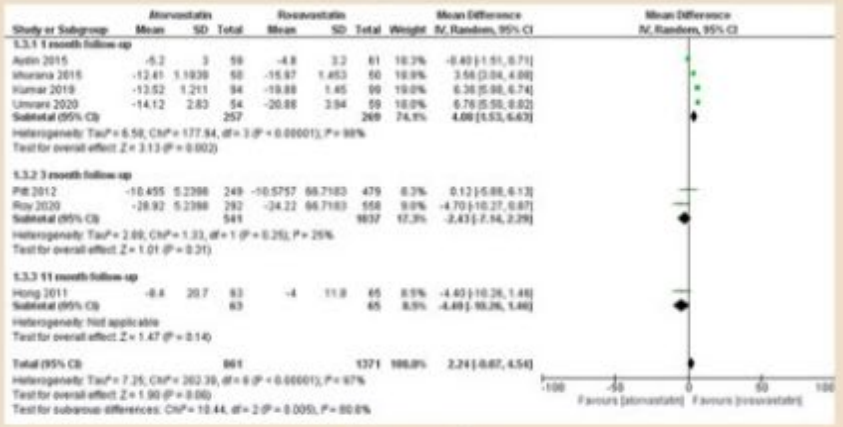
Objective

To compare the efficacy of atorvastatin versus rosuvastatin in reducing lipid parameters (LDL-C, HDL-C, TC, TG) and inflammatory biomarkers (CRP, ESR) among patients with ACS.

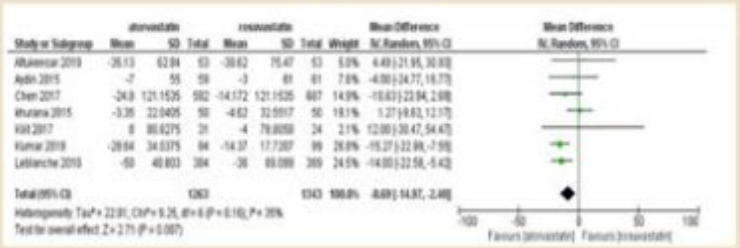
Methodology

- Design: Systematic review and meta-analysis (PRISMA and Cochrane guidelines).
- Databases: MEDLINE, CENTRAL, and ClinicalTrials.gov (inception–August 4, 2025).
- Inclusion: RCTs and observational studies comparing atorvastatin vs rosuvastatin in ACS.
- Analysis: Random-effects model; results as WMD (95% CI); heterogeneity assessed with I^2 statistic.
- Follow-up: Short-term (1 month) and long-term (>3 months).

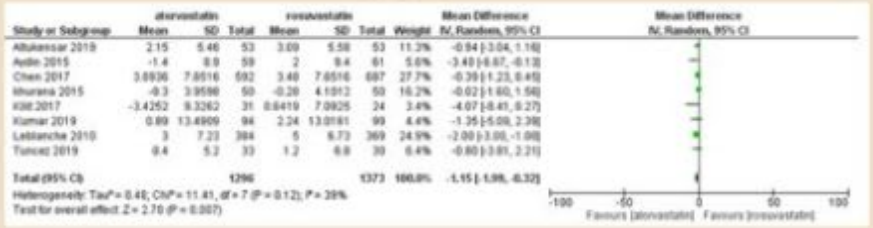
CRP



Triglyceride



HDL-C



Results

- Studies included: 15 (13 RCTs + 2 observational); N = 5,491 patients.
- CRP: Significant short-term reduction with rosuvastatin (WMD 4.08; 95% CI 1.53–6.63; p=0.002).
- HDL-C: Significant short-term increase with rosuvastatin (p=0.007).
- TG: Significant decrease with atorvastatin in short- and long-term (p=0.007; p=0.04).
- LDL-C, TC, ESR, oxLDL: No significant differences between groups.
- Heterogeneity: Mostly low to moderate except for CRP (I^2=98%).

Conclusion

- Rosuvastatin is more effective in lowering CRP and raising HDL levels short-term.
- Atorvastatin is superior in reducing triglyceride levels at 3 months.
- No significant differences for other lipid or inflammatory parameters.
- Clinical implication: Statin selection may be individualized based on patient profile.
- Future direction: Larger, high-quality RCTs are needed to establish therapeutic superiority.

Evaluating the Function and Effectiveness of the High Acuity Unit within the Emergency Assessment Unit at Colchester General Hospital

Dr Amy Lebby[1], Dr Abdurrahman Yusuf[1], Dr Calum Connolly[1], Dr Frederick Jarvis

East Suffolk and North Essex NHS Foundation Trust

Background:

The High Acuity Unit (HAU) at Colchester Hospital is a key area which manages patients at high risk of clinical deterioration and who require more intensive monitoring and intervention than is available in a general medical ward.

The objective of this audit was to assess the effectiveness of the HAU as an intermediary between the acute medical unit and the critical care unit (CCU).

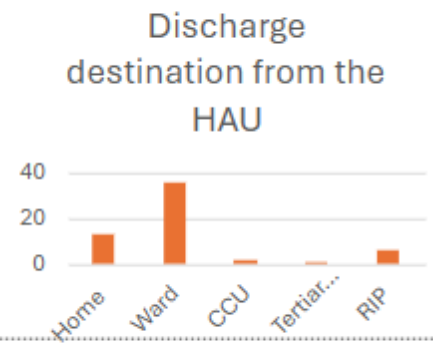
Methods:

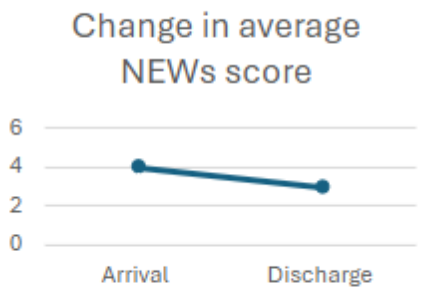
This was achieved by analysing the electronic records of patients admitted to HAU over a one-month period. Data was collected, including referral source, NEWS score on admission vs discharge and their discharge destination.

Results:

60 patients were admitted to the HAU over a 4-week period. 4 were excluded due to incomplete records.

- Average length of stay was 2 days
- The most common discharge destination was a medical ward
- The average NEWS improved from 4 to 3 – the highest NEWS on arrival (of included patients was 12 and the lowest was 0)
- Most patients were referred from ED, 1 patient from AMSDEC





The most applied interventions in HAU:

1. Non-invasive ventilation
2. Telemetry
3. Closer monitoring by nursing team with smaller nurse to patient ratios

Discussion:

The HAU at CGH performs a crucial intermediary role and effectively manages a diverse range of acutely unwell patients. A high percentage of patients admitted to the HAU experience clinical improvement, reflected by a significant reduction in NEWS scores and a high rate of safe step-downs to general medical wards or direct to home.

Low escalation rates to CCU and mortality highlight the effectiveness of early intervention in improving patient outcomes. This is particularly true with the use of interventions such as non-invasive ventilation.

Non-invasive ventilation is only otherwise available in the Resuscitation area of ED, critical care and in the respiratory ward so use of NIV in HAU frees up capacity in these areas.

Overall, the HAU enhances patient safety, optimises resource utilisation and contributes significantly to the continuity and efficiency of acute medical care pathways.

With thanks to the HAU team for collecting data for patients admitted during this period.

APPROPRIATENESS OF ECG UTILISATION IN THE EMERGENCY DEPARTMENT

Anand Sunil[1], Chris Alphonse [1], Saleem Farook[1]
[1]Department of Emergency medicine, Wythenshawe Hospital, Manchester University NHS Foundation Trust, Manchester, UK

INTRODUCTION

Electrocardiography (ECG) is an essential diagnostic tool in the Emergency Department (ED). However, inappropriate use can lead to wasted resources, delay interpretation, and affect patient care. We undertook a two-cycle quality improvement project (QIP) to assess ECG utilisation, documentation of rationale, timeliness of interpretation, seniority of reviewer, and related outcomes.

OBJECTIVES

Determine the appropriateness of ECG's Performed in the ED based on clinical indications
Analyse the time please and proportion of
1.ECG's requested
2.ECG's performed
3.ECG's interpreted
-Subgroup Analysis of time taken to perform ECG on chest paint patients
-Analyze which grades of clinicians are performing and interpreting ECGs
-Assess the documentation of ECG interpretation on EPR(HIVE)

METHODOLOGY

Retrospective data were reviewed from the electronic patient record (EPR) across two randomly chosen 24-hour periods: December 2023 (Cycle 1) and March 2025 (Cycle 2). Data were benchmarked against departmental standards and the Care Quality Commission (CQC) requirement for ECG interpretation by a senior decision maker (ST3+) within 30 minutes. Interventions introduced between cycles included standard operating procedures (SOPs) for ECG requesting and interpretation, clearer triage criteria, and education sessions for nursing, auxiliary, and medical staff.

ANALYSIS

SUBGROUP ANALYSIS OF PATIENTS WITH CHEST PAIN *(cycle 1 vs cycle 2)*

	Cycle 1 9/12/23 (weekend)	Cycle 2 30/03/25 (weekend)	Cycle 1 11/12/23 (weekday)	Cycle 2 24/03/25 (weekday)
Ratio of chest pain ECGs out of all ECGs	19%	32%	21%	19%
Repeat chest pain ECGs	13%	15%	34%	50%
Interpretation overall	81%	96%	80%	85%
Interpretation (ST3+)	50%	51%	53%	81%
ECG with findings	18%	58%	46%	53%

Fig 1

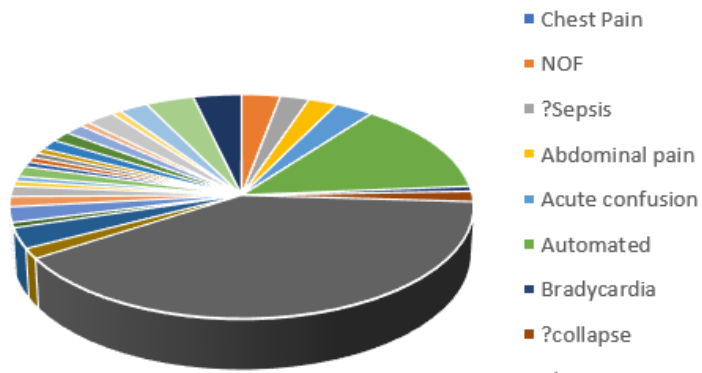


Fig 2

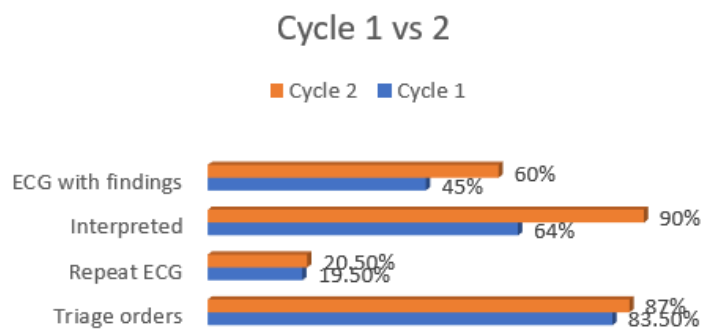


Fig 3

KEY POINTS

Rate of ECGs remains mostly unchanged – approx. 40% of patients get ECGs
Interpretation rates have improved in cycle 2 (90% compared to 65% in cycle 1)

Consultant Interpretation rate doubled from 27% to 50% of overall interpretation
SPR (ST3+) rate remains steady at 24% of overall interpretation.

Time to interpretation is variable:

Remains long over the weekend day (70mins cycle 1 vs 66 mins cycle 2) improved on weekday (209mins cycle 1 vs 73 mins cycle 2)

90% of Chest pain ECGs are interpreted
Out of the total 2444 patients in the whole week, 998 had ECG's done which is 39%(24 Mar- 30 Mar,2025)
Chest pain is the most frequent indication 39% and 33% corresponding to both days.
20% of the ECGs were repeated on both cycles.
Majority of the ECGs still ordered at triage.

RECOMMENDATIONS

2014 UK ED based audit in the BJC1 – the ECG rate is around10%, compared to our 40%
Implement triage criteria as agreed in the ECG SOP
Raise awareness of the importance of ECG interpretation AND documentation particularly at nights and in chest pain patients – Further Qip Cycles
Re-audit to look in more detail: chest pain patients and machine interpretation
CQC standard: Chest pain patients should have ECGs done and interpreted by ST3 or above within 30 minutes of arrival

NHS
Manchester University
NHS Foundation Trust

Antimicrobial Stewardship Concerns in the Management of Influenza and Influenza with Associated Bacterial Pneumonia

NHS Somerset NHS Foundation Trust

Andrew Chan, Katie Wiles, Megan Markey-Wells, Eleanor Davey and Ian Head

Somerset NHS Foundation Trust, Taunton, United Kingdom

Background

Distinguishing influenza infection from influenza with associated bacterial pneumonia is a significant clinical challenge as the clinical presentation may be similar and there is no single definitive differentiating test. Bacterial coinfection may present at initial evaluation or manifest later as clinical deterioration, particularly with new or worsening respiratory symptoms, hypoxia, or sepsis.

This creates an antimicrobial stewardship dilemma because antibiotics have no benefit in the management of influenza infections occurring alone.

Methods

We performed a retrospective analysis using a standardised proforma of Influenza cases confirmed by positive respiratory multiplex PCR from December 2024 to January 2025, reviewing the factors used by clinicians to aid in their decision-making and antimicrobial prescribing. These included observation charts, radiological, microbiological and biochemical investigations. All-cause mortality was assessed at 30-days.

Results

114 cases of Influenza infection were identified. The median age was 70 (interquartile range 55-79). 8 patients required admission to a high dependency or intensive care unit. 30-day all-cause mortality was 8 (7%). A summary of patient demographics, comorbidities and observation chart records are summarised in table 1.

78 cases (68%) had a National Early Warning Score (NEWS)≥5. Radiological investigations, either X-ray or CT, were done on 99 (87%) cases with 36 (32%) showing evidence of consolidation. 3 (3%) cases had a positive microbiological sample, either a positive blood or sputum culture. These 3 cases also had concomitant radiological consolidation.

45 (39%) cases had elevated white cell count (WCC) and 95 (83%) had elevated C-reactive protein (CRP). 2 patients in intensive care settings had a procalcitonin (PCT) both of which were >0.80µg/L. Both these cases had radiological consolidation, and one case had a positive sputum sample.

We evaluated the use of WCC and CRP in our cohort illustrated in Figure Although we found a statistical significance comparing cases with positive radiological or microbiological investigation to those without; p=0.01 for WCC and p=0.00002 for CRP in all patients. The level of significance decreases in the subgroup of patients with a NEWS≥5; p=0.15 (NS) for WCC and p=0.01 for CRP.

83 (73%) patients were started on antibiotics as illustrated in table 2. 17 patients had their antibiotic stopped prior to completion of the course following confirmation of influenza. There was a combined cumulative 678 days of antimicrobial therapy used for these cases.

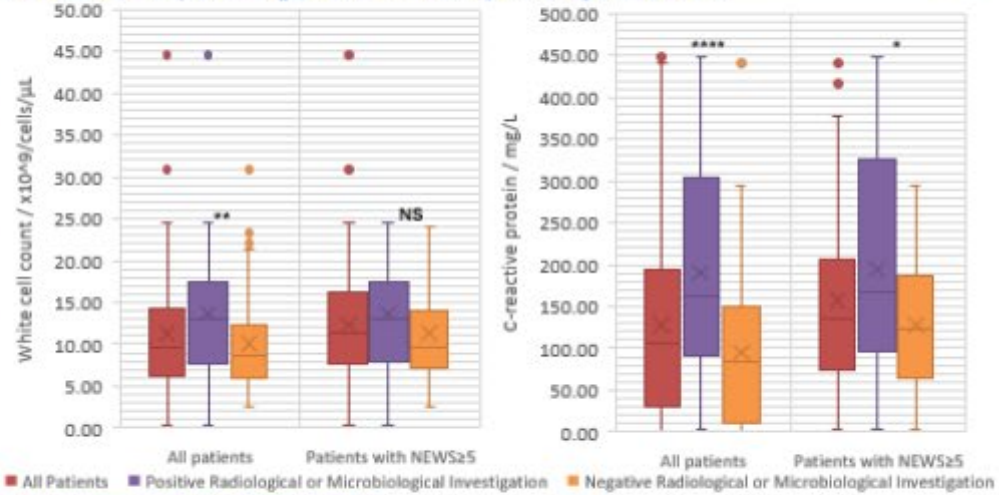
Table 1: Summary of demographics, comorbidities and main findings during episode (numbers, percentage in brackets unless otherwise specified)

Variable	Number (%)
N. patients	114
Age, median (25-75% IQR) (years)	70 (55-79)
Gender, male	55 (52%)
Long term care facility / nursing home resident	11 (10%)
Influenza Strain	
- Influenza A	104 (91%)
- Influenza B	8 (7%)
- Influenza A and B co-infection	2 (2%)
- Co-infection with other respiratory virus	1 (1%) [SARS-CoV2]
Healthcare associated Infection	12 (11%)
Community acquired Infection	102 (89%)
Charlson comorbidity index, median (25-75% IQR)	4 (2-5)
Immunosuppressed	8 (7%)
Solid organ transplant recipient	1 (1%)
Underlying Lung Disease including asthma, COPD, Bronchiectasis	48 (42%)
NEWS Score ≥ 5 during episode	78 (68%)
- Tachypnoea (RR>20)	62 (54%)
- O2 requirement	74 (65%)
- Tachycardia, HR>100bpm	67 (59%)
- Significant Hypotension, SBP≤90 or DBP≤60	31 (27%)
- Confusion	31 (27%)
Acute Kidney Injury	28 (25%)
HDU / ITU Admission	8 (7%)
Radiological evidence of consolidation	36 (32%)
Positive microbiological culture	3 (3%)
30-day all-cause mortality	8 (7%)

Table 2: Summary of antibiotic prescribing and days of antimicrobial therapy for each agent used (numbers, percentage in brackets based as proportion of patients receiving antibiotics)

Antibiotics prescribed	83 (73% of all patients)	Total Days of Antimicrobial Therapy
Amoxicillin	38 (46%)	191
Doxycycline	34 (41%)	152
Trimethoprim-sulfamethoxazole	29 (35%)	142
Flucloxacillin	19 (23%)	96
Other antimicrobials	27 (33%)	97
Antibiotic stopped following positive influenza sample	17 (20%)	

Figure 1: Box plot comparing biochemical markers in different patient groups, indicated in chart are range with outliers, interquartile range, median and mean, p-values by 2-talied t-test



Discussion & Conclusion

Influenza can cause multiple systemic decompensations that can present similarly to bacterial infection and raise concern for sepsis. In our hospital the most common agents used were targeted towards covering respiratory pathogens and influenza-associated pneumonias. However, there are many occasions when broader spectrum antimicrobials including beta-lactam/beta-lactamase combinations, carbapenems, fluoroquinolones and aminoglycosides are used.

Further investigations may aid clinical judgement but have limitations. Radiographic imaging is required for diagnosing pneumonia but cannot reliably differentiate viral from bacterial aetiologies based on the pattern of consolidation[2,3]. Microbiological testing should be performed though negative results do not exclude bacterial involvement, as testing may be affected by specimen quality and prior antibiotic administration[1]. Other studies have shown that among biochemical markers, only procalcitonin has proven utility in differentiation[4,5], other markers of inflammation such as WCC and CRP are unreliable as illustrated in Figure 1 and other guidelines[1].

In our study, although 83 patients (73%) received antibiotics and 66 completed a full course, only 36 (32%) met investigation thresholds of having at least one of the following: radiological consolidation, positive microbiological culture or raised procalcitonin. Based on current evidence, this suggests that antibiotics are being over-utilised for uncomplicated influenza infections. This issue has led to a combined cumulative use of 678 days of antimicrobial therapy.

References

1. Uyeki TM, Bernstein HH, Bradley JS, et al. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza. Clin Infect Dis. 2019;68(6):e1. doi:10.1093/CID/CIY866

2. Chertow DS, Memoli MJ. Bacterial coinfection in influenza: A grand rounds review. JAMA. 2013;309(3):275-282. doi:10.1001/JAMA.2012.194139,

3. Thomas M. File Jr, Ramirez JA. Community-Acquired Pneumonia. O'Malley PG, ed. New England Journal of Medicine. 2023;389(7):632-641. doi:10.1056/NEJMCP2303286

4. Cuquemelle E, Soulis F, Villers D, et al. Can procalcitonin help identify associated bacterial infection in patients with severe influenza pneumonia? A multicentre study. Intensive Care Med. 2011;37(5):796-800. doi:10.1007/S00134-011-2189-1,

5. Wu MH, Lin CC, Huang SL, et al. Can procalcitonin tests aid in identifying bacterial infections associated with influenza pneumonia? A systematic review and meta-analysis. Influenza Other Respir Viruses. 2012;7(3):349. doi:10.1111/J.1750-2659.2012.00386.

IMPLEMENTING SIMULATION TRAINING DAYS FOR IMT STAGE 2 TRAINEES IN LONDON

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[2]Department of Care of Older People, North Middlesex University Hospital

Royal Free London NHS Foundation Trust

INTRODUCTION

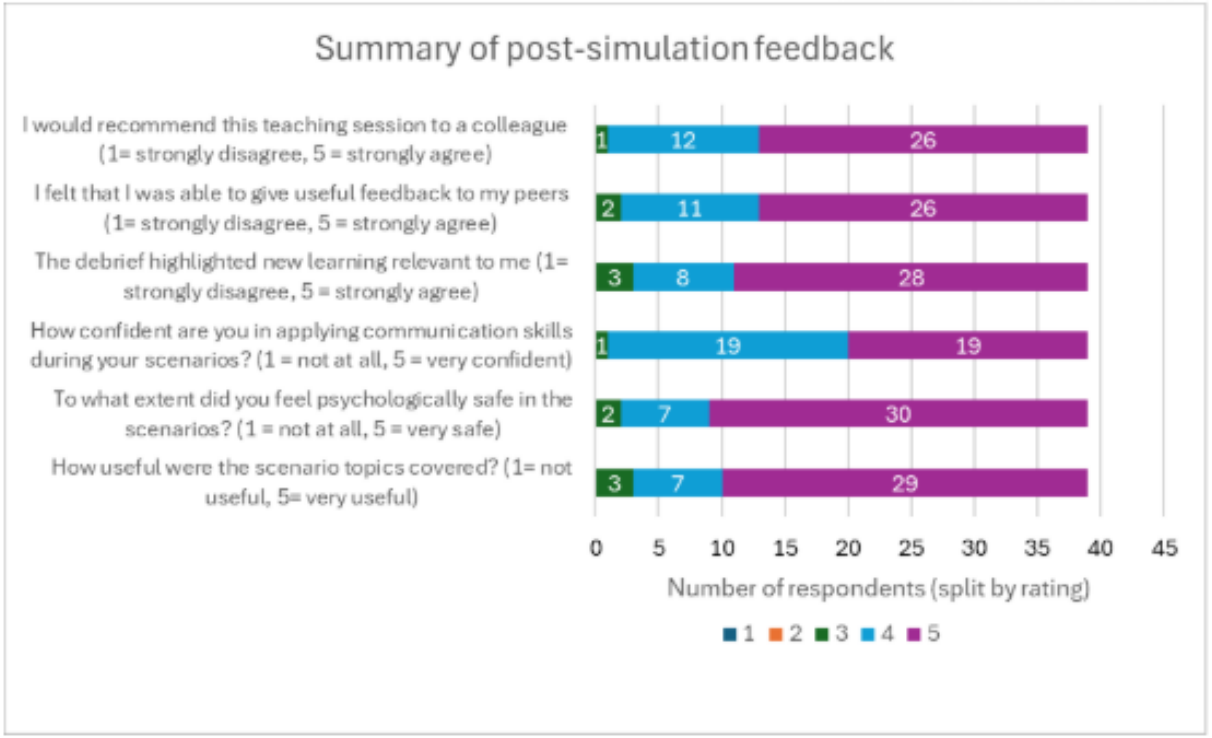
The new IMS2 curriculum requires 12 hours of human-factors simulation yet few centres offer this training in a clinical context

METHODS

- 8 sessions were held comprising a short introduction to human factors followed by 7 scenarios covering acute scenarios & roleplay
- Days were advertised to trainees across the London GIM network, recruiting 39 trainees
- Faculty included the simulation fellow, resident doctors, and medical consultants.
- Scenarios either adapted from similar training days or written by resident doctors based on their experiences.

RESULTS

- Increased proportion of people very familiar with human factors from 20.5% to 74.4%.
- Trainees were more confident using strategies to improve teamwork, communication & challenge bias



CONCLUSION

Our simulation sessions have been well received by participants, with feedback indicating an improved understanding of human factors and that participants' clinical practice would change resulting from the course.

A Saddle Pulmonary Embolus with Subsequent Embolic Stroke from an Intracardiac Thrombus In-transit

Andrew Morrish[1], Fadwa Al-Qadi[1], Kanwal Tariq[2], Claudette Phillips[3] 1,2: Respiratory Medicine, 3: Radiology; Hull University Teaching Hospitals NHS trust, Hull, HU3 2JZ

NHS Humber Health Partnership

Introduction

Saddle pulmonary embolism (SPE) refers to a thrombus located at the bifurcation of the main pulmonary artery, and is often associated with hemodynamic instability, increased complication rates, and poorer outcomes if not managed actively [1] . Intracardiac thrombi (ICT), particularly within the left atrium (LA), left atrial appendage, or left ventricle, significantly increase the risk of systemic thromboembolism, including ischemic stroke and acute ischemia involving abdominal organs or lower limbs [2]. While echocardiography remains the most used modality for diagnosing ICT, CTPA is also valuable, particularly in certain clinical contexts.

Case Presentation

Initial Presentation, Investigations and Management

Middle-aged obese male, reduced mobility post right foot debulking surgery presents with hypoxic respiratory failure

CTPA: Extensive submassive PE + right heart strain

US: No DVT (right leg cannot be scanned due to cast)

Started on weight-adjusted therapeutic dose LMWH

Clinical Course

At presentation, required high flow nasal cannula oxygen

Weaned successfully to room air over next 24 hours.

Acute Neurological Episode

Sudden, transient episode of right homonymous inferior quadrantanopia and expressive dysphasia, lasting approximately 15 minutes. Neurological examination was unremarkable following resolution of symptoms

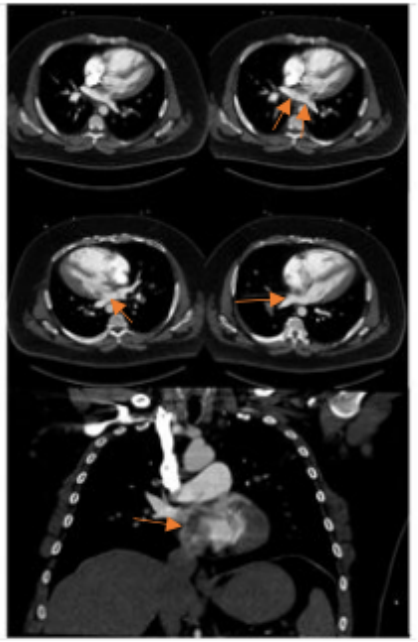


Fig 1. CTPA Images capture intracardiac thrombus in transit early in patients' admission.

Neuroimaging

MRI Brain: Multiple acute supratentorial infarcts, consistent with proximal embolic source

Cardiac Assessment

TTE inconclusive

TOE deferred (risk of interruption to anticoagulation during acute SPE)

Re-evaluation of Initial CTPA

Demonstrates a filling defect within the right atrium adjacent to the interatrial septum (IAS), extending across the IAS into the LA. These findings suggest an ICT in transit (ICTIT), straddling the IAS

Ongoing Management

Continued therapeutic LMWH, switched to DOAC. Significant clinical improvement. Discharged

Further Evaluation

Repeat TTE (with bubble study): inconclusive

TOE: scheduled to assess for IAS defect with plan for closure

Three-Month Follow-up

Repeat CTPA: Complete resolution of thrombus

Bilateral US leg: persistent (or new) right leg DVT. Switched to warfarin

Discussion

PE with right heart thrombi have higher mortality than PE alone (21% vs 11%) [3], with right-sided thrombi seen in up to 18% of massive PE [4]. Bi-atrial thrombi are rare, with 30-day mortality around 18% [5]. Earlier recognition of ICTIT on imaging may have altered management.

No consensus exists for treating PE with ICTIT. Options include thrombolysis, anticoagulation, or embolectomy. Meta-analyses show thrombolysis improves survival versus other approaches [6,7], though surgery offers lowest mortality when thrombi cross a PFO (10.8%) [5]. In our case, ICTIT was found post-stroke, making thrombolysis contraindicated. No RCTs confirm LMWH or DOAC efficacy in this setting. Case reports of similar presentations describe mixed outcomes: PE with ICTIT treated in the first instance with fibrinolysis [8] and LMWH converted to DOAC [9] were also followed by embolic strokes; PE with ICTIT and embolic stroke on presentation reacted well to LMWH-to-warfarin therapy, with complete resolution of ICTIT straddling PFO [10].

These reports highlight the need to routinely identify ICTIT on CTPA and refine treatment strategies.

Echocardiography remains key for detecting intracardiac thrombi.

TOE is recommended when TTE is inconclusive [11], though image quality can limit accuracy. In this case, TOE was contraindicated, underscoring the value of detailed CTPA review when echo findings are uncertain.

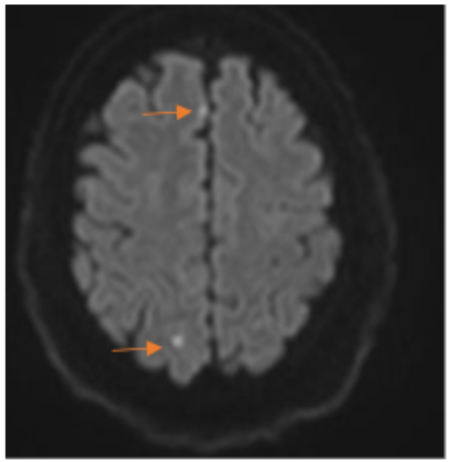


Fig 2. MRI showing multiple regions of restricted diffusion in different vascular territories. Suggestive of embolic infarcts

Conclusion

This case of high-burden PE underscores the crucial need for thorough evaluation of CTPA images with attention to the presence of ICTIT. Early identification of this could prompt more aggressive treatment. Reassessing imaging is particularly valuable in patients who develop neurological symptoms or suffer a cerebrovascular event, especially when echocardiographic results are inconclusive. Complex cases like this benefit greatly from a multidisciplinary team approach to ensure accurate diagnosis and optimal management.

References

Pneumococcal purulent pericardial effusion as a presentation of immunocompromise: The importance of asking the right questions at the right time

Authors: Anesa Noor, Kalliopi Ioakim, Ahmed Shahin, Linda Vaccari , Douglas Fink, Niket Patel

NHS Royal Free London NHS Foundation Trust

Background

- Purulent pericarditis is a rare but life-threatening condition, accounting for <1% of pericarditis cases.[1]
- Gram positive cocci (staphylococci and streptococci) are the most common organisms isolated.[1]
- Prompt recognition, antimicrobial therapy, and pericardial intervention are critical to survival.[2]

Case Presentation

- 64-year-old female presented to ED with 1-day history of pleuritic chest pain & SOB
- PMH: HTN & Asthma (both well-controlled)
- Vitals, bloods and CXR all normal → discharged with referral to RACPC
- Represented 4-days later with worsening chest pain
- Vitals: BP 139/86 mmHg , **HR 111 bpm**, **T 37.9˚C, RR 24/min** and SpO2 95%

Initial Workup

- Bloods: Hb 100, **WCC 15**, **CRP 380**, Troponin 20 (14) and D Dimmer 3205ng/mL.
- ECG: STE lead II, aVL and V1-2, global PR depression
- Coronary angiography: unobstructed coronaries
- CTPA: bilateral small pleural & pericardial effusion
- Bedside TTE: **1.1cm pericardial effusion**
- Blood cultures**: Streptococcus *pneumoniae* (+)**

Progress During Admission

- Pt deteriorated despite appropriate antibiotics
- Serial TTEs showed increasing size of effusion
- Inflammatory markers continued to rise
- Persistent anaemia(Hb 70) → **MM screen +ve**
- Pericardial drain inserted Day 13 of admission
- Symptomatic and clinical improvement
- Clinical improvement Drain removed 3 days
- Fluid re-accumulated on repeat TTE
- Transfer to CTS centre for pericardial window

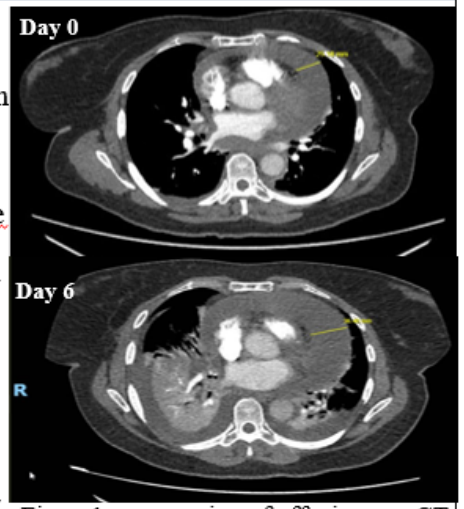
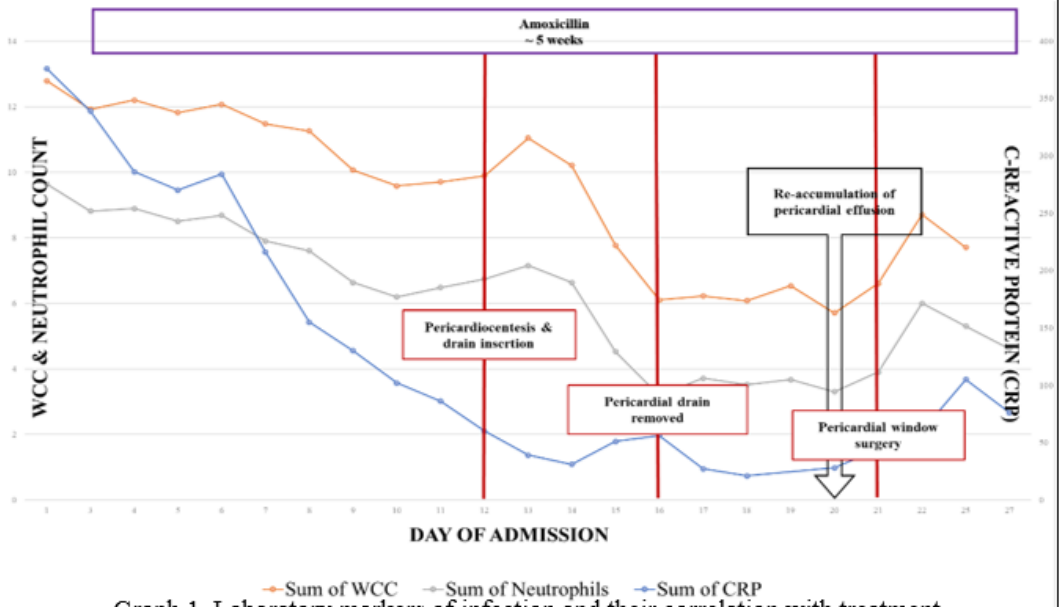


Figure1. progression of effusions on CT



Graph 1. Laboratory markers of infection and their correlation with treatment.

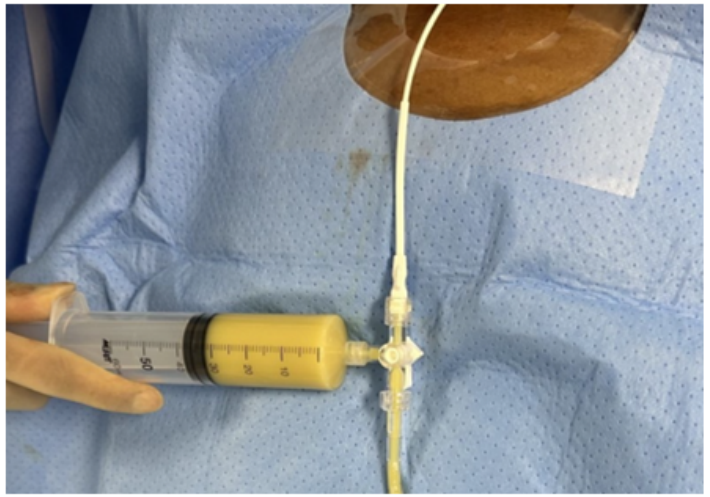


Figure2. Macroscopic appearance of drained pericardial fluid.

Conclusion

- Purulent pericarditis carries significant mortality if unrecognised.
- Early multidisciplinary input, timely pericardial intervention, and attention to underlying risk factors are essential.
- This case emphasises the importance of considering bacterial pericarditis in patients with persistent inflammatory response and pericardial effusion.

References

1. Sagristà-Sauleda J, et al. Purulent pericarditis: review of a 20-year experience in a general hospital. J Am Coll Cardiol. 1993 Nov 15;22(6):1661-5.

2. Parikh SV, et al. Purulent pericarditis: report of 2 cases and review of the literature. Medicine (Baltimore). 2009 Jan 1;88(1):52-65.

* Note this work was presented at ESC Congress 2024

Prevalence and Predictors of Depression in Asthma Patients: a Cross-sectional Study

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1 Background

- Asthma is frequently associated with depression.
- The relationship may be bi-directional, possibly mediated by a shared inflammatory pathway.
- Data from India on the prevalence of depression in asthma patients remain limited.

2 Aim

- To estimate the prevalence of depression in asthma patients and identify the associated risk factors.

3 Methods

Asthma patients screened in OPD (n=842)

↓

Asthma patients randomly selected for enrollment (n=264)

↓

Underwent assessment for depression (n=248)

Assessments:

- Socio-demographic and clinical details collected, including treatment compliance
- **ACT** (Asthma Control Test)
- **AQLQ** (Asthma Quality of Life Questionnaire)
- **PHQ-9** (Patient Health Questionnaire-9)
- Inhaler technique checked
- AEC (absolute eosinophil count) and FeNO (fractional excretion of nitric oxide) done

Written informed consent obtained from all participants.

4 Results

Figure 1

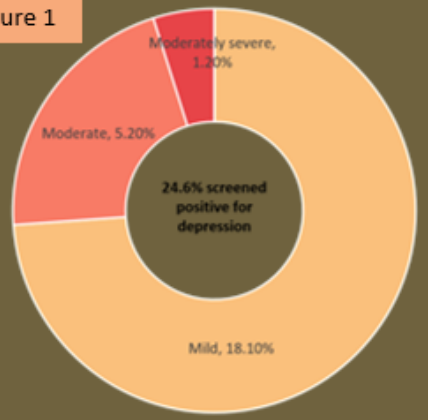

Table 1

Logistic regression	Univariate regression		Multivariate regression	
Predictor variables	Unadjusted OR [95% CI]	P-value	Adjusted OR [95% CI]	P-value
Female gender	1.87 [1.03,3.39]	**0.040**	1.89 [0.87,4.14]	0.11
Comorbidities	2.10 [1.11,3.99]	**0.023**	1.80 [0.81,3.96]	0.15
Inhaler technique incorrect	3.59 [1.10,11.75]	**0.035**	1.44 [0.33,6.19]	0.63
Non-compliance with ICS	2.30 [1.16,4.56]	**0.016**	1.69 [0.77,3.70]	0.19
ACT (Partly controlled/uncontrolled asthma)	2.92 [1.58,5.40]	**0.001**	0.97 [0.39,2.44]	0.95
AQLQ	0.32 [0.20,0.52]	**<0.001**	0.27 [0.12,0.57]	**0.001**
Non-eosinophilic asthma	1.11 [0.61,2.00]	0.739		

- **Nearly 1 in 4 asthma patients screened positive for depression.**
- Depression severity correlated negatively with asthma control ((ρ = -0.332, P<0.001) and quality of life (ρ = -0.451, P<0.001).
- **Poor quality of life was the strongest independent predictor of depression.**

5 Conclusions

- The subjective burden of asthma appears to have a greater influence on psychological health compared to disease severity or demographic factors.

6 Implications

- **Routine screening for depression** should be a part of comprehensive asthma management.
- **Patient education** on correct inhaler technique and adherence should be emphasised.
- **Future longitudinal studies** should explore whether improving asthma-related quality of life or treating comorbid depression can enhance both psychological and respiratory outcomes.

References

1. Jiang M et al, J Affect Disord. 2014 Sep;166:22–9. 2. 2022 GINA Main Report. 3. Misra S st al, Indian J Chest Dis Allied Sci. 2015;57(2):87–90. 4. Asthma Control Test (ACT). 5. Asthma Quality of Life Questionnaire (AQLQ). 6. Kroenke K et al, J Gen Intern Med. 2001 (PHQ-9).

Acknowledgements: This study was funded by the intramural Fluid Research Grant, provided by the Office of Research, Christian Medical College, Vellore (IRB Minute no. 15251).

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To establish baseline AMTS checks of at least 50% of patients on Knightley ward in Northampton General Hospital within 3 days of arrival, over the next 4 months - A qualitative project.

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Arash Fattahi, Naveed Imtiaz
Supervisor: Dr Nariman Othman

Background

The Abbreviated Mental Test Score (AMTS) is a 10-point assessment system that can be used to screen for cognitive impairment. The Mental Capacity Act is a law that protects vulnerable people over the age of 16 around decision-making. If there are concerns about cognition, a mental capacity assessment (MCA) should be undertaken to ensure treatments are done in best interests as well as identifying the potential need for a DOLS. As of August 2024, AMTS assessments were not being carried out on Knightley ward, which is a geriatrics ward.

Conclusion

Overall, the QI project has achieved a consistent >50% rate of AMTS checks for patients on Knightley ward. It is recommended that doctors on Knightley ward continue to carry out regular AMTS checks on new patients where possible. Staffing has been the main barrier to completing AMTS checks as it holds low priority compared to other clinical jobs.

It would be good to spread this practice to other elderly wards within the trust. Once there is consistent AMTS checking in place, a further QI project can be done to assess whether MCA assessments are being done for patients scoring <8 on their AMTS. Subsequently, these assessments can be checked to ensure patients that are deemed to lack capacity are having DOLS put in place. The consultant on Knightley ward is now well versed with the utility of AMTS and can sustain this practice with all new teams of doctors that rotate onto the ward.

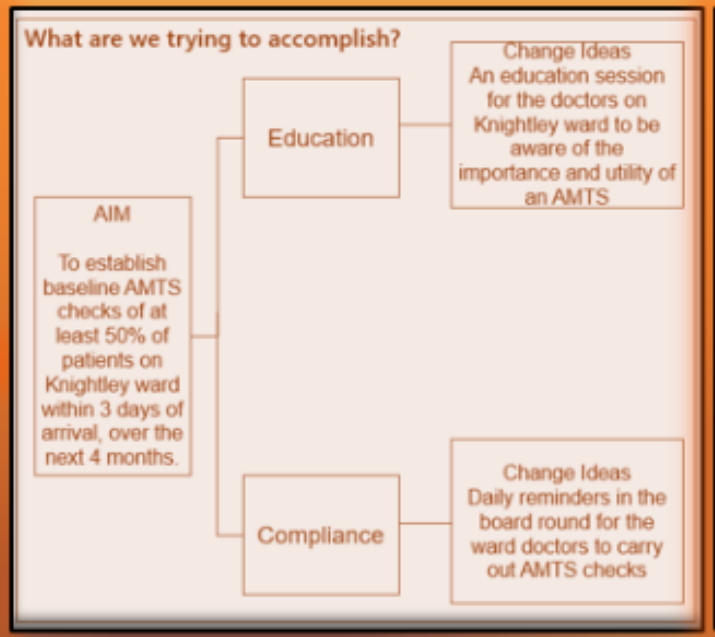


Figure 1. Driver diagram of this QI project

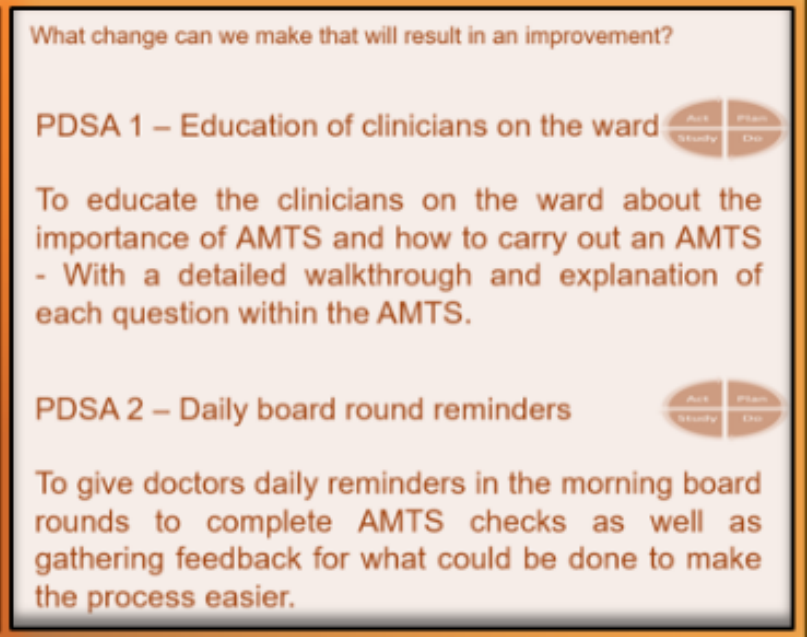


Figure 2. PDSA cycles of this QI project

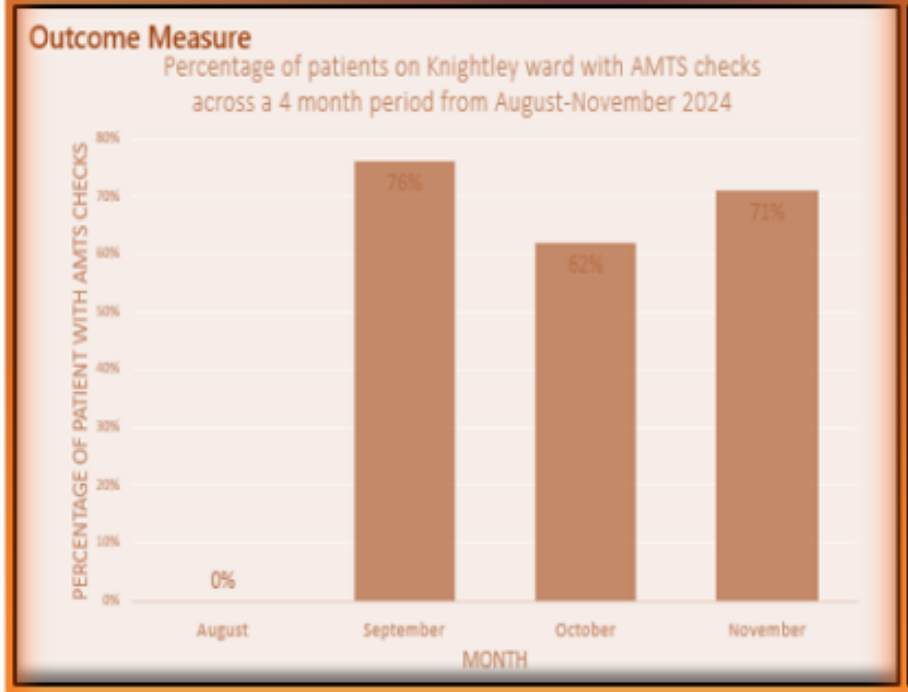


Figure 3. Outcome measures of this QI project

Process Measure: Are AMTS checks a smooth process?

September - Pre-printed sheets would be nice as it's time consuming to manually write out results
October - Pre-printed sheets have been great for ease of use, but they ran out and we had to resort to manual writing
November - Having a large supply of pre-printed sheets has meant we've always used them. It's important to print out 30 sheets every months to add to the stockpile to prevent this issue.

Balance Measure: Do the doctors feel AMTS checks are a significant pressure on their already high clinical caseload?

September - No, they only take a few minutes
October - We've been regularly poorly staffed this month due to leave and sickness, AMTS is low priority compared to other jobs
November - Having reminders has been useful, but better staffing has had the bigger impact factor

Figure 4. Process and balance measures of this QI project

Lower Survival in SMuRF-less Patients with Myocardial Infarction but Reduced 1-Year Mortality Associated with Targeted Therapies: A MIMIC-IV database Study

AUTHORS: Hamza, Anfal; Basit, Abdul; Sufyan, Muhammad; Hassan, Arbaz; Sajjad, Talha; Arham, Muhammad; Jehangir, Hanzala; ; Dad, Allah; Hamza bin Abdul Malik, Mohammad; Labeeq, Muhammad; Shehryar, Farah; Waqas Afzal, Muhammad;

INTRODUCTION

Despite lacking traditional cardiovascular risk factors, patients without Standard Modifiable Cardiovascular Risk Factors (SMuRF-less) have significantly worse outcomes.

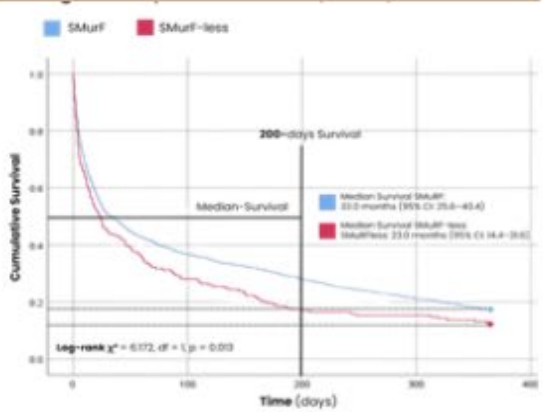
OBJECTIVE

Our study aims to assess clinical characteristics and mortality outcomes in SMuRF and SMuRF-less group in patients with Myocardial Infarction.

METHODS

- A retrospective cohort study using the MIMIC-IV database was conducted to compare outcomes in SMuRFs (diabetes, hypertension, smoking, and dyslipidemia) and without any of these (SMuRF-less).
- Cox hazards regression was used to identify predictors of mortality.
- Kaplan–Meier survival analysis was performed to compare time-to-death between two groups.
- SPSS (Version 30.0) was used, with significance defined at $p < 0.05$.

KAPLAN-MEIER ANALYSIS



	Total	Events	Censored	Percentage
SMurF	1071	885	186	17.4%
SMurF-less	189	166	23	12.2%

CONCLUSION

SMuRF-less patients exhibited significantly lower survival at 90, 180, and 365 days compared to SMuRF-positive patients. Beta-blockers, statins, nitrates, and PCI/CABG were independently associated with reduced 1-year mortality in the SMuRF-less group.

RESULTS

- A total of 3391 patients were retrieved (male: 2246; females:1145) and out of these, 384 (11.32%) were SMuRF-less.
- SMuRF-less patients had significantly lower median survival compared to those with SMuRFs (23 vs. 33 days) at 90 days with (Log-rank $\chi^2 = 5.139$, $p = 0.023$), 180 days ($\chi^2 = 8.934$, $p = 0.003$), and 365 days ($\chi^2 = 6.172$, $p = 0.013$).
- In Cox regression analysis, use of beta-blockers (HR 0.658, 95% CI 0.565–0.766, $p < 0.001$), statins (HR 0.809, 95% CI 0.696–0.941, $p = 0.006$), nitrates (HR 0.597, 95% CI 0.491–0.725, $p < 0.001$), and PCI/CABG (HR 0.516, 95% CI 0.431–0.618, $p < 0.001$) were independently associated with significantly lower 365-day mortality in the SMuRF-less group.

Incidence and Clinical Outcomes of Infective Endocarditis Following TAVR vs. SAVR: A Systematic Review and Meta-Analysis

Hassan, Arbaz; Hamza, Anfal; Arham, Muhammad; Ahmad, Waqas; Akram, Muhammad Rizwan; Saim, Muhammad; Bader, Aymen; Dad, Allah; Tareen, Muiz Khan; Bakht, kinza; Sajjad, Talha

University Hospitals of Derby and Burton NHS Foundation Trust

INTRODUCTION

The global incidence of Infective Endocarditis (IE) increased by staggering 129% in the last three decades, resulting in dismal outcomes following valve interventions.

OBJECTIVE

This review seeks to compare incidence and survival rates following Transcatheter aortic valve replacement (TAVR) vs. Surgical aortic valve replacement (SAVR) in patients with IE.

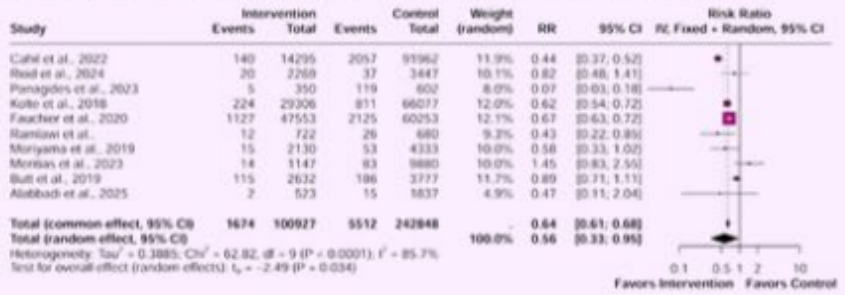
RESULTS

- TAVR Group = 100,927 patients ; SAVR Group = 242,848 patients
- Incidence of IE = TAVR < SAVR; (RR = 0.56, p= 0.034)
- Risk of Sepsis: TAVR-IE < SAVR-IE; (RR: 0.41; p= 0.025)
- Risk of Atrial Fibrillation = TAVR-IE > SAVR-IE; (HR = 1.22, p= 0.007)
- Risk of Pacemaker Implantation: TAVR-IE > SAVR-IE; (HR=1.21; p= 0.160)

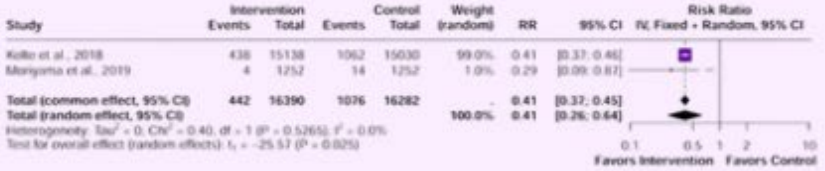
METHODS

- The review protocol was registered on PROSPERO (ID: CRD420251012750).
- We searched databases to retrieve RCTs and observational studies comparing TAVR and SAVR in IE patients.
- Primary outcome was incidence of IE.
- Secondary outcomes included AFib, sepsis, and pacemaker implantation.
- The "meta" package was used in R-studio analyze binary and continuous outcomes

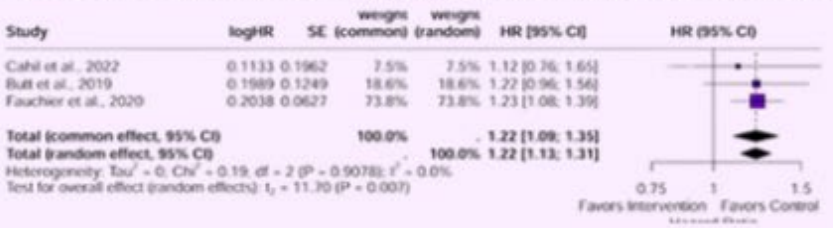
Forest Plot 1. Incidence of Infective Endocarditis (IE) in TAVR versus SAVR



Forest Plot 2. Forest plot for Sepsis in IE-TAVR versus IE-SAVR



Forest Plot 3. Forest plot for Hazard Ratio Atrial Fibrillation (AF) between both Groups



CONCLUSION

Higher incidence of IE in SAVR and contrasting risk profiles in both groups suggest the need of personalized therapeutic strategies and longitudinal outcome monitoring following valve interventions.

High Neutrophil-to-Lymphocyte Ratio is Associated with Adverse Outcomes in Acute Myocardial Infarction Patients Treated with Fibrinolysis: A Meta-Analysis

Warrington and Halton Teaching Hospitals NHS Foundation Trust

AUTHORS: Hamza, Anfal; Shehryar, Farah; Arham, Muhammad; Hassan, Arbaz; Chaudhary, Muhammad Umair; Ghaffar, Minahil; Mehmood, Asad; Sajjad, Talha; Sufyan, Muhammad; Afzal, Muhammad Waqas; Chughtai, Hamza Iqbal; Dad, Allah; Malik, Atif Nawaz

INTRODUCTION

Acute myocardial infarction (AMI) affects nearly 3 million people globally. Neutrophil-to lymphocyte ratio (NLR) has emerged as a potential prognostic marker in fibrinolysis-treated AMI patients.

OBJECTIVE

This study aims to evaluate prognostic utility of NLR in predicting adverse outcomes and assess its diagnostic accuracy using a pooled (AUC) estimate.

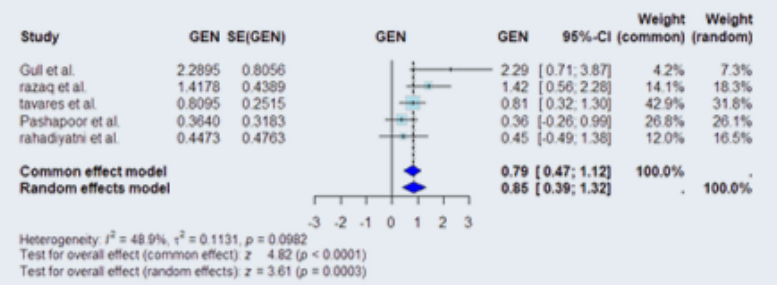
RESULTS

- 3,141 patients (males: 2312, females: 829, pooled mean age: 57.93 [p<0.00001])
- High NLR moderately predicted adverse outcomes in AMI (pooled AUC: 0.701; 95% CI: 0.596–0.789), with better accuracy for all-cause mortality (AUC: 0.776; 95% CI: 0.655–0.876) than treatment success (AUC: 0.596; 95% CI: 0.468–0.713)
- High NLR was associated with increased mortality (OR: 1.71; 95% CI: 1.00–2.90), and stroke (OR: 3.02; 95% CI: 2.67–3.41).

METHODS

- This meta-analysis (CRD420251025025) adhered to the PRISMA 2020 guidelines.
- We included fibrinolysis-treated acute MI patients, with high vs. low NLR groups.
- The primary outcome was the pooled AUC for NLR's predictive accuracy; secondary outcomes included mortality and major cardiovascular events.
- Statistical analysis was performed using R (v2025.05.0+496) with significance set at $p < 0.05$.

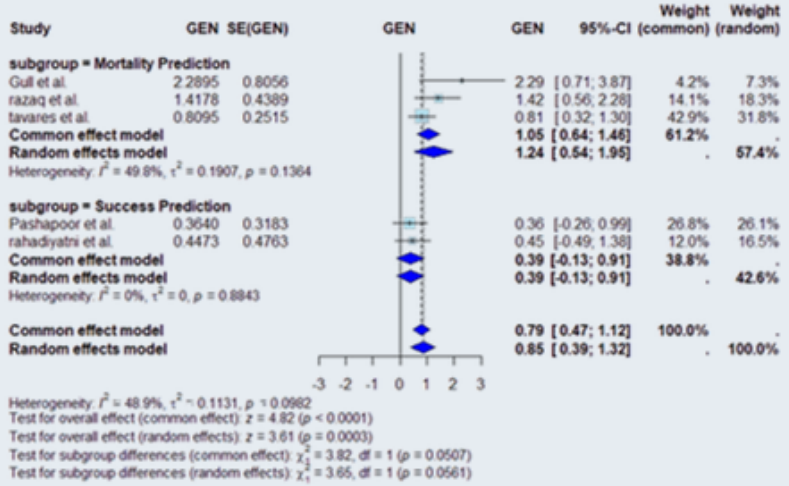
AUC OVERALL



CONCLUSION

As an accessible marker, NLR may aid in early risk stratification and inform clinical decision-making

SUB-GROUP ANALYSIS



From Euphoria to ICU - Unraveling a Young Adult's Collapse

NHS Wirral University Teaching Hospital NHS Foundation Trust

CASE STUDY:

A 20-year-old male normally fit and well was sent to UMAC by the GP due to hyperkalemia, severe abdominal pain, dehydration, and malnutrition. He had metabolic acidosis, acute renal failure and had not opened his bowels for 8 days; guarding was noted, without peritonism.

Social History: Chronic intranasal ketamine use (>12 months, ≥8g/week); no significant sexual history.The combination of renal and hepatic abnormalities, along with chronic ketamine use, was the key in diagnosis.

Investigations: Key lab findings: Hyperkalemia 8.3 mmol/L, Hyponatremia 105 mmol/L, Urea 48 mmol/L, Creatinine 434 µmol/L, Bicarbonate 15 mmol/L, pH 7.25, Lactate 2.2. LFTs Markedly elevated Transaminases with normal Bilirubin.

CT AP: Bilateral hydroureteronephrosis, contracted bladder with no anatomical obstruction. Diffuse intrahepatic biliary ductal dilatation without obstructive cause.

Management:

ICU admission with bilateral nephrostomies and slow correction of electrolyte abnormalities resulting in significant improvement and patient's recovery.

Diagnosis:

Ketamine-induced uropathy, cystopathy, and cholangiopathy.

Non-obstructive uropathy due to chronic urothelial inflammation, reduced bladder compliance and functional outflow resistance. Intrahepatic biliary dilatation with normal bilirubin suggests ketamine-related bile duct toxicity.

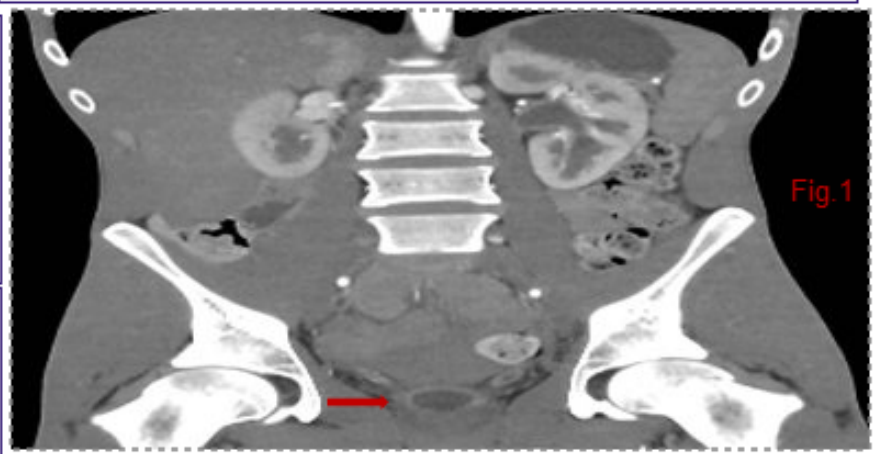


Fig.1

Discussion: Ketamine, an NMDA receptor antagonist, is commonly used in anesthesia and pain relief. Its hallucinogenic and dissociative effects have fueled recreational use especially in young adults. This case highlights irreversible bladder fibrosis and hepatobiliary injury from chronic use, figure 2 illustrates a possible mechanism of pathophysiology but little is currently understood. Clinicians should be alert to these atypical, multisystem effects. Non-obstructive uropathy and cholangiopathy may mimic surgical emergencies but reflect drug toxicity. Early recognition and cessation are key to preventing lasting damage.

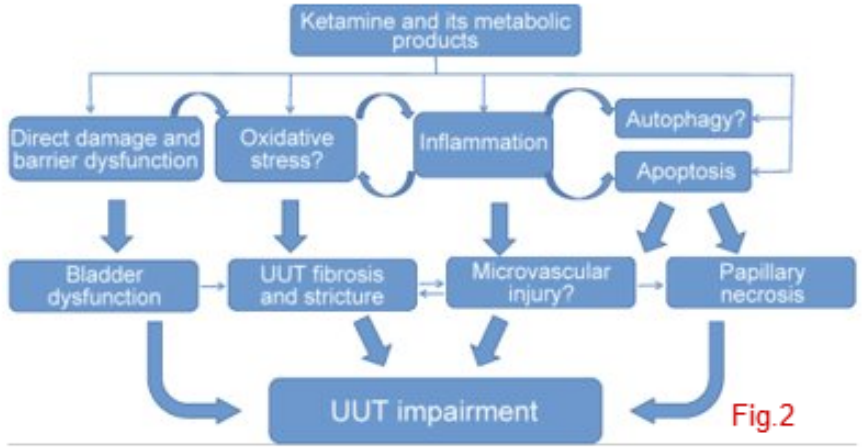


Fig.2

Differentials:

Obstructive uropathy (e.g. prostatic, urethral stricture), Neurogenic bladder (spinal pathology, diabetes), Interstitial cystitis / radiation cystitis, Drug-induced cystitis (cyclophosphamide)

Clinical Pearl: In young patients with unexplained AKI or hyperkalemia, think ketamine cystitis — a silent cause of obstructive uropathy. **Check the bladder, stop the ketamine, save the kidneys.**

Authors

Dr. A. Gilmore – Consultant in Acute Medicine

Dr. A.Sancaran , Dr. A.Noble, Dr. D.Mcdaid, Dr. D.Mcgrath

References:

1.National Institute for Health and Care Excellence (NICE), Ketamine. British National Formulary (BNF).

2.Fenton, C. and Yousef, S. (2023) KetamineToxicity. StatPearls. Treasure Island (FL): StatPearls Publishing =

No conflict of interest

The B12 Illusion with Whippets Abuse

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NHS
Wirral University Teaching Hospital
NHS Foundation Trust

BACKGROUND: **Nitrous oxide** is a colourless gas which was **initially used as anaesthetic for dental procedures** [1]. It is now easily accessible due it's **sale in the catering industry** as "whippets" - aerosol chargers used in canisters of whipped cream. It is the **second most used drug between 16-24 yr olds** [2]. It is inhaled via balloons and leads to a feeling of **euphoria which can last from seconds to a few minutes**, depending on the individual's rate of metabolism.

CASE PRESENTATION

18-year-old male presenting with a **3-week history** of **progressive bilateral lower limb numbness, weakness, and gait unsteadiness**.

No past medical history, no recent viral infections. No family history of neurological diseases.

No history of vegetarianism or risky sexual behaviours. Later disclosed that he used **approximately six whippet canisters weekly for six weeks**.

EXAMINATION

Neurological examination revealed **proximal (4/5) and distal (3/5)** MRC power scale **weakness, glove-and-stocking sensory loss** (right>left), and **absent lower limb ankle and knee reflexes**.

INVESTIGATIONS

Normal serum B12 and **folate** but **hyper-homocysteinaemia** (145 µmol/L). **MRI spine ruled out structural lesions** but was limited by motion artifact.

PATHOPHYSIOLOGY

Nitrous oxide causes **inactivation of B12**, leading to **disruption in the homocysteine metabolism** and the maintenance of the myelin sheaths. This in turn leads to oxidative stress, endothelial damage and **subacute degeneration of the spinal cord**. It classically affects the **corticospinal tract** and **dorsal column** due to their high myelin demands.

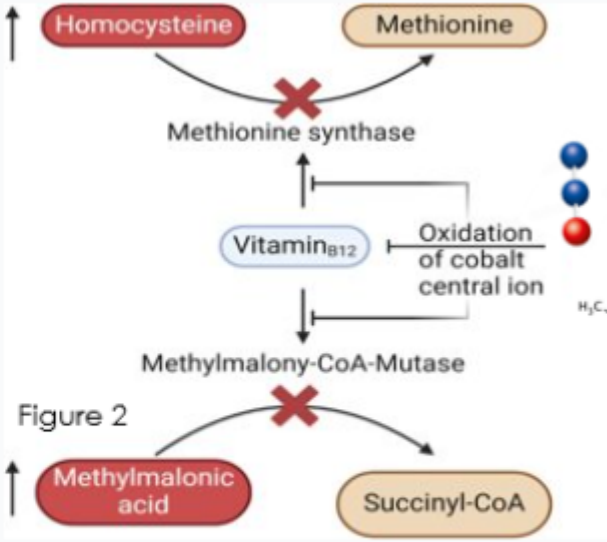


Figure 2

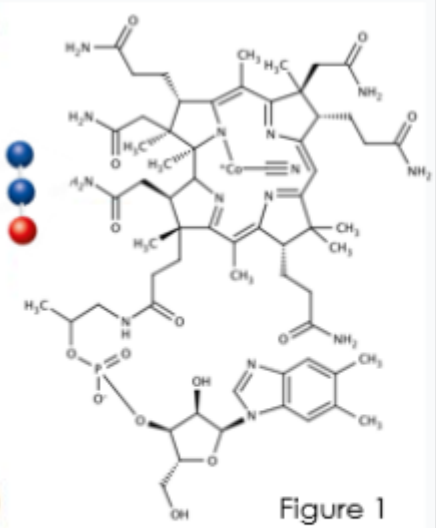


Figure 1

REFERENCES
https://www.ncbi.nlm.nih.gov/books/NBK532922/
https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/drugmisuseinenglandandwales/yearendingmarch2020/pdf
https://pn.bmj.com/content/23/3/222#F1

TREATMENT

MEDICAL: **Immediate intramuscular vitamin B12** (1 mg on alternative days) helps to **bypass nitrous oxide–inactivated enzymes** and **folate supplementation supports homocysteine reduction**. Treat for 2 weeks and then assess neurological response. Continue until symptoms resolve. Can treat up to 8 weeks [3].
REHABILITATION: Ongoing intensive physiotherapy and rehab targets gait instability and motor weakness.
OUTCOME: Under Neurology follow-up at Walton CNN; homocysteine levels have normalized.
DIFFERENTIALS: **GBS**, **transverse myelitis**, **SCD from true B12 deficiency**, or **HIV associated vacuolar myelopathy**.

CONCLUSIONS

- Acute physicians should remember chronic use of N2O causes a **neuro-psychiatric presentation** and a normal B12 level does not exclude it as the underlying pathology is that of a **functional B12 deficiency**, **homocysteine and methylmalonic acid levels should be assessed early on**.
- **Early SCD may lack MRI abnormalities**, emphasizing the role of examination and biochemistry.
- **Prompt treatment helps reverse symptoms**.

The authors declare that they have no conflict of interest.

Mollaret's Meningitis

NHS Wirral University Teaching Hospital NHS Foundation Trust

Dr M. Hamad (Consultant in Acute Medicine) • Mrs S. Dasuqi (Critical Care Clinical Pharmacist) •
Dr A. Sancaran (Senior Clinical Fellow Acute Medicine) • Dr J. Coulthurst (FY-1)

Introduction:- Mollaret's meningitis (recurrent benign lymphocytic meningitis) is a rare neurological syndrome characterised by:

- ≥3 recurrent aseptic episodes
- Self-limiting course
- Strong association with HSV-2

First described by Pierre Mollaret (1944).

Case Presentation

35-year-old man presented with acute severe headache, photophobia, vomiting, and neck stiffness.
History: three identical self-resolving episodes over the past two years, each requiring admission (7–10 days recovery).
No significant past medical or drug history.
Exam: meningism without focal deficits, rash, or systemic findings.

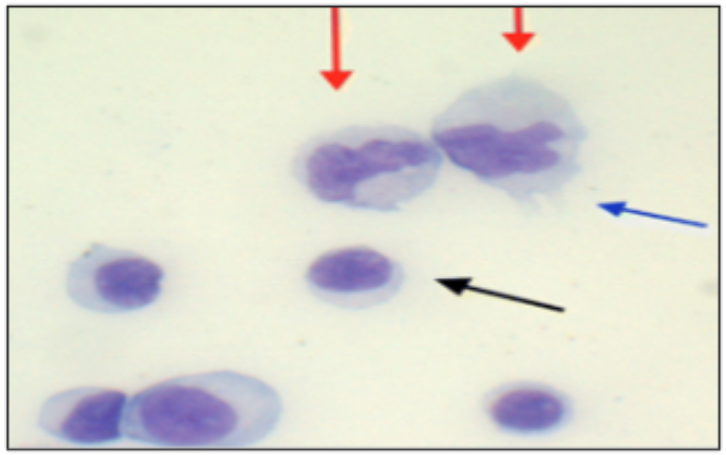
Management

Investigations: Bloods, CXR, ECG, and CT brain were normal.
MRI: mild meningeal enhancement.
CSF: lymphocytic pleocytosis, raised protein, normal glucose.
HSV-2 DNA detected on PCR, consistent with prior results.
Empirical antibiotics stopped once viral cause confirmed.
IV Acyclovir (10 mg/kg q8h) continued → marked improvement within 72 hours. Discharged with neurology follow-up and consideration for long-term antiviral prophylaxis.

Relevance to Acute Medicine

Patients often present acutely with meningitis symptoms mimicking bacterial meningitis. Recognition of recurrent, self-limiting pattern prevents unnecessary broad-spectrum antibiotic use.
Detailed history (previous identical episodes) is diagnostic gold. Targeted HSV PCR testing and early microbiology/neurology input streamline management. Highlights the importance of antimicrobial stewardship and pattern recognition in acute settings.

Fig 1: Mollaret Cells (endothelial polymorphonuclear cells)



Aseptic meningitis mimics:-
SLE, Behcet's disease, Sarcoidosis, Dermoid cyst, Neoplastic meningitis, Lymphoma.

Discussion :-

Mollaret's meningitis should be considered in any patient with recurrent aseptic meningitis.
-**CSF findings:** transient pleocytosis, Mollaret cells, and positive HSV-2 PCR (though PCR sensitivity may fluctuate).
-**Diagnosis:** a negative PCR does not exclude the condition — clinical context and recurrence pattern are key.
-**Treatment:** typically antiviral therapy (e.g. acyclovir). Spontaneous recovery can occur even without antivirals.
-Long-term antiviral suppression may reduce recurrences, though evidence remains limited.

References:

1. Mascia RA, Smith CW. Am J Med Sci 1984; 287:
2. Galdi AP. Arch Neurol. 1979; 36:657–658.
3. Sendi P, Graber P. CMAJ 2006; 174 (12) 1710-1710-a

Declaration : No conflict of interest

The Silent Stanford A

NHS
Wirral University Teaching Hospital
NHS Foundation Trust

Introduction:

Aortic dissection represents one of the most catastrophic emergencies in cardiovascular medicine, carrying a mortality rate that increases by 1-2% per hour without surgical intervention.

While classic teaching emphasises abrupt, severe pain as the hallmark presentation, we present an extraordinary case that defies this paradigm — a completely asymptomatic dissection discovered incidentally in a patient with a strong family history of connective tissue disorder.

This case not only challenges fundamental clinical assumptions but also powerfully underscores the critical importance of proactive screening.

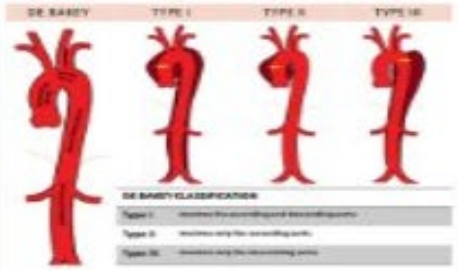
Case Presentation:

A 56-year-old **asymptomatic** female was referred for outpatient transthoracic echocardiography to investigate a **newly discovered diastolic murmur** noted during a routine follow-up for hypertension management.

Her history was significant for a strong **family history of Marfan syndrome** in her mother and sister, though she had never undergone formal genetic testing or dedicated aortic imaging. Despite thorough and repeated questioning, she explicitly denied any pain, dyspnoea, syncope, or neurological symptoms.

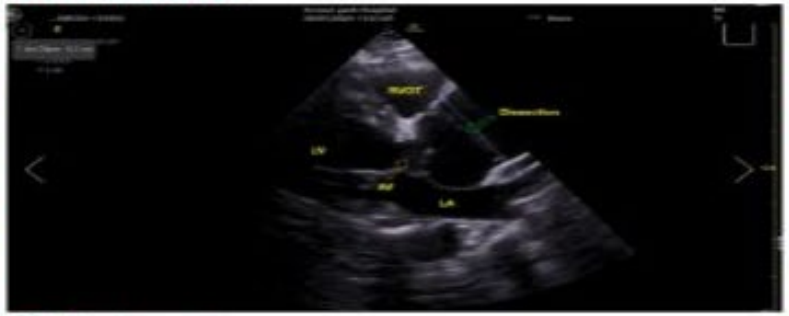
Cardiovascular auscultation revealed a soft, early diastolic murmur. She was haemodynamically stable (BP 111/69 mmHg, HR 64 bpm). Remarkably, lab results, including troponin-I and D-dimer, returned well within normal limits.

Bedside echocardiography demonstrated a severely dilated aortic root of 5.9 cm with a highly mobile, oscillating intimal flap and moderate-to-severe aortic regurgitation. Emergency CT angiography confirmed an **Acute Stanford A (DeBakey type II) Dissection** originating from a gigantic 72mm root aneurysm, extending to the brachiocephalic artery origin, with no evidence of mural thrombus, suggesting an acute event.

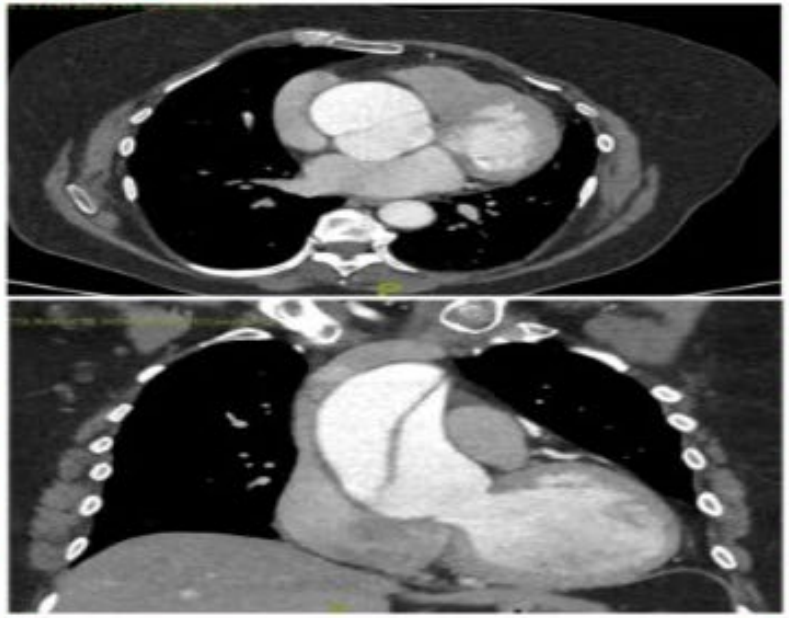


The patient was immediately started on a titrated labetalol infusion for strict haemodynamic control, targeting systolic BP <130 mmHg and heart rate <60 bpm in preparation for emergency surgical repair.

Bedside ECHO:



CT Aortogram:



Clinical pearl:

Sometimes, the most critical warnings come not with a scream, but with a whisper. In high-risk patients, a single new murmur can be the only clue to a silent, lethal dissection

- A clue that, when heeded, grants the power to alter a fatal outcome.

Discussion:

This case is exceptional for its triad of unusual features:

1. The silent clinical presentation

2. The extreme dimensions of the aortic root aneurysm at discovery.

3. The completely normal biomarkers despite an acute dissection.

In patients with high risk of connective tissue disorders, chronic aortic remodelling and neural adaptation may attenuate or eliminate the typical pain response, rendering the dissection clinically silent until terminal rupture.

The murmur of acute aortic regurgitation, therefore, becomes a paramount— and potentially solitary—sentinel sign, mandating immediate and definitive vascular imaging.

The patient was transferred to tertiary care for surgical intervention on the same day, exponentially increasing her chance of survival.

This case proves that relying solely on classic symptoms like severe pain may miss life-threatening aortic dissections. Therefore, proactive imaging and monitoring in patients with connective tissue disorders are essential.

Dr M Hamad - Consultant Acute Medicine
Mrs S Dasuqi - Critical care Clinical Pharmacist
Dr A Sancaran - Senior Clinical Fellow Acute Medicine
Dr H Suliman - FY2
Dr L Malik - FY1

References:

1. Association of painless acute aortic dissection with increased mortality. Park SW, Hutchison S, Mehta RH, et al. Mayo Clin Proc. 2004;79:1252–1257. doi: 10.4065/79.10.1252.
2. 2. The International Registry of Acute Aortic Dissection (IRAD): new insights into an old disease. Hagan PG, Nienaber CA, Isselbacher EM, et al. JAMA. 2000;283:897–903.
3. 3. Asymptomatic aortic dissection in Marfan syndrome. Wong T, Kilner PJ, Gatzoulis MA. Heart. 2002;87:66. doi: 10.1136/heart.87.1.66

Declaration - No conflict of interest

IMPROVING ANTICOAGULATION REVERSAL IN ACUTE INTRACEREBRAL HAEMORRHAGE: A QUALITY IMPROVEMENT PROJECT

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NHS
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SCAN ME

Introduction

Intracerebral haemorrhage (ICH) accounts for 10–15% of all strokes in the U.K. and carries high morbidity and mortality rate of up to 50% within one month, with only 20% regaining functional independence[1]. Stroke care costs approximately £26 billion annually to the NHS, with long-term care adding a further burden to families and healthcare services[2]. Rapid reversal of anticoagulation in ICH with Prothrombin Complex Concentrate (PCC), has been linked to a 20% reduction in mortality[3].

Aims & Objectives

Our main reason for this study was to identify delays in treatment for anticoagulation reversal

- ❑ Create an ICH Fast-Kit on the Stroke Ward for quicker interventions – **optimize DTN time**
- ❑ To meet standards of our ABC-ICH protocol 3.2
- ❑ Improve education and awareness about the protocol and the importance of anticoagulation reversal within the recommended timeframe

Methods

We obtained our retrospective data using the **SSNAP database** (Sep 2023 – Aug 2024)

Patient selection criteria

- Admitted to our Stroke Unit <24h
- On anticoagulation
- Received a dose of anticoagulation 24h prior to admission

Exclusion criteria

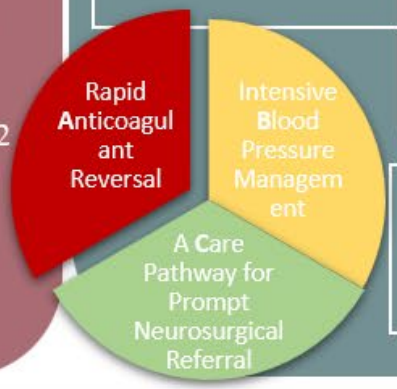
Patients commenced on our end-of-life pathway or died within 24h of admission

Measured parameters

- Time of symptom onset
- Time of initial presentation
- Anticoagulant type
- Time of CTb scan
- Time taken to reverse anticoagulation
- Reversal agent used

1ry outcome measure: Door-to-Needle time (DTN)

2ry outcome measure: Door-to-Scan Time (DTS)

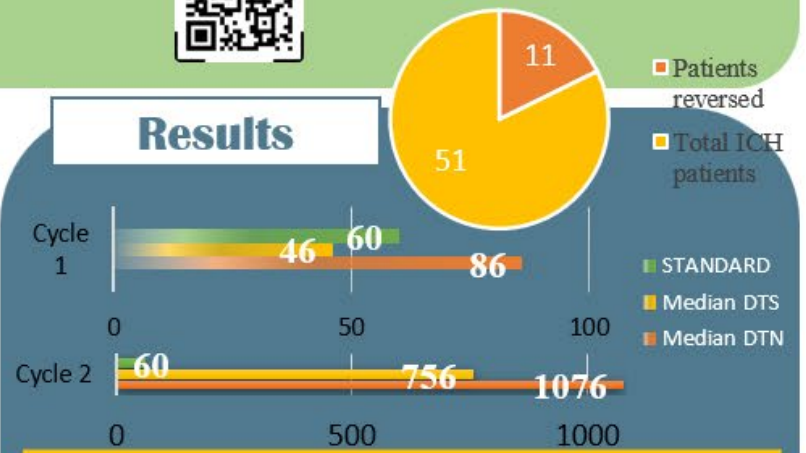


Interventions

- Posters
- Education – Trust/Ward staff teaching
- Educational video on our Intranet
- ICH FAST-Kit

We then conducted a prospective study for 8 months using the same criteria from Oct 2024 – May 2025

Results



	Retrospective Study	Prospective Study
Total ICH Patients	51	73
Total Patients on Acg	13	12
Eligible Patients	11	1
Reversal <60min	1	0

Discussion/Conclusion

- Protocol standards not being met – 1 patient reversed <60 min
- No valid conclusion due to lack of sufficient data in 2nd cycle,
- Limited awareness about the protocol, documentation issues, and delayed access to reversal agent
- Ongoing 3rd cycle audit – updating stroke proformas, integrating ABC-ICH protocol into departmental teaching, and ultimately, working towards ICH Fast-Kit on the Stroke ward– logistics i.e conditions required for Octaplex storage

Role of Thoracic Ultrasound in Early Diagnosis: A Safer & Quicker Approach

Dr Asjad Ahmed Eitezaz, Dr Muhammad Usama, Dr Abu-Bakr Ahmed, Dr Arwa Jibril, Dr Nadia Sayeed

NHS Walsall Healthcare NHS Trust

Introduction

Pleural effusions are a common cause of hospital admission and morbidity. Delays in confirming diagnosis and scheduling procedures extend hospital stays and increase radiation exposure when CT is used as first-line imaging.

- **BTS 2023 guidance** recommends **thoracic ultrasound (TUS)** before pleural procedures, highlighting its diagnostic role.
- Despite its established pre-procedural value, diagnostic TUS remains underutilized.
- Bedside TUS offers **rapid confirmation**, enabling **earlier intervention and safer care**.

Aims

- Assess timeliness and compliance with **BTS standards** for inpatient pleural procedures.
- Identify causes and contributing factors to procedural delay.
- Develop improvement strategies to enhance **efficiency and patient safety**.

Materials and Methods

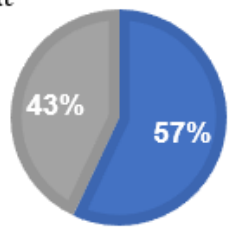
- Walsall Manor Hospital, UK
- Quality Improvement Project (first **PDSA** cycle)
- 50 inpatient pleural procedures (retrospective review)
- Demographics, indications, imaging modality, timing, and cause of delay
- Compliance with BTS standards assessed

Results

BTS Compliance: 57 %

Contributors to delay:

- Anticoagulation management
- Weekend service gaps
- Referral inefficiencies
- CT-capacity dependence
- Limited ultrasound-trained workforce



Results and Discussion

Case vignette: Suspected effusion—11-day delay from repeated CXR/CT while O_2-dependent; day-1 bedside TUS could confirm and allow immediate drainage

Why delays happen:

Imaging pathway and workforce bottlenecks.

Why bedside TUS:

Faster, safer, and more cost-effective; reduces radiation and shortens stay.

Implementation:

Cross-train ED, GIM, and Acute Medicine to expand access; aligns with ARCP competency requirements.

Conclusion

Delays in pleural procedures are multifactorial; imaging workflow is central. TUS is under- utilized as a diagnostic tool. Embedding TUS as the initial diagnostic step offers a safer, quicker and more cost effective approach which shortens stay.

Planned interventions: education and training, expanded TUS competence, pathway redesign, and re-audit.

Rare Case of Bilateral Adrenal Haemorrhage Associated with HIV and Intravenous Stimulant Drug Use

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Department of Diabetes and Endocrinology, Northern Care Alliance NHS Foundation Trust Bury Care Organisation, Greater Manchester, UK

11 – 12 November
Med+ 2025

Background

Adrenal haemorrhage (AH) is a rare, life-threatening condition that can lead to acute adrenal insufficiency [1,2].

HIV infection and **stimulant drug use** have both been associated with adrenal dysfunction through mechanisms such as opportunistic infection, vascular injury, and stress-induced coagulopathy [3-7].

To our knowledge, this is the **first case** of non-traumatic AH in the context of HIV infection and illicit stimulant drug use.

Case Presentation

Demographics: 33-year-old, Caucasian man
Presentation: 5-day history of abdominal pain, fever, diarrhea, and vomiting.

Past medical history: HIV, illicit drug use [methamphetamine and cocaine], current smoker
Drug history: Truvada 200/245 mg once daily and Raltegravir 600 mg once daily

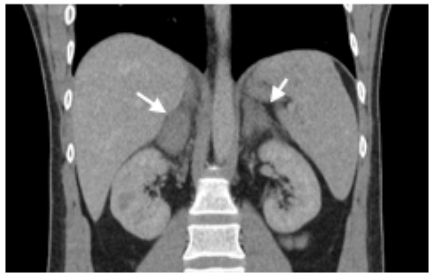
Full case images and reference list available via QR code

Management

- Imaging confirmed bilateral AH (Figure 1).
- Administered IV fluids, IV antibiotics, analgesia, and high-dose intravenous steroids (50 mg four times daily).
- Discharged on oral hydrocortisone 10 mg, 5 mg, and 5 mg.

Follow up

- Interval CT scan after 14 months showed complete resolution of the adrenal haemorrhages (Figure 2).
- Hydrocortisone day curve showed partial recovery of adrenal function.



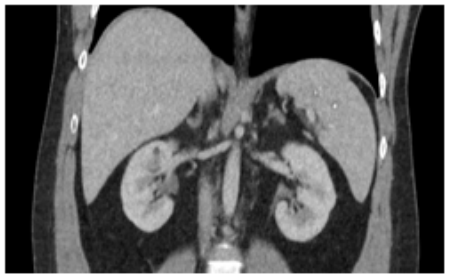


Figure 1 & 2. Contrast-enhanced CT of the abdomen and pelvis showing bilateral adrenal haemorrhage on admission (top) and complete resolution at 14 months (bottom).

Test	Result/Interpretation
Cortisol (9 AM)	95 nmol/L *(low)*
Synacthen Stimulation Test	95 → 150 → 201 *(inadequate)*
Aldosterone	Undetectable
Renin	0.1 pmol/hr *(low)*
Prolactin	187 mU/L *(normal)*
Urine & plasma metanephrines	Unremarkable
HIV-1 viral load	Undetectable
CD4 count	699 cells/µL *(normal)*

Table 1. Summary of Hormonal and Biochemical Investigations.

Discussion

Pathophysiology: In sepsis, bacterial endotoxins trigger pro-inflammatory cytokines causing adrenal venous injury and parenchymal haemorrhage[1,2,8].
Serial imaging is recommended to monitor resolution of the haematoma [8,9] .
Prognosis depends on early recognition and prompt treatment [1].

Key points:

Consider AH in **HIV-positive** or **IV stimulant drug–using** patients with **clinical features of adrenal insufficiency**.

Early recognition and **prompt steroid replacement** are crucial to prevent adrenal crisis and mortality.

HIV infection and **stimulant drug use** may increase susceptibility to **adrenal destruction and haemorrhage**.

Further research is needed on the **direct effects of HIV, antiretroviral therapy, and methamphetamine** on the adrenal gland.

Out of the (orbital) box: A Case of IgG4-Related Disease Presenting with Lacrimal Gland Swelling

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Introduction

IgG4-related disease (IgG4-RD) is a chronic, relapsing-remitting, multi-system fibroinflammatory disorder characterized by tumefactive lesions, dense lymphoplasmacytic infiltrates rich in IgG4-positive plasma cells, and often elevated serum IgG4 levels. It may affect multiple organs either synchronously or metachronously, with a tendency to mimic malignancy or infection.

Case Presentation

A 43-year-old Caucasian female with a background of systemic lupus erythematosus and antiphospholipid syndrome (diagnosed in 2015) presented with progressive bilateral lacrimal gland swelling over several months.

	Right eye	Left eye
Visual acuity	6/6	6/7.5
Intra Ocular Pressure	12	12
External eye examination	Enlarged lacrimal gland	Enlarged lacrimal gland
Proptosis	No exophthalmos	No exophthalmos
Ocular motility	Normal	Normal
RAPD	absent	absent
Ishihala	15/15	15/15
Anterior segment	NAD; Dry eye	NAD; Dry eye
Posterior segment	NAD	NAD

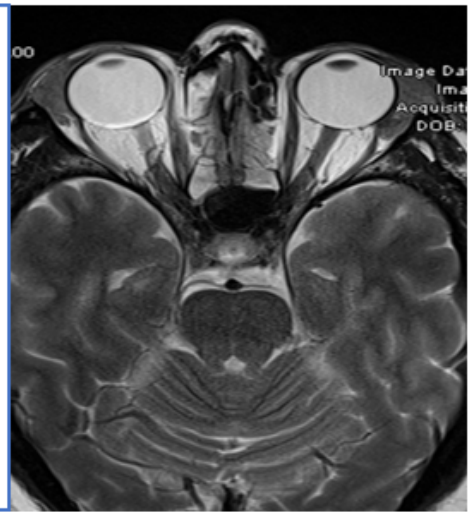
Her medical history included sensorineural hearing loss (2015), asthma, migraine, and previous cholecystectomy. She was taking hydroxychloroquine but previously did not tolerate methotrexate. She first noticed bilateral scleral icterus in January 2023. Liver function tests and hepatitis screen were normal. Multiple GP and optician consultations led to treatment for presumed dry eye disease without improvement. She reported progressive orbital swelling, dry eyes and mouth, and epigastric discomfort. Investigations for Sjogren syndrome and sarcoidosis were negative.
In January 2024, she presented to the Emergency Department with severe epigastric pain and was diagnosed with acute pancreatitis. She subsequently developed pancreatogenic diabetes (type 3c).

Investigations

- Raised serum IgG4 (4.85 g/L)
- MRI orbit: bilateral lacrimal gland enlargement (L>R)
- Biopsy of lacrimal gland: chronic inflammatory changes consistent with IgG4-related disease
- FNA of pancreas: IgG4 background staining
- ACE, calcium, myositis antibodies: normal/negative

Management and Outcome

Oral prednisolone 40 mg was commenced in March 2024 and tapered over eight weeks. There was a rapid clinical response with marked reduction of lacrimal gland swelling after 7 days. However, symptoms recurred after cessation of steroids. Mycophenolate mofetil (MMF) was initiated as a steroid-sparing agent but was not tolerated. Rituximab therapy was then started.



Discussion

IgG4-RD is an under-recognised systemic disease with diverse manifestations. Orbital involvement occurs in 17–60% of cases, most often affecting the lacrimal glands, trigeminal nerve, orbital fat, and extraocular muscles. Pancreatic disease (autoimmune pancreatitis) is frequently the first presentation. Early diagnosis and corticosteroid therapy usually lead to good short-term outcomes, though relapses are common. Diagnosis combines clinical features (tumefactive lesions), serology (elevated IgG4), and histopathology (IgG4-positive lymphoplasmacytic infiltrate with fibrosis). Differentials include Sjogren syndrome, sarcoidosis, granulomatosis with polyangiitis, thyroid eye disease, orbital lymphoma, and idiopathic orbital inflammation.

Conclusion

This case illustrates the importance of considering IgG4-related disease in patients with bilateral lacrimal gland enlargement and systemic features such as pancreatitis. Multisystem involvement, characteristic serology, and histopathology support the diagnosis. Early steroid therapy is usually effective, but many patients require long-term immunosuppression to maintain remission.

References

1. Wallace, Z.S. et al. (2024) 'Current and future advances in practice: IgG4-related disease', Rheumatol Adv Pract.
2. Perugino, C.A. et al. (2023) 'Evaluation of the safety, efficacy, and mechanism of action of obexelimab for the treatment of patients with IgG4-related disease: an open-label, single arm, single centre, phase 2 pilot trial' The Lancet Rheumatology.
3. Stone, J.H. et al. (2012) 'IgG4-related disease', N Engl J Med, 366, 539–551.
4. Lanzillotta, M. et al. (2020) 'Advances in the diagnosis and management of IgG4 related disease', BMJ, Vol 369.
5. McNab AA, McKelvie P. IgG4-¬ related ophthalmic disease. Ophthalmic Plast Reconstr Surg. 2015;31(2):83–88.

Haematoma estimation in Intracerebral Haemorrhage (ICH), the difference between Brainomix (AI-based software) and the ABC/2 formula: A Single Centred, Retrospective Review.

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Whiston Hospital, Mersey West Lancashire Trust

NHS Mersey and West Lancashire Teaching Hospitals NHS Trust

Introduction

- Haematoma size is a key factor in determining the severity and outcome of intracerebral haemorrhage (ICH)
- UK guidelines define a haematoma **>30mL** as *severe*
- Such cases warrant urgent neurosurgical discussion for possible surgical evaluation (1,2)
- Brainomix is an AI-based imaging software that uses machine learning algorithms to segment and quantify brain lesions, including ICH, providing rapid haematoma volume estimates to aid clinical decision making.

Method

- Retrospective review of **47** patients with confirmed ICH at Whiston Hospital
- Data was collected for patients admitted with an ICH between January 2024 and June 2025
- Haematoma volumes were calculated using the ABC/2 formula
- All measurements were reviewed and confirmed by a Consultant Radiologist
- Results compared the ABC/2 formula calculations to AI-based software (Brainomix) volume estimates.

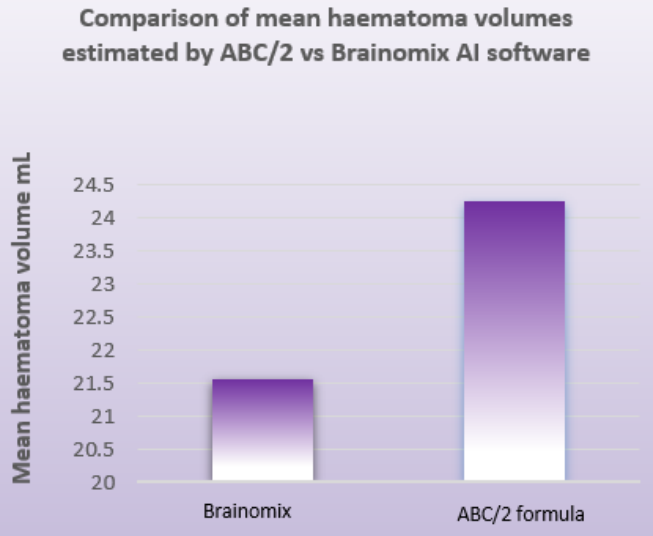


Figure 1 *Graph showing comparison of mean haematoma values estimated by the ABC/2 formula vs Brainomix AI software*

Results

- Brainomix successfully calculated haematoma volume measurements for **31** out of **47** patients
- ABC/2 gave larger estimates in **16** patients.
  - Of these, **8** patients had differences **>5mL**, which could be clinically significant
- Brainomix produced larger volume estimates in **5** patients
  - All differences were **<5mL**
- In **10** patients, both methods gave nearly identical volumes **(<1mL difference)**
- Mean haematoma volumes were calculated for both ABC/2 formula and Brainomix *(see figure 1)*
  - ABC/2: **24.23mL**
  - Brainomix: **21.55mL**
- Most discrepancies occurred in large haematomas **(>20mL)**
- Small haematomas were generally estimated similar by both methods

Conclusion

- AI based software should be used with caution for haematoma estimation
- More studies are needed to standardise estimation tools for ICH
- Using multiple methods helps ensure accurate haematoma volume measurements until AI tools are fully validated

References

1) National Advisory Committee for Stroke. Neurosurgical referral in intracerebral haemorrhage. www.naccs.org.uk/resource/intracerebral-haemorrhage [Accessed 1 Sep 2025].

2) Green AR, Hall CL, Carter F, Lawrence T, Wilkinson DA, Adaway M, et al. Consensus statements and care bundle for the acute management of patients with intracerebral haemorrhage in the UK. Stroke Vasc Neurol 2023;8:e001236.

Levelling the playing field: more than just the service versus training debate

Dr C. Froneman, Dr B. Khan

Introduction

Training and development are critical components of workforce success (1). Residents face a myriad of challenges to training (e.g. minimal specialty time, frequent rotations etc.) whilst also competing for opportunities with other trainees and continuing to meet service demands. This not infrequently results in inequity and friction amongst trainees. Providing a planned, structured and constructive training environment can negate this and also lead to wider benefits:

1. Maintaining a healthier work-life balance
2. Harmonious functioning of a team
3. Improved efficacy of the overall service
4. Improved trainee experience
5. Adapting to a changing workforce i.e. working less than full time (LTFT)

Ultimately this will lead to a more sustainable working environment for current and future residents.

Aim

Optimizing training and development of trainees by creating a job-planned, structured training placement balancing curriculum requirements and service needs.

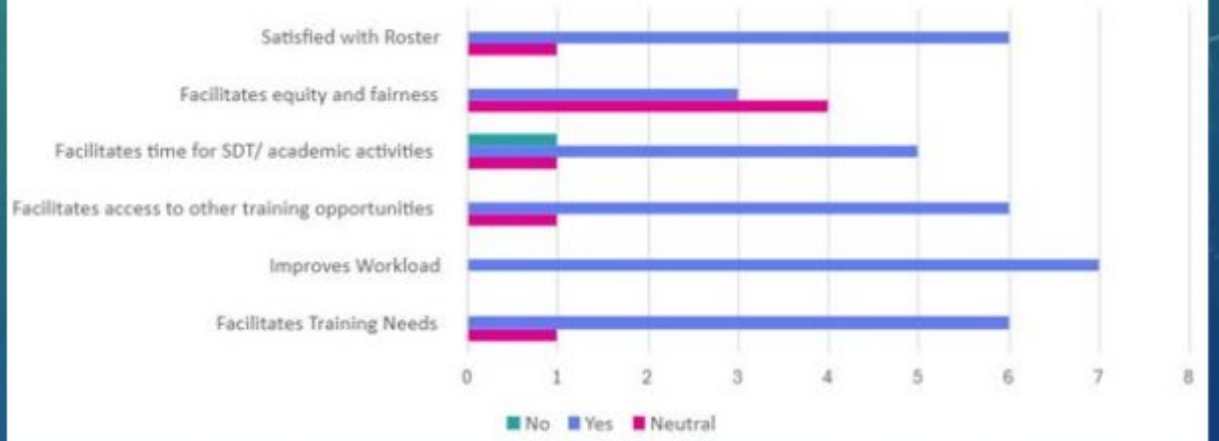
Methodology

1. Gap Analysis of trainees' learning needs
2. Identify local and regional learning opportunities
3. Match and schedule opportunities to trainees
4. Extend opportunities to further enhance training i.e. aligned specialty training days, specialty clinics

Results

The survey showed an overwhelming positive response. Residents found the roster improved management of overall workload, created different training opportunities and facilitated the achievement of training needs.

Figure 1. Resident Feedback 1 year after implementation of monthly schedule



Conclusion

This monthly schedule is a simple and easily executed solution to create a better learning environment for trainees as well as a more balanced and effectively run service.

References: 1. NHS Long Term Workforce plan. (June 2023)

From Final Year to FY1 : Enhancing Final Year medical students' Confidence and Competence for Out-of-Hours Task

Hannah Sung1, Giselle Ngan2, Evita Muller2, Anna Gurung2, Tessa David2, Sanad Kamal2

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Background

The transition from medical school to a foundation year 1 doctor is widely recognised as one of the most challenging stages of training

Newly qualified doctors often feel underprepared for out of hours (OOH) work, particularly in :

- managing acute unwell patients
- prioritising tasks under pressure
- navigating a new clinical system like EPIC

These gaps can compromise patient safety and contribute to stress, hesitation and burnout

Aim

The lack of structured undergraduate training focused on OOH readiness is identified

To improve final year medical students' confidence and preparedness for common OOH tasks by >50%, through a structured two hour simulation based training session

Methodology

The Plan-Do-Study-Act (PDSA) cycle methodology is adopted.

Plan - current F1 doctors were surveyed to identify the most challenging and common OOH tasks encountered.

Do - from the above information, six simulation stations are designed, which include

hyperglycaemia, fluid review, falls, deteriorating patients, chest pain and results review. Each station consists of a 10-minute interactive scenario followed by a 5-minute focused feedback and mini-teaching session. The scenarios mirrored real F1 experiences with immediate facilitator feedback

Study - Participants completed pre- and post-session Likert scale surveys assessing confidence

Act - feedback used to refine scenarios and integrate more realism

Results

Data showed a significant improvement in self-reported confidence across all domains

- Confidence in early recognition and timely escalation of deteriorating patients
- Felt better equipped to prioritise multiple tasks in a safe and structured way - reported improved clarity and confidence
- Clear boost in overall preparedness for realities of OOH clinical scenarios

Qualitative feedback reflected relevance and realism, confidence and preparedness and facilitator feedback, for example

- "Scenarios mirror what we face on call - I feel like a real shift"
- "Now I know how to structure tasks and escalate safely"
- "Immediate feedback made it clear what I did well and where to improve"

Acting upon feedback from cycle 1, improvements were made to facilitate further realism of OOH shifts and the integration of real-time elements

- EPIC playground incorporated from cycle 2 onwards

This has yielded further significant improvement in stations like the task board and more positive qualitative feedback highlighting improved engagement and realism.

Fig. 1 Pre and post session Likert scale survey - Cycle 1

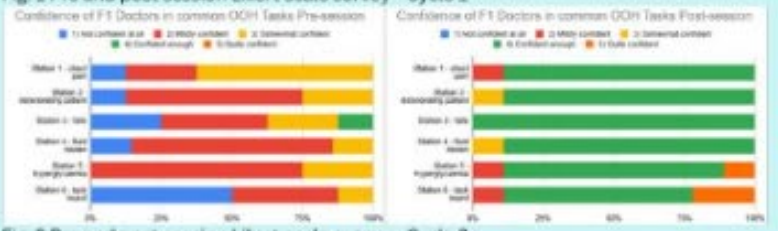

Fig. 2 Pre and post session Likert scale survey - Cycle 2

Fig. 3 Pre and post session Likert scale survey - Cycle 3

Next Steps

In order to further enhance realism and mimic the real-life time-pressured scenario, the bleep system will be incorporated into future sessions, to simulate the unpredictable and often chaotic nature of receiving multiple concurrent clinical tasks

Long-term vision: to make these simulations an ongoing, integrated part of medical education.

Conclusion

This pilot showed the importance of good medical education with simulation scenario to better prepare medical students for real life challenges as resident doctors. This not only improves individual preparedness, but directly contributes to patient safety, clinical efficiency and well being of doctors.

References

1. Monrouxe LV, Bullock A, Tseng HM, Wells SE. Association of professional identity, gender, team understanding, anxiety and workplace learning alignment with burnout in junior doctors: a longitudinal cohort study. BMJ Open. 2017;7(12):e017942-e017942. doi:https://doi.org/10.1136/bmjopen-2017-017942
2. Brennan N, Corrigan O, Allard J, et al. The transition from medical student to junior doctor: today's experiences of Tomorrow's Doctors. Medical Education. 2010;44(5):449-458. doi:https://doi.org/10.1111/j.1365-2923.2009.03604.x
3. Monrouxe LV, Grundy L, Mann M, et al. How prepared are UK medical graduates for practice? A rapid review of the literature 2009-2014. BMJ Open. 2017;7(1):e013656-e013656. doi:https://doi.org/10.1136/bmjopen-2016-013656
4. Tallentire VR, Smith SE, Skinner J, Cameron HS. The preparedness of UK graduates in acute care: a systematic literature review. Postgraduate Medical Journal. 2011;88(1041):365-371. doi:https://doi.org/10.1136/postgradmedj-2011-130232

When Minds and Bodies Collide: Managing Complex Physical Illness in a Psychiatric Inpatient

Lead Author: Christina Regi F2 (County Durham and Darlington Foundation Trust). Co Authors: Adarsh Iyer SHO, Mathew Kunnel Jomon GPST1

1. INTRODUCTION

Individuals with mental illness exhibit a higher prevalence of physical comorbidities, with multi-morbidity expected to increase [1].
Managing physical health problems whilst maintaining psychiatric care has proven to be challenging.

Case Relevance:

- underscores the importance of integrating physical and psychiatric care
- addresses the clinical challenges involved
- proposes strategies to enhance collaboration between Medicine and Psychiatry to improve patient outcomes.

2. CASE BACKGROUND

Young male with **complex autism** and a **pathological demand avoidance** behavioural profile.
Childhood history: Ventricular septal defect (VSD) and tricuspid regurgitation.
Pre-admission: Long-term inpatient at an **acute male psychiatric ward**
💾 **Current admission:** Presented with a 4-week history of **shoulder pain**, attributed to weightlifting.
🔍 **Clinical findings:** Features suggestive of **injury/ haematoma**, but **elevated infection markers** raises a concern for **infection**.
⚠️ Management complicated by **episodes of non-compliance** and **repeated absconding.**

3. CASE CONTENT

Day 0	🩸 Bloods: Raised CRP and WCC. 🦴 Left shoulder X-ray: Subluxation noted. 🧲 MRI: Haematoma identified, possible superimposed infection. 🧫 Blood cultures: Grew *Streptococcus anginosus*. ❤️ Echocardiogram: VSD with left-to-right shunt, otherwise normal. 🌡️ Clinical course: Developed fevers →commenced on antibiotics.
Day 2	**Arthroscopic washout** performed (bursa); rotator cuff intact. suspected infected haematoma but synovial fluid culture negative → alternative source sought.
Day 4	**CT TAP:** Multiple bilateral pulmonary septic emboli (no large PE on CTPA). Given background of congenital cardiac abnormality → concern for infective endocarditis (IE).
Day 11	**TTE/ TOE** (transthoracic/ transoesophageal echocardiogram): No evidence of vegetation. After IE MDM + Adult Congenital Heart Disease (ACHD) review → treated as **presumed infective endocarditis**. [Duke's Criteria]

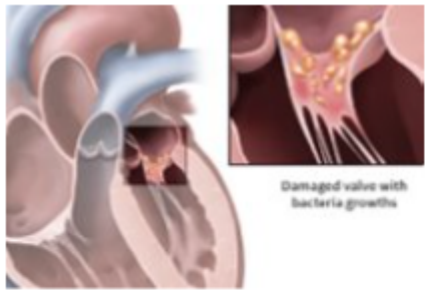

Image: Bacterial vegetations on a damaged heart valve in infective endocarditis.
Source: University of Heart Ottawa Heart Institute

4. CHALLENGES/ ADAPTATIONS

Clinical / Diagnostic	Patient Non-compliant with TOE procedure → • Patient returned to Psychiatry hospital in evenings; came back for day reviews & blood tests. • Admitted night before procedure; NBM maintained.
Medication	No clear medication list; missed doses meant poor continuity of Psychiatric care. Difficulty in rationalising antimicrobial therapy (patient reluctance, vascular access, out-of-hours dosing) → • IV ceftriaxone 2g OD (instead of TDS) • Single-dose IV dalbavancin 1500mg gave 14 days coverage.
Patient & Staff Safety	Patient threatening self-harm, violence & absconding; medical staff had not received restraint training → assistance was provided by two trained carers from the psychiatric unit.
Psychosocial	Distress for staff and family → maintained frequent communication between mental health team and medical team.

5. OUTCOME

Coordinated care: Orthopaedics, Microbiology, OPAT, Psychiatry, Same Day Emergency Care, Cardiology & ACHD. Completed **4 weeks parenteral antibiotics.**

Organism, Streptococcus, was highly sensitive. Good clinical & biochemical improvement.
Orthopantomography (OPG) XR excluded oral source

6. LEARNING POINTS

- Collaborative medical + psychiatric care teams
- Cross-disciplinary training for staff
- Standardized shared-care protocols
- Shared electronic records & structured communication
- Regular multidisciplinary case

References

1. Pizzol D, et al. Relationship between severe mental illness and physical multimorbidity: a meta-analysis and call for action. BMJ Ment Health. 2023;26(1):e300870

Impact of a 24-hour Critical Care Outreach Service on the Identification and Management of Deteriorating Surgical Patients in a Rural District General Hospital (DGH): A Human Factors Approach

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BACKGROUND

- Surgical patients often deteriorate post-operatively.[1] Strained communication between surgical and intensive care teams during out-of-hours periods can delay vital interventions,[2] particularly in DGH settings.
- This study aimed to assess if implementation of a 24/7 CCOT service in a rural DGH may bridge this gap to facilitate timely review, management and improve outcomes.

METHODS

- A retrospective observational study was conducted in a rural DGH focusing on critically ill surgical patients admitted to ITU.
- The frequency of out-of-hours (17:00 - 08:00) reviews, adverse outcomes and 30-day mortality was measured across 15 patient records over one-month periods before and after the implementation of a 24/7 CCOT (Figure 1).

RESULTS

- ITU review rates significantly increased, with a reduction in adverse outcomes and 30-day mortality rates (Figure 2).
- Other points of note:
  - More frequent documentation by CCOT, ITU and surgical teams.
  - Increased adherence to hospital VTE prophylaxis guidelines.
  - More CCOT reviews for patients who were not admitted to ITU.

CONCLUSIONS

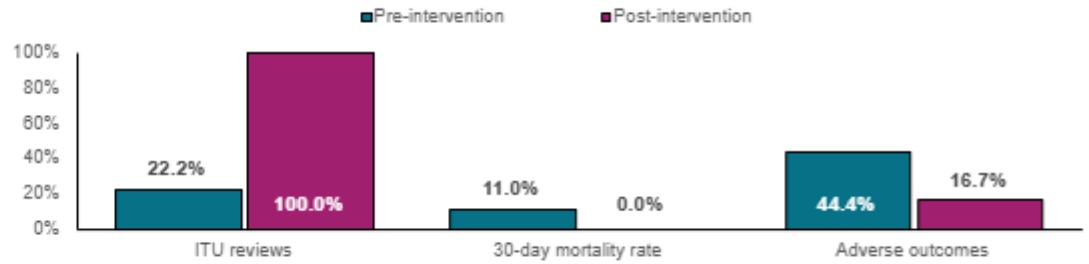
- A 24/7 CCOT service acts as an effective intermediate step for escalating care in deteriorating patients, including timely identification and management.
- Human factors interventions may play significant roles in improving clinical response and patient safety during critical out-of-hours periods in rural DGHs.

FIGURE 1.

Summary of research approach

FIGURE 2.

Proportion of patients records by frequency of out-of-hours ITU reviews, adverse outcomes and 30-day mortality rate, pre- and post-intervention



Abbreviations: DGH: District General Hospital; CCOT: Critical Care Outreach Team; ITU: Intensive Therapy Unit; VTE: Venous Thromboembolism.

References:

1. Mohammed Iddrisu S, Considine J, Hutchinson A. Frequency, nature and timing of clinical deterioration in the early postoperative period. J Clin Nurs 2018; 27: 3544–53.
2. 2. Nagpal, K., Arora, S., Vats, A., Wong, H.W., Sevdalis, N., Vincent, C. and Moorthy, K., 2012. Failures in communication and information transfer across the surgical care pathway: interview study. BMJ quality & safety, 21(10), pp.843-849.

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NHS Wye Valley NHS Trust

Delayed-onset Irinotecan-Induced Pneumonitis in a Colorectal Cancer Patient

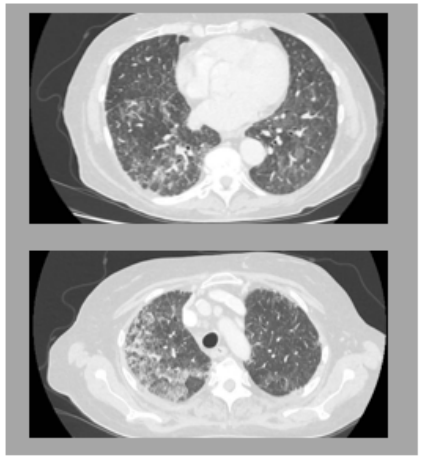
Kenny Ling, Mariam Al-Ani, Justin Choo

BACKGROUND

- Irinotecan is a widely used **chemotherapeutic agent** in the treatment of metastatic colorectal cancer, with established efficacy in combination regimens such as FOLFIRI.(1)
- While its most common toxicities, such as neutropaenia and diarrhoea, are well recognised,(2) irinotecan-induced pneumonitis remains a **rare** but potentially **life-threatening** complication.(3,4)
- Pulmonary toxicity has been reported to occur even **weeks after** administration, and may present subtly, often mimicking infectious causes.
- Prompt recognition and management are essential to **prevent progression** and **optimise outcomes.**

CASE SUMMARY

- **80-year-old female** with metastatic colorectal cancer who developed worsening **dyspnoea** three weeks following her fourth cycle of irinotecan and etoposide.
- CT showed bilateral **ground-glass opacities,** she had **elevated inflammatory markers**, with no microbial growth on blood cultures.
- Empirical **antibiotic therapy** was commenced for presumed atypical pneumonia; however, her **oxygen requirements persisted**. Bronchial washing samples were negative for infectious causes.
- Given the radiological findings, clinical course, and lack of improvement with antibiotics, a diagnosis of **irinotecan-induced pneumonitis** was considered.
- The patient responded well to **high-dose corticosteroids**, with rapid clinical and radiological improvement, and was successfully weaned off oxygen before discharge.



Figures 1&2: HRCT-Chest

REFERENCES

1. Chai Y, Liu JL, Zhang S, Li N, Xu DQ, Liu WJ, et al. The effective combination therapies with irinotecan for colorectal cancer. Front Pharmacol. 2024 Feb 5;15:1356708.
2. Kciuk M, Marciniak B, Kontek R. Irinotecan-Still an Important Player in Cancer Chemotherapy: A Comprehensive Overview. Int J Mol Sci [Internet]. 2020 Jul 12;21(14). Available from: http://dx.doi.org/10.3390/ijms21144919
3. Madarnas Y, Webster P, Shorter AM, Bjarnason GA. Irinotecan-associated pulmonary toxicity. Anticancer Drugs. 2000 Oct;11(9):709–13.
4. Baba K, Matsubara Y, Hirata Y, Ota Y, Takahashi S, Boku N. Case report: Irinotecan-induced interstitial lung disease in an advanced colorectal cancer patient resurfacing decades after allogeneic bone marrow transplantation for aplastic anemia; a case report and narrative review of literature. Front Oncol. 2023 Jun 16;13:1215789.
5. Michielin O, Udry E, Périard D, Matzinger O, Lobrinus JA, Stupp R. Irinotecan-induced interstitial pneumonia. Lancet Oncol. 2004 May;5(5):322–4.
6. Yoshida Y, Sugimoto T, Hosokawa Y, Suma H, Kobayashi H, Ishitoku M, et al. C-reactive protein and ground-glass opacity as predictors for intractable interstitial lung disease in patients with systemic sclerosis under cyclophosphamide treatment regardless of concomitant glucocorticoids. Mod Rheumatol. 2022 Jan 5;32(1):141–8.
7. Shinoda T, 河原喪次郎, カワハラヒデジロウ, Kawahara H, Yoshinaga K, Shiova H, et al. Refractory Irinotecan-Induced Interstitial Pneumonitis after Treatment of Metastatic Lung Cancer form the Rectum : A Case Report (Case Report). Jikeikai medical journal. 2006 Dec 10;53(4):159–62.
8. Chandak TR, Huberfeld SI. Irinotecan(CPT-II)-induced Fatal Pulmonary Toxicity [Internet]. 2010 [cited 2025 Sep 2]. Available from: http://dx.doi.org/10.1164/ajrccm-conference.2010.181.1_MeetingAbstracts.A292

DISCUSSION

- Diagnostic complexity of drug-induced pneumonitis in patients receiving chemotherapy.
- **Non-specific respiratory symptoms**, persistent hypoxia, and radiographic ground-glass changes may initially be attributed to infection, **delaying appropriate treatment.**
- Irinotecan-induced pulmonary toxicity is believed to involve **immune-mediated inflammatory pathways** with a favourable response to corticosteroids (5,6)
- The **delayed onset** of symptoms, occurring weeks after chemotherapy administration, underscores the importance of maintaining a **high index of suspicion** for pulmonary toxicity outside the immediate post-treatment period.
- Severe cases may require mechanical ventilation (7,8), **early recognition,** and **corticosteroid therapy** may prevent clinical deterioration.

CONCLUSION

- Drug-induced pneumonitis should remain a **key differential** diagnosis in patients undergoing chemotherapy who present with **respiratory symptoms.**
- Persistent oxygen requirements, ground-glass opacities on imaging, and raised inflammatory markers unresponsive to antibiotics should prompt consideration of high-dose corticosteroid therapy.
- Need for vigilance as symptoms can appear **weeks after administration.**
- MDT collaboration involving **oncology**, **respiratory** and **radiology** is critical in ensuring quick diagnosis and management of this rare but serious adverse drug reaction.

Real world experience with Nintedanib in patients with PF-ILD

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Portsmouth Hospitals University NHS Trust

Introduction

Progressing fibrosing ILD (PF-ILD) is a clinical phenotype characterised by progressive decline in lung function despite standard therapy. **Nintedanib**, an antifibrotic agent, has shown efficacy in slowing FVC decline (as per **INBUILD trial**[1]). This audit reviewed **real-world outcomes** in patients treated with Nintedanib for PF-ILD at a UK ILD centre.

Primary outcome: Change in FVC and DLCO pre- and post-Nintedanib.
Subgroup focus: Connective tissue disease-related ILD (CTD-ILD), chronic hypersensitivity pneumonitis (CHP), fibrotic non-specific interstitial pneumonitis (NSIP), unclassified, and 'other' (incorporating sarcoidosis, asbestosis and exposure-related ILDs).

Methods

Design: Retrospective audit (June 2022–June 2024)
Analysis:
Microsoft Excel and online statistics calculator
Wilcoxon signed-rank test for paired comparison
Subgroup analysis according to figure 1.

Results

Population: 37 patients (21 female)
Mean age: 71.5 years
Monitoring bloods: complied in 30, missing in 3 patients
Tolerance: Good overall; 21 experienced side effects, most commonly diarrhoea (18), other adverse effects: hypertension (2), anaphylaxis (1)

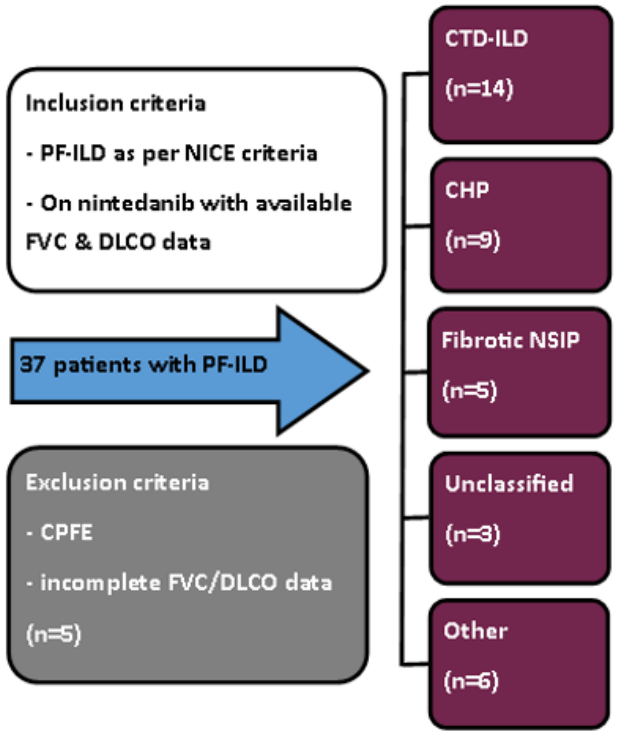


Figure 1 – schematic illustrating inclusion and exclusion criteria and subsequent patient groupings for analysis

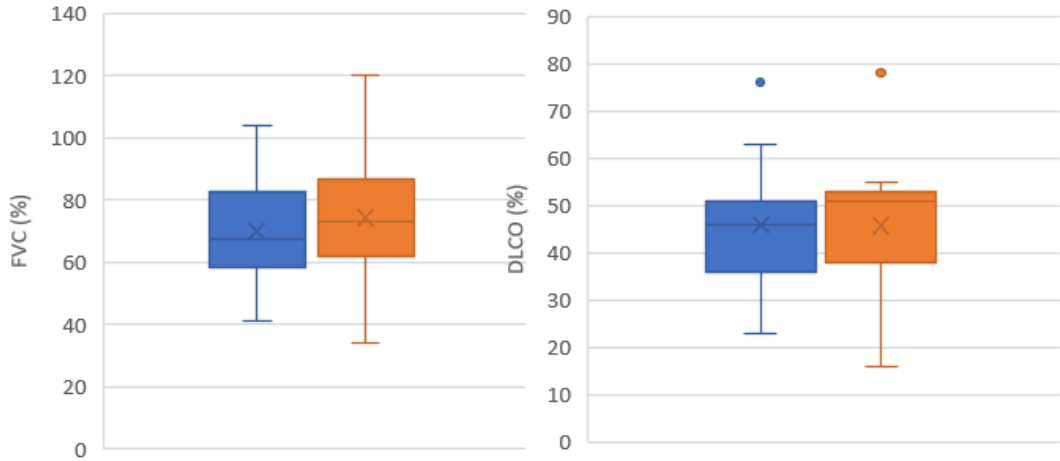


Figure 2 – FVC (%)* and DLCO (%) in CTD-ILD subgroup both before Nintedanib treatment (blue) and after (orange). *Please note that FVC change is statistically significant ($p<0.05$)

Conclusion

Nintedanib appears to slow or prevent lung function decline in PF-ILD
CTD-ILD patients may derive the most measurable benefit

Real-world findings align with **INBUILD trial** results.
Well-tolerated with manageable side effects.
Limitations: Single-centre, retrospective design, small sample size.

REFERENCES

1.Wells AU, Flaherty KR, Brown KK, et al. Nintedanib in patients with progressive fibrosing interstitial lung diseases-subgroup analyses by interstitial lung disease diagnosis in the INBUILD trial: a randomised, double-blind, placebo-controlled, parallel-group trial. Lancet Respir Med 2020; 8(5): 453–460.

Prednisolone dosage for exacerbations of chronic obstructive pulmonary disease

Devon Ward, Maria Drelciuc, Justine Hadcroft

Royal Liverpool University Hospital

University Hospitals of Liverpool Group

Background

Current guidelines on the treatment of exacerbations of chronic obstructive pulmonary disease (ECOPD) suggest 30mg oral prednisolone once daily for 5 days should be given. This projected aimed to improve the proportion of ECOPD patients prescribed the recommended dose of prednisolone in respiratory wards in a Liverpool hospital.

Methods

An initial clinical audit was followed by one cycle of QI methodology using PDSA. New admissions to respiratory wards were reviewed before the intervention (09/24-11/24) and after the intervention (01/25-03/25). Data were collected from hospital and community records on demographics, dosage and duration of prednisolone and factors for weaning courses.

Quality Improvement Cycles and Results

CLINICAL AUDIT (n=203)

16.2% (n=33) were prescribed 30mg prednisolone for 5 days

24.1% (n=49) prescribed **weaning course**

53.1% (n=26) of weaning courses started at 30mg

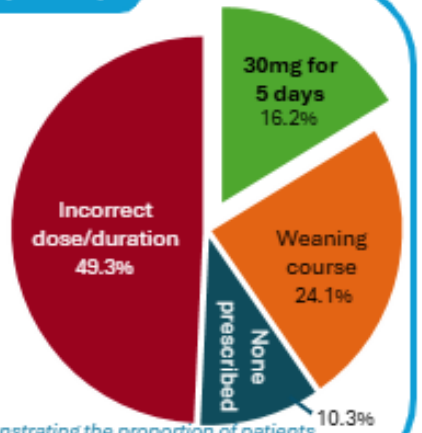


Figure 1 – pie chart demonstrating the proportion of patients prescribed different doses of prednisolone in the initial audit

RE-AUDIT (n=118)

36.4% (n=43) were prescribed 30mg prednisolone for 5 days

22.0% (n=26) prescribed **weaning course**

84.6% (n=22) of weaning courses started at 30mg

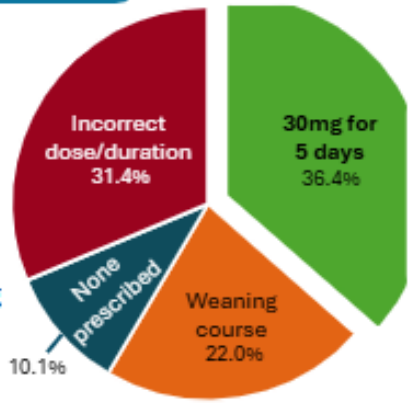


Figure 2 – pie chart demonstrating the proportion of patients prescribed different doses of prednisolone after the interventions

FIRST CYCLE INTERVENTIONS
2 teaching sessions delivered to respiratory multidisciplinary team

SECOND CYCLE INTERVENTIONS
1 teaching sessions delivered
1 poster created for the wards

2nd cycle re-audit...

OVERALL CHANGE

Significant increase in proportion correctly prescribed 30mg prednisolone for 5 days (X2=18.59, p=0.0003)

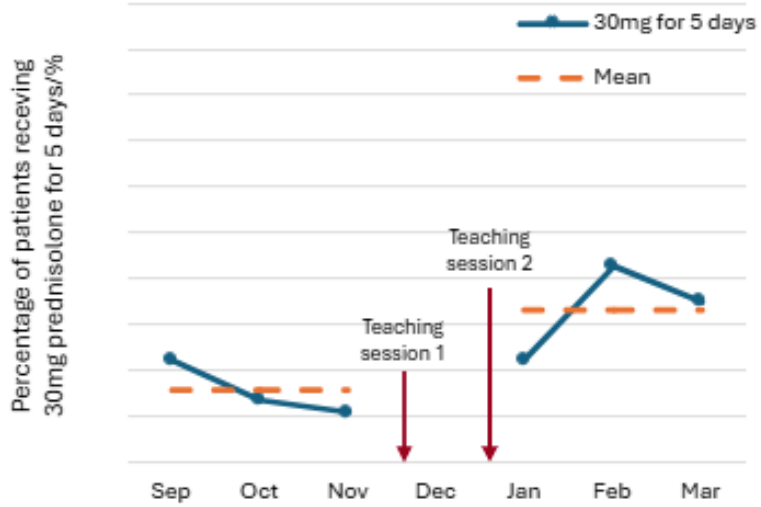


Figure 3 – run chart demonstrating percentage of patients prescribed 30mg prednisolone for 5 days as well as the mean percentage before and after the interventions.

Limitations

- Small sample size and single-centre, 3-ward trial
- Information bias - paper ED prescriptions were not included – may have missed first prednisolone dose
- Complicated due to differences between GOLD and NICE guidance during the project

Conclusion

Whilst these interventions resulted in a significant 20.2% increase in correct prednisolone dose for ECOPD, accurate prednisolone prescribing for ECOPD remains poor with almost half of patients receiving incorrect doses. Continued teaching to rotational resident doctors may be beneficial in improving prescribing in ECOPD.

Isolated ACTH deficiency due to Presumed Postpartum Lymphocytic Hypophysitis and Consequent Empty sella Syndrome, presenting with Severe Symptomatic Adrenal insufficiency- A Case Report

Dinath Perera[1], Naina Skariah[1], Maria Maridaki[1], Sath Nag[1]

[1]South Tees Hospitals NHS Foundation Trust, Middlesbrough, United Kingdom

INTRODUCTION

- Isolated adrenocorticotropic hormone (ACTH) deficiency is a rare cause of adrenal insufficiency, characterized by low cortisol levels in the presence of suppressed ACTH, while other anterior pituitary hormones remain unaffected.
- Diagnosis is often delayed due to its nonspecific and insidious presentation.[1]

CASE DETAILS

- A 36-year-old woman with no significant past medical history and an uncomplicated pregnancy presented one year postpartum with severe fatigue and ~20 kg unintentional weight loss starting 3–4 months after delivery.
- Breastfed for 6 months- Stopped due to breast fibroadenomas
- Denies headaches, visual symptoms, or any major complications during or after delivery
- General appearance: markedly thin and pale.
- No buccal or gingival hyperpigmentation, vitiligo, or goiter
- Blood pressure: 118/82 mmHg, no postural drop
- Capillary blood glucose: 6.0 mmol/L

INVESTIGATIONS

Primary Care Workup:

- Subclinical hypothyroidism:
  - TSH: 12.58 mIU/L *(Ref: 0.27–4.2)*
  - FT4: 10.4 pmol/L *(Ref: 10.0–21.0)*
- Started on levothyroxine therapy

Referral to Rapid Diagnostic Centre (RDC):

- Due to unexplained weight loss
- CT TAP (Thorax, Abdomen, Pelvis): No evidence of malignancy

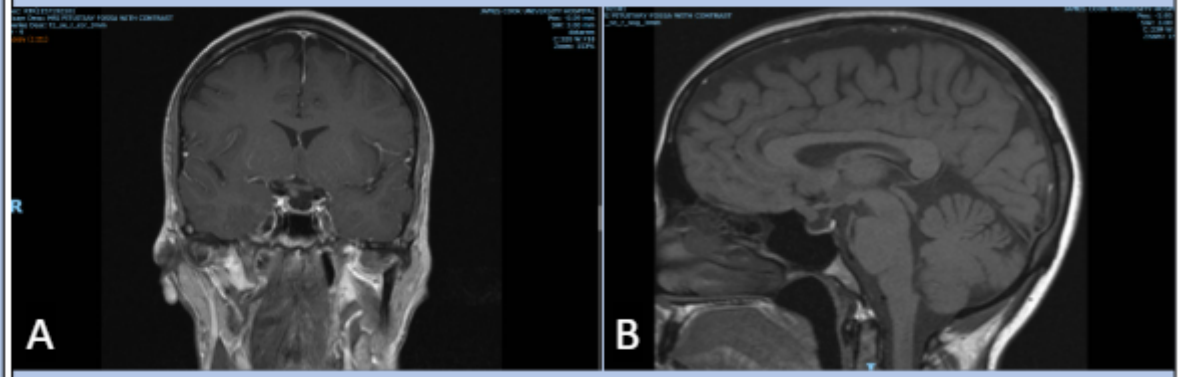
Further Evaluation by GP:

- Noted persistent lethargy and low weight
- Random serum cortisol:
  - Result: Undetectable cortisol <14 nmol/L

SDEC assessment

- Sodium 138 mmol/L(135-145); Potassium 4.2 mmol/L(3.5-4.5)
- Routine biochemistry otherwise normal
- **9 am cortisol <14 nmol/L**
- ACTH stimulation test : Fail (baseline cortisol <14 nmol/L;60 - minute increment 16 nmol/L)
- Anterior pituitary hormone profile
  - FSH 9 u/L, LH 8.3 u/L
  - Oestradiol 202 pmol/l(regular menstrual cycle post partum)
  - Prolactin 555 mU/L (59-619)
  - TSH 6 mU/L; FT4 15.2 pmol/L(10-21); On Levothyroxine
  - **Serum ACTH <2 ng/L (7.0-63.0)**
- Aldosterone 84.0 pmol/L (<630)
- Renin :0.5 nmol/h (0.3-2.2)
- IGF-1 14.3 nmol/L (9-31)

MRI PITUITARY



A. Empty sella with marked pituitary gland thinning (<1 mm); no evidence of pituitary adenoma
B. Tuberculum sellae meningioma on the right side, measuring 5 × 9 × 7 mm, with close abutment of the right communicating segment of the internal carotid artery.

DISCUSSION

- Isolated ACTH deficiency, though rare, often presents with nonspecific symptoms that require a high index of suspicion for timely diagnosis.
- Early recognition and prompt glucocorticoid replacement are crucial to improving outcomes and preventing potentially life threatening adrenal crises.[1]
- This case emphasizes that while postpartum fatigue is frequently attributed to psychosocial stressors related to newborn care, clinicians should remain vigilant for organic causes when symptoms are persistent, severe, or accompanied by unexplained signs such as weight loss or hypotension.[2]

REFERENCES

1) Charmandari E, Nicolaides NC, Chrousos GP. Adrenal insufficiency. Lancet. 2014 Jun 21;383(9935):2152-67.
2) Baral B, Sharma M, Khadka R, Naveed O, Bekele A. Postpartum Hypophysitis: A Case Report and a Literature Review. Cureus. 2024 Apr;16(4):e59396.

Mortality and Cardiovascular Outcomes in Sarcoidosis Patients with Co-existing Heart Failure with Preserved Ejection Fraction Treated with Sodium-Glucose Cotransporter-2 Inhibitors

Thurairajasingam, Krija; Hamilton, Michael; Otabor, Emmanuel; Okunlola, Ayoyimika; Alomari, Laith; Lam, Justin

Imperial College London ; Jefferson Einstein Philadelphia Hospital, Philadelphia, Pennsylvania. ; Lincolnshire Community and Hospital NHS trust ;

Royal College of Physicians

Introduction & background

- Systemic sarcoidosis can lead to heart failure through various non-infiltrative mechanisms. SGLT2 inhibitors are established as part of guideline-directed therapy for heart failure with reduced ejection fraction.
- Their potential benefits in sarcoidosis patients with preserved ejection fraction remain unclear
- It is unknown whether these agents improve outcomes in patients without confirmed cardiac sarcoid involvement.

Method

- We performed a retrospective cohort study in the TriNetX Global Network.
- Adults ≥ 18 years with sarcoidosis and HFpEF recorded between 2019 and 2024 were eligible; other infiltrative cardiomyopathies were excluded.
- 1:1 propensity-score matching for demographics, comorbidities and medications yielded 2,280 patients per group (SGLT2 vs control).
- Outcomes were tracked for five years: all-cause mortality (primary); hospitalizations; arrhythmias (atrioventricular block or ventricular tachyarrhythmia); major adverse cardiovascular events (MACE: cerebral infarction, acute HF, cardiac arrest);, inflammatory markers

Conclusion

- SGLT2 inhibitor therapy was linked to lower mortality and fewer hospitalizations.
- Inflammatory markers such as CRP and ESR were also reduced among treated patients.
- No significant differences were observed in arrhythmia or major cardiovascular events, highlighting the need for prospective confirmation of these findings.

Results

Outcome	SGLT2 Inhibitor Group (n = 2,280)	Control Group (n = 2,280)	P value	Interpretation
All-cause mortality	10.3 %	19.2 %	< 0.001	Significantly differnce
Hospitalization (any cause)	41.1 %	48.7 %	< 0.001	Reduced hospitalization risk
Arrhythmias (AV block / VT)	5.2 %	5.0 %	NS	No significant difference
Major Adverse Cardiovascular Events (MACE)	11.8 %	10.4 %	NS	No significant difference
C-reactive protein (mg/L)	32.4 ± 54.8	45.2 ± 64.4	< 0.001	Lower systemic inflammation
Erythrocyte sedimentation rate (mm/h)	35.3 ± 28.7	43.9 ± 32.8	< 0.001	Lower inflammatory activity

References

1. *Gilotra NA, Griffin JM, et al. Sarcoidosis-Related Cardiomyopathy: Current Knowledge, Challenges, and Future Perspectives State-of-theArt Review. J Card Fail. 2022 Jan;28(1):113-132. doi:10.1016/j.cardfail.2021.06.016. Epub 2021 Jul 11. PMID: 34260889; PMCID: PMC8748280.*
2. *Patel J, Rassekh N, Fonarow GC, et al. Guideline-Directed Medical Therapy for the Treatment of Heart Failure with Reduced Ejection Fraction. Drugs. 2023 Jun;83(9):747-759. doi: 10.1007/s40265-023-01887-4. Epub 2023 May 31. PMID: 37254024.*

Long-Term Efficacy & Safety of Low-Carbohydrate Diets in Type 2 Diabetes Remission: A Systematic Review

Rajib Das, **Nour Mohammad**, Md Shaiful Islam, Sowmitra Das, **Faisal Abdullah**, Md Abdul Kader, Md Abdullah Al Mamun, Sourav Dutta, David Unwin, Istvan Mazak

1. Background

- Type 2 Diabetes (T2D) affects **4.9 million people in the UK**, costing the NHS **£10 billion GBP annually** [1].
- Pharmacological management often fails to achieve remission and is associated with side effects and escalating costs [2].
- **Low-carbohydrate diets (LCDs)** and **ketogenic diets (KDs)** are emerging as effective non-pharmacological strategies for T2D remission.

2. Aims & Objectives

To evaluate the **long-term efficacy and safety** of LCDs/KDs in:

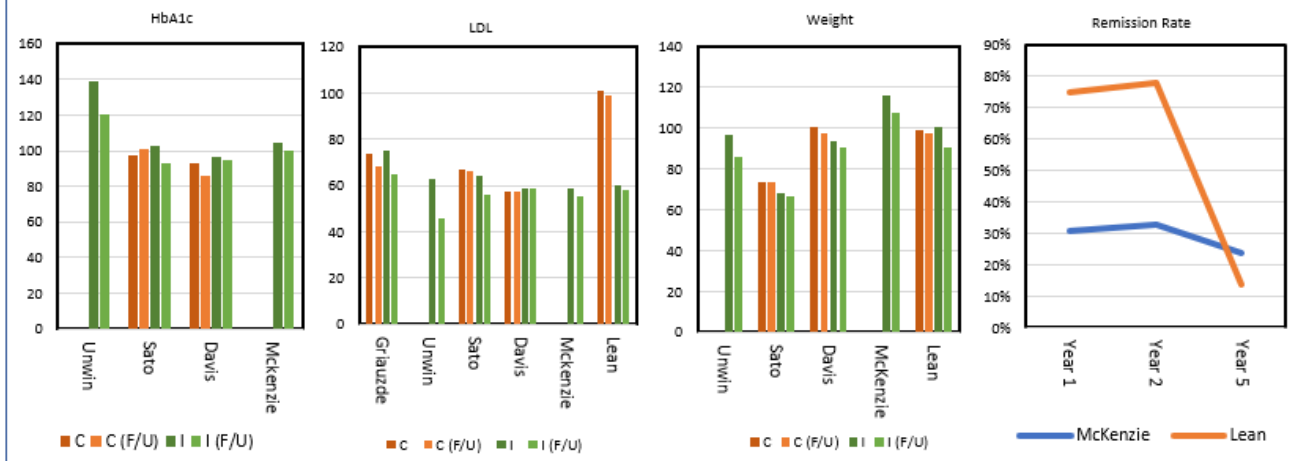
- Glycaemic control & T2D remission
- Weight loss & metabolic health
- Medication reduction & cost savings

3. Methodology

- **Design**: **Systematic Review (PRISMA-guided)**: PubMed & Cochrane search (2000–2024)
- **Inclusion**: RCTs, cohort studies, ≥12-month follow-up, Adults with T2D, LCDs/KDs intervention ≥12 months
- **Outcomes:** ***Primary:*** T2D remission, changes in HbA1c, body weight. ***Secondary:*** BP, lipid profiles, adverse events
- **Final Studies Included**: 6
- **Follow-up Duration:** 1–8 years
- **Population**: Adults with T2D
- **Interventions**: LCDs (50–130g carbs/day), KDs (<50g carbs/day)

Study	Design	Duration	Key Finding
Unwin et al. (2023)	Single-arm	8 years	**51% remission, HbA1c ↓63→46, Weight ↓10kg** [3]
Lean et al. (2024) – DiRECT	Non-randomized	5 years	**14% remission at 5 years, 32% off glucose-lowering meds** [4]
McKenzie et al. (2024)	Cluster RCT	5 years	Significant weight loss, improved lipids, **no major adverse events** [5]
Griauzde et al. (2022)	RCT	1 year	HbA1c ↓75→65.2, **improved BP & lipids** [6]
Sato et al. 2017 (1 year F/U)	RCT	1.5 year	Significant improvements in HbA1c & BMI from baseline were observed[7]
Davies et al. 2009	RCT	1 year	At 1 year, both low-carb and low-fat diets produced similar weight loss[8]

4. Results



5. Discussion

- **LCDs are effective in inducing remission**, improving metabolic outcomes[3,4,5]
- **Adherence & support** are critical to long-term success.[3]
- **No major adverse effects reported over 5–8 years**[4]
- LCDs should be preferable to **pharmacotherapy** or **bariatric surgery** in many type-2 diabetic patients [9]
- **Liver and renal functions show no deterioration**[5]
- They significantly reduce HbA1C levels and weight[3]
  Weight loss greatly enhances insulin sensitivity overall[10]
- Keeping weight off prevents diabetes from returning.

Outcome	Improvement Observed
HbA1c	**↓ up to 17 mmol/mol**[3]
Weight	↓ up to 11 kg[3]
BMI	↓ significantly in a few studies
SBP	↓ by 8 mmHg in some trials[3]
HDL	↑ across most trials
LDL	↓ notably in all studies
Triglycerides	↓ notably (e.g., **186 → 124** mg/dL)[3]
Remission Rate	**75% at 1 year → 14% at 5 years**[4]
Medication Use	**↓ up to 74% off glucose meds**[4]

6. Recommendations & Scope of NHS Implications

- Offer LCDs as a **viable option** for motivated T2D patients
- Provide **ongoing support** via remote monitoring, group sessions, or dietitian input
- Monitor lipids, renal function, and medication adjustments
- **Cost Savings: Up to £68,353/year per practice** [3]
- Potential for **integration into NHS diabetes pathways** as a first-line strategy

7. Conclusion

- **LCDs & KDs are safe, sustainable, and clinically effective options for T2D remission.**
- Implementation in **NHS primary care** could reduce the diabetes burden.
- **Structured support** is essential for long-term adherence.
- **Personalized dietary strategies** should be incorporated into standard diabetes care.

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Anterior Spinal Artery Infarction in a Middle-Aged Female: A Diagnostic Challenge Mimicking Transverse Myelitis

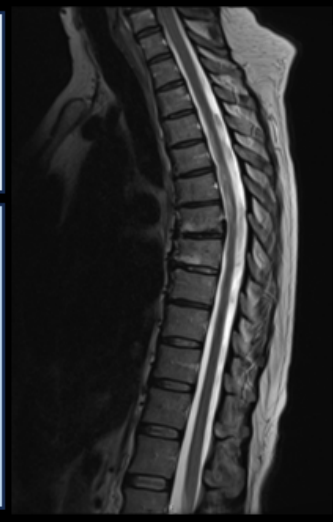
Authors and Co-Authors Details: Bhattacharjee, Santonu1; Todi, Rahul2 University Hospitals Sussex NHS foundation Trust

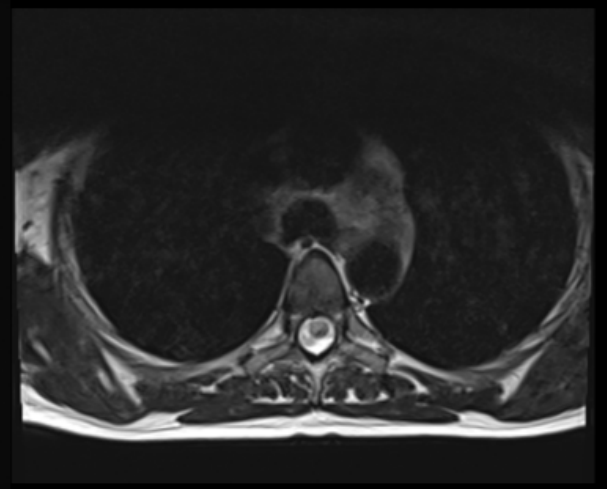
Background:

Anterior spinal artery (ASA) infarction is a rare but potentially debilitating vascular event resulting from ischaemia to the anterior two-thirds of the spinal cord. Diagnosis is often challenging due to clinical and radiological overlap with conditions such as transverse myelitis and cauda equina syndrome.

Case Presentation:

- A 56-year-old woman presented with **sudden-onset radicular pain** at the T4 dermatome, followed by bilateral lower limb paraesthesia.
- Within hours, she developed **flaccid paralysis** of the right lower limb and weakness in the left, along with **acute urinary retention.**
- Neurological examination showed 0/5 power in the right LL and 2/5 in the left, with preserved deep tendon reflexes. Sensory deficits were noted at the T4–T5 level, with impaired proprioception and vibration sense on the left.





Investigations and Findings:

- Routine blood tests, (CSF) analysis, including inflammatory markers: Normal
- Urgent MRI of the whole spine excluded cauda equina. Imaging showed **extensive high signal** on STIR and T2-weighted sequences from T2 to T8, predominantly involving the **anterior spinal cord**, with **contrast enhancement**. The initial impression was transverse myelitis, and the patient was started on corticosteroids and aspirin, given the possibility of infarction.
- Subsequent neuroradiology review revealed that the hyperintensity was primarily confined to the **anterior third of the cord** on axial images— an atypical pattern for transverse myelitis but characteristic of ASA infarction.
- Neurological reassessment supported this revised diagnosis. Further workup to exclude infectious, inflammatory, and autoimmune causes was negative.
- Lipid profiling revealed **elevated cholesterol and lipoprotein(a)**, a known prothrombotic risk factor
- A repeat MRI ruled out dural arteriovenous fistula

Discussion and Conclusion:

- This case highlights the diagnostic complexity of ASA infarction, especially its mimicry of inflammatory myelopathies on clinical and radiological grounds.
- Recognition of the anterior spinal cord involvement on MRI, in correlation with clinical findings, is crucial to prevent misdiagnosis and inappropriate treatment. The patient was initially treated for both ASA infarction and transverse myelitis. Once transverse myelitis was ruled out and ASA infarction confirmed, corticosteroids were tapered, and stroke-specific management continued. The patient responded well and began physiotherapy-led rehabilitation, with referral to a specialised spinal rehabilitation centre.
- Identifying modifiable vascular risk factors, such as dyslipidaemia and elevated lipoprotein(a), allowed for targeted secondary prevention.
- Early and accurate diagnosis of ASA infarction is essential for appropriate treatment and optimising outcomes, as demonstrated in this case.

References

1. Caton MT, Huff JS. Spinal Cord Ischemia [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2020. Available from: https://www.ncbi.nlm.nih.gov/books/NBK539870/
2. Pawar NH, Loke E, Aw DC. Spinal Cord Infarction Mimicking Acute Transverse Myelitis. Cureus. 2017 Dec 6;
3. Simone CG, Emmady PD. Transverse Myelitis [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2022. Available from: https://www.ncbi.nlm.nih.gov/books/NBK559302/

Prevalence of Gastrointestinal (GI) Parasitic Infections in Rural Northeast Thailand: A Cross-Sectional Study.

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[1]Guy's and St Thomas' Trust ; [2]Mahidol University, Thailand ; [3]University of Turin, Italy

Mahidol University
Faculty of Tropical Medicine
Mahidol Bangkok School of Tropical Medicine

Background

- GI parasitic infections remain common in Thailand - **9.79% prevalence in 2019.**[1]
- **Soil and water exposure** and **eating raw or undercooked food** increase infection risk.[2]
- In Si Sa Ket, where **75% work in agriculture, occupational exposure** drives ongoing transmission.
- Targeted surveillance and treatment can reduce **malnutrition, anaemia, and economic loss** from chronic infection.[3]

AIM: Measure prevalence of GI parasites and implement treatment.

Method

- **Cross-sectional** survey (October 2024) in 4 rural areas.
- **Recruitment**: Public health officials and village health volunteers.
- **Stool analysis**: Direct smear (in saline and iodine) and Kato thick smear conducted by trained personnel.
- **Positive samples** were **independently verified** and treated as per **Thai national guidelines.**

Results

Fig. 1.

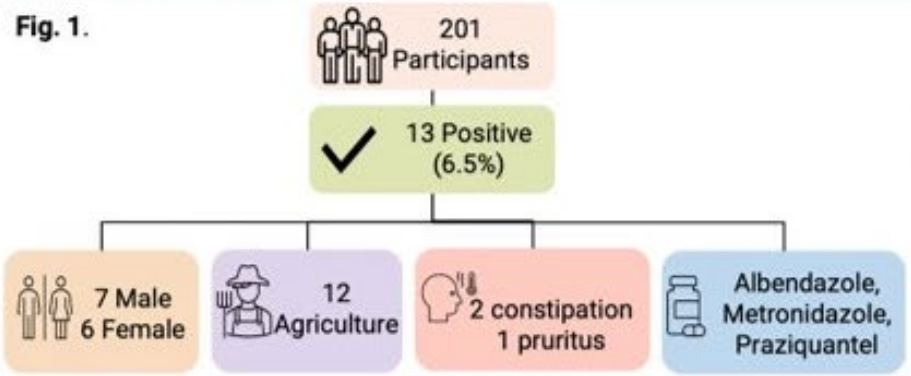
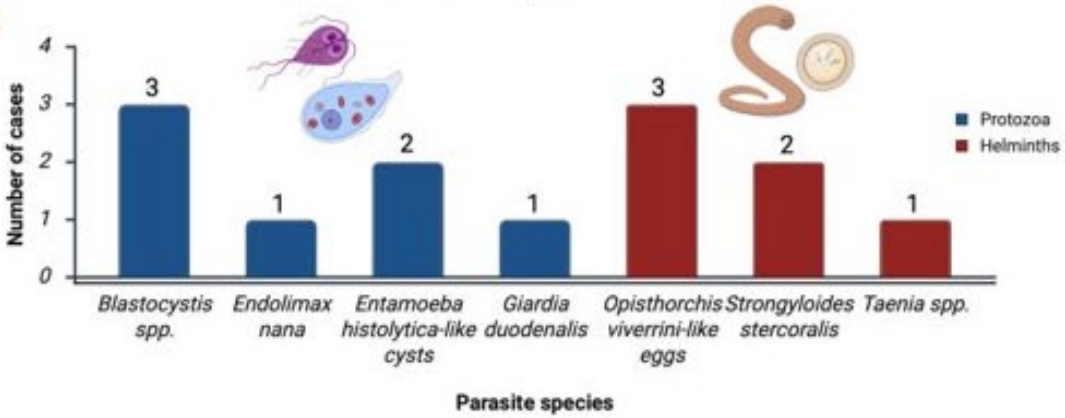


Fig. 2: Distribution of parasites detected.



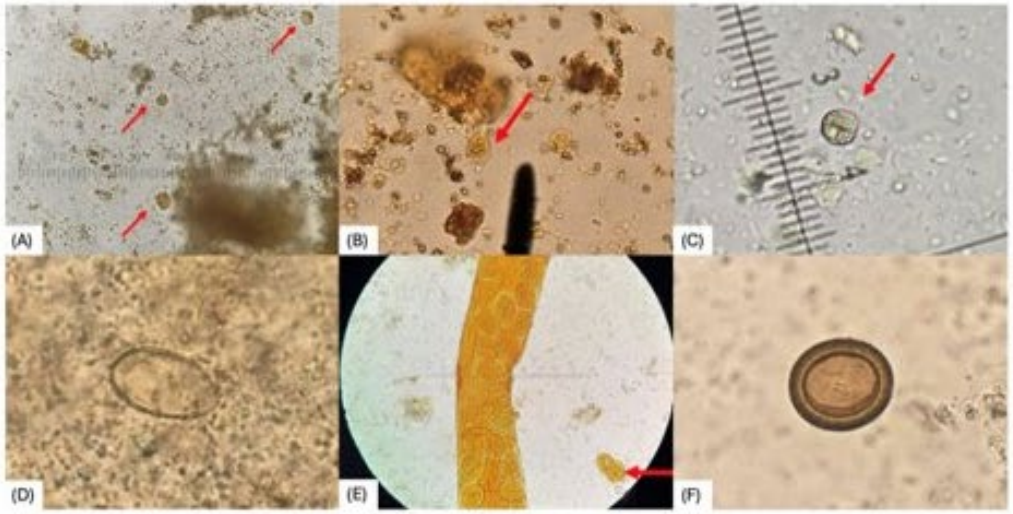


Fig. 3: Microscopy.

(A) *Blastocystis* spp. vacuolated form
(B) *G. duodenalis* cyst
(C) *E. histolytica*-like cyst
(D) *O. viverrini*-like egg
(E) *S. stercoralis* egg with larvae and free-living female
(F) *Taenia* spp. egg.

Take-home Messages

- **6.5% prevalence** of GI parasitic infections among screened volunteers.
- **77% asymptomatic**, highlighting the hidden community burden of infection.
- **92% agricultural workers**, reflecting ongoing **occupational exposure risk**.
- **Targeted treatment** successfully delivered in accordance with Thai national guidelines.
- Findings **inform future public health priorities** for surveillance and risk reduction.

References:
1. Wattanawong O, *et al*. Current status of helminthiases in Thailand: A cross-sectional, nationwide survey, 2019. *Acta Trop*. 2021 Nov 1;223:106082.
2. Boonjaraspinyo S, *et al*. A Cross-Sectional Study on Intestinal Parasitic Infections in Rural Communities, Northeast Thailand. *Korean J Parasitol* 2013;51(6):727.
3. Suntaravitun P. Prevalence of intestinal parasites and associated risk factors for infection among rural communities of Chachoengsao province, Thailand. *Korean J Parasitol*. 2018 Feb 1;56(1):33–9.

Evaluating the Diagnostic Yield of CT Coronary Angiography in a Rapid Access Chest Pain Clinic: A Quality Improvement Project at a DGH

Dr Basant Kashyap[1],Dr Supriya Sharma[2],Dr Sadaf Shaikh[3]

1,2,3 : George Eliot Hospital NHS Trust

INTRODUCTION

Rapid Access Chest Pain Clinics (RACPCs) are central to the early identification and management of suspected coronary artery disease (CAD). CT Coronary Angiography (CTCA) is recommended by NICE as the first-line diagnostic tool for stable chest pain due to its high sensitivity and negative predictive value (1). However, its real-world diagnostic yield, particularly the positive predictive value (PPV), varies across centres. This Quality Improvement Project (QIP) aimed to evaluate the PPV of CTCA in detecting CAD in patients attending the RACPC at George Eliot Hospital NHS Trust, and to assess its clinical relevance for service optimisation.

AIM AND METHODOLOGY OF THE STUDY

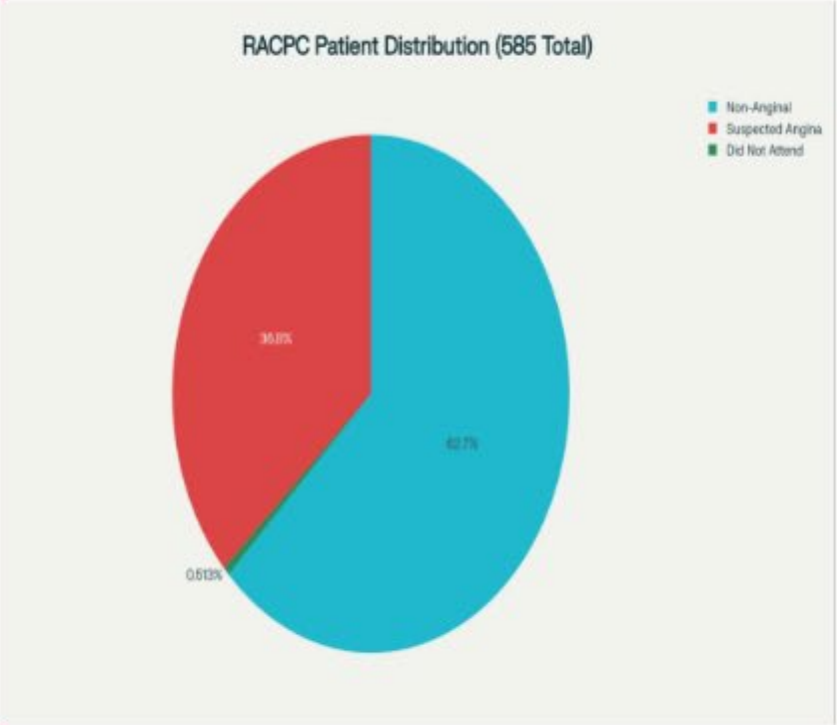
Aim of the study : To identify the positive predictive value (PPV) of CTCA in rapid access chest pain clinic assisting in identifying underlying coronary artery disease.

Materials and Methods :

The data for the QIP was collected based on all patients referred to RACPC at GEH between 2nd June 2023 and 31st July 2024. Demographic details, clinical classification (anginal vs. non-anginal chest pain), CTCA utilisation, and subsequent diagnostic confirmation of CAD were collected. The primary outcome was the PPV of CTCA for detecting CAD. Secondary outcomes included the proportion of patients undergoing CTCA relative to clinic referrals and stratification by symptom classification.

RESULTS

A total of 585 patients attended the RACPC during the study period (male: 308; female: 277). Of these, 215 were suspected clinically to have angina, 367 were classified as non-anginal, and 3 did not attend. CTCA was performed in 151 patients, among whom 71 were confirmed to have underlying CAD. The positive predictive value (PPV) of CTCA in this cohort was 47.0% (71/151). Stratified analysis showed higher diagnostic yield in patients with anginal symptoms compared with non-anginal presentations.



CONCLUSIONS

This QIP demonstrates that in a real-world RACPC setting, CTCA has a PPV of 47% for detecting CAD. While CTCA remains a valuable first-line investigation due to its sensitivity and ability to rule out CAD, its predictive accuracy is enhanced when integrated with clinical risk assessment. Careful triage of patients with higher pre-test probability can optimise resource utilisation, reduce unnecessary imaging, and improve clinical outcomes. These findings support ongoing pathway refinement and highlight the importance of regular audit to ensure alignment with NICE recommendations.

Clinical relevance:

This QIP highlights the potential of optimising CTCA use within RACPC to enhance diagnostic efficiency, minimise unnecessary imaging in low-risk patients, and expedite timely management of confirmed CAD. Its clinical relevance lies in supporting evidence-based practice , refining referral pathways, improving resource allocation, and ultimately delivering superior patient care outcomes.

REFERENCES

1.National Institute for Health and Care Excellence. *Chest pain of recent onset: assessment and diagnosis (CG95).* NICE; 2016.Available from: https://www.nice.org.uk/guidance/cg95

Baseline ECG, documentation of QTc interval and use of haloperidol at Mater Hospital

A Quality Improvement Project

Kelvin Mupunga
Internal Medicine Training Year 2

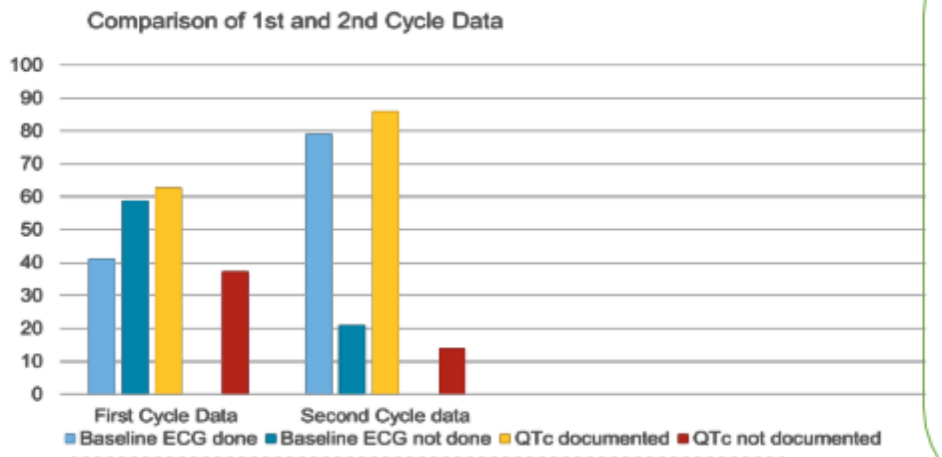
Background

- 3 patients taking haloperidol developed tachyarrhythmias with no evidence of QTc documentation or baseline ECG having been performed according to guidelines.
- Haloperidol is a first-generation antipsychotic regularly used to manage agitation and delirium.[1]
- It makes the heart prone to arrhythmias by prolonging the QTc interval, therefore an ECG should perform before prescription
- an alternative drug should be used if having a baseline ECG is impractical.[2-3]
- An acceptable baseline ECG should not be > 1 month old at the time of prescribing haloperidol.[4]
- If the use of haloperidol is inevitable due a clear explanation on the use of the drug without baseline ECG should be provided.[5]
- no standardised ECG monitoring frequency during haloperidol therapy ,ECG monitoring frequency is determined by individual patient factors and occurrence of arrhythmia symptoms .[2-3]
- if at any point QTc is > 500ms, haloperidol should be discontinued.[1-5]

Methods

- Retrospective review of patient records done
- an ECG was valid if it was <1 month old before prescription of haloperidol.
- excluded patients already on haloperidol on admission and those given haloperidol in end of-life care.
- Following the first cycle data analysis, interventions done included a presentation Junior Doctors teaching day, awareness posters were emailed to junior doctors and displayed on notice boards.
- Cooperated with the Trust IT, awareness poster was displayed as a screensaver on computers in clinical areas.

Results



Results Analysis

- A total of 60 records were identified in the first cycle, 9(0.15%) were excluded, thus 51 patient records were analysed.
- The results showed that 30(58.8%) patients didn't have a baseline ECG, whereas 21(41.2%) had baseline ECG performed. QTc documentation was done in 32(62.7%) patients while in 19(37.3%) there was no QTc documentation.
- A second audit cycle was conducted after interventions with the results showing significant improvement, 43 patients' records reviewed showed that 34(79.1%) had baseline ECGs, while in 9(20.9%) baseline ECG was not performed. QTc documentation was present in 37(86%) whereas 6(14%) had no QTc documentation.

Discussion

- 1ST cycle results showed a low number of patients had an ECG and documentation of QTc before prescription of Haloperidol
- Marked improvement in both performance of baseline ECG and documentation of QTc after intervention
- There was a discrepancy between number of baseline ECGs present and the QTc documentation.
- Probably some of the baseline ECGs were not reviewed at all as they were forgotten since the inclusion criteria considered not only ECGs done at time of prescribing haloperidol, but those done within 1 months as well.
- Limitation →change over doctors during the implementation of → using 2 cohorts of doctors.

Conclusion

- Although the interventions were effective in bringing about a favourable change, the long-term sustainability of the positive outcomes may be challenged by the frequent turnover of doctors.
- As such, a proposal to add pop-up message reminders to the computer system which appear when prescribing not only haloperidol but most medications with baseline studies required prior to prescribing was forwarded and accepted by IT department.

References

1. British Geriatrics Society (2019) *Patients presenting with confusion and delirium*. http://www.bgs.org.uk
2. Broszko M. & Stanciu, C. N. (2017) Survey of EKG monitoring practices: a necessity or prolonged nuisance? *Am J Psych*, 12(3):6 9
3. European Medicines Agency. (2023). *Haloperidol and QTC interval prolongation.*
4. NICE 2019 Delirium: prevention, diagnosis and management Clinical guideline (CG103)
5. Psychiatric Pharmacy Essentials (2020) *Psychotropic medication monitoring: Antipsychotics| American Association of Psychiatric Pharmacists (AAPP)*. https://aapp.org/guideline/essentials/antipsychotic monitoring

Facial Diplegia with Paresthesias Variant of Guillain–Barré Syndrome Associated with Autoimmune Haemolytic Anaemia: A Case Report

Dr Shanaz Koyam Madath[1], Dr Bijoy Jose[1], Dr Deepak Charles[1], Dr Mathew Abraham[1] | [1]Aster Medcity, Kochi, India

Introduction

• Facial Diplegia with Paresthesias (FDP) is an uncommon Guillain–Barré syndrome (GBS) variant characterized by **bilateral lower-motor-neuron facial weakness** and **distal sensory disturbance** with preserved limb power.

• The concurrent presence of **Autoimmune Haemolytic Anaemia (AIHA)** is exceptionally rare and may significantly **alter therapeutic** decision-making, particularly when using intravenous immunoglobulin (IVIG).

•Awareness of such immune overlap syndromes is vital to avoid treatment-related morbidity.

Case Presentation

•**29-year-old female** presented with ascending numbness and subsequent **bilateral LMN facial palsy** within 48 hours.

•**Motor power preserved; reflexes diminished.**

•**MRI brain/spine – normal; NCS – absent F-waves → demyelinating neuropathy.**

•**CSF:** albuminocytologic dissociation.

•**Initial Hb 10.2 g/dL.**

Results

•Commenced on **IVIG (2 g/kg over 5 days)** for GBS.

•On Day 4 → developed **icterus** and laboratory evidence of **hemolysis** (↑ LDH, indirect hyperbilirubinemia, Coombs IgG positive).

•**Autoimmune screen:** ANA +, Anti-Ro52 +, Anti-Ro +, AMA-M2 +.

•**IVIG discontinued; high-dose methylprednisolone initiated.**

•**Mycophenolate mofetil** added for steroid-refractory anemia.

•**Neurological recovery** achieved within 1 week; **hematological recovery** over 4 weeks.

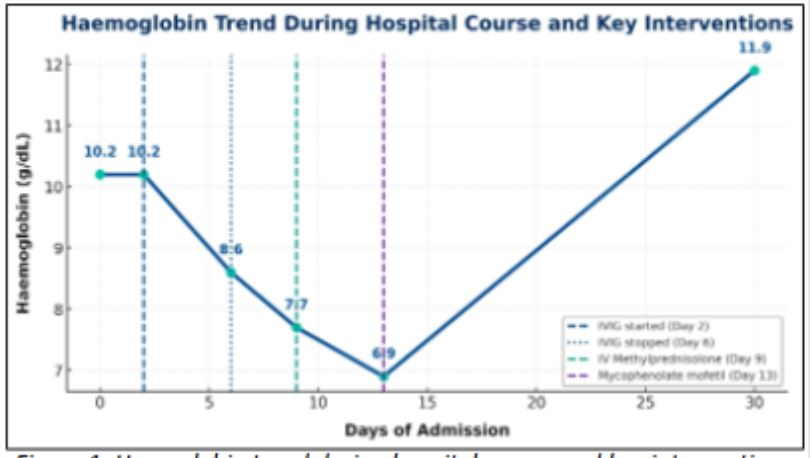


Figure 1. Hemoglobin trend during hospital course and key interventions.

Discussion and Conclusion

•**Facial Diplegia with Paresthesias (FDP)** is a rare Guillain–Barré variant; coexistence with **Autoimmune Haemolytic Anaemia (AIHA)** represents an exceptionally uncommon immune overlap syndrome.

•**IVIG-induced hemolysis** is a recognized but under-reported adverse effect, particularly in **autoantibody-positive patients**.

•Literature shows onset typically occurs **within 12 hours to 10 days** of infusion, with hemoglobin nadirs appearing **1 to 14 days post-treatment** and resolution over **several days to a week** in mild cases.

•This case's hemolysis on **Day 4** falls squarely within that expected window, emphasizing the importance of **post-IVIG vigilance,** although had a **delayed hematological recovery requiring steroids and immunosuppression** indicating a pre-existing associated **autoimmune condition,** unmasked by **atypical GBS.**

•Recommended practice: monitor hemoglobin **36–96 hours post-infusion** and continue periodic checks for up to **10 days**, as delayed hemolysis can occur.

•**Early identification, prompt discontinuation of IVIG, and tailored immunosuppression** (steroids ± MMF) are crucial for achieving both neurological and hematological recovery.

•This case highlights the need for **individualized, multidisciplinary management** and continuous hematologic surveillance in atypical GBS variants with autoimmune overlap.

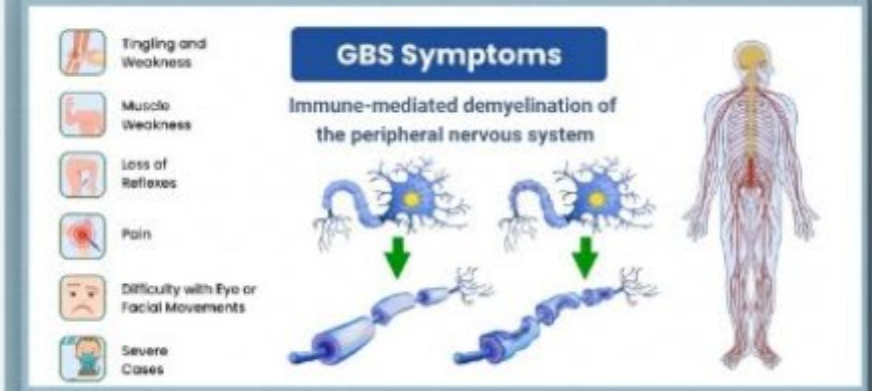
•Maintain a high index of suspicion for autoimmune overlap in atypical GBS, monitor hematological parameters closely during IVG therapy, timely immunosuppressive modulation ensures dual neurological and hematological recovery.

Presented at RCP Med+ 2025, Royal College of Physicians, London, UK – November 2025

When spasticity Conceals Paralysis: A case of vaccine-Associated Guillain-Barré syndrome in HSP

Introduction

Guillain-barré syndrome is an acute immune-mediated polyneuropathy. It often follows infection as Campylobacter, CMV, EBV, or Zika. Rarely, it occurs following vaccination. Hereditary spastic paraplegia is a neurogenerative disorder causing progressive spasticity and weakness. The coexistence of HSP and GBS is exceptionally rare, often leading to diagnostic delay.



Case Summary

A 71-year-old man with X-linked HSP developed progressive weakness, stiffness, and paraesthesia two days after receving Moderna (JN.1 Spikevax) and influenza vaccines. He experienced transient facial droop and slurred speech.
Examination: initial 3/5 global weakness, diminished sensation.
Progression: UL 1/5-2/5, LL 1/5, areflexia, impaired proprioception.
MRI: normal; CSF: albuminocytologic dissociation; antiganglioside antibodies: negative. Despite IVIG therapy, he deteriorated and died from respiratory failure.

Aim

To highlight the diagnostic challenge of differentiating GBS from baseline HSP progression following COVID -19 vaccination.

Key Findings, Results

- Diagnostic delay due to overlap with chronic HSP weakness.
- Vaccine-associated GBS may present atypically with more cranial nerve involvement and lower antibody positivity.
- Negative antiganglioside antibodies do not exclude GBS.
- Vigilance needed in neurological comorbidities.

Recommendations

- Maintain high suspicion for GBS in neurological patients.
- Early neurology input and CSF analysis are vital.
- Recognise atypical post-vaccine presentations and treat promptly with IVIG.
- Encourage reporting of post-vaccine neurological events.

Conclusion

GBS can be masked by HSP. GBS may occur following COVID-19 vaccination, though causality is uncertain. Prompt recognition and treatment are crucial.

Thel Su Hlaing, Mary Ejiro, Khant Nyi Zaya,
Consultant Supervisor Adel Benyamin
Nevill Hall Hospital, Aneurin Bevan University Health Board, Wales, UK

References

Hospital-Wide Improvement of Fast Track Discharges with a Targeted Focus in Old People's Services

Royal London Hospital
E. Thompson, S. Al-Hashimi, P. Anekwe, S. Nelson-Piercy, G. Lumley

Barts Health NHS Trust

Introduction

The Fast Track (FT) pathway should facilitate fast hospital discharge for patients in the terminal phase, Despite the NHS's target of 48 hours, data from the Royal London Hospital (RLH) revealed it takes 13-14 days to implement a FT discharge (1). Teams have attempted to improve efficiency but face challenges. MDT feedback on prior QI efforts was negative due to impact on workload and obstacles relating to high staff turnover. We needed to improve FT efficiency through engagement of a busy and rotational workforce.

Methods/Materials

A PDSA approach was followed with the aim to decrease mean days from decision to implementation of a fast track (FT) discharge by 30% from January –May 2025.

Plan:
-Audit of Old People's services (OPS) August 2024–January 2025
-Doctors' Survey January 2025
-Process mapping and driver diagram
Do:
-Cycle 1 (Mar 5–19, 2025): Flowchart and QR code to key resources
-Cycle 2 (Mar 20–Apr 17, 2025) :Three teaching sessions to physicians
Study/ Act: Post-cycle audits with results presented at QI, Governance and End of Life meetings. Valuable stakeholder feedback steered the project forward.

Figure 1: Driver diagram detailing change ideas

Results and Discussion

Cycle 1:
-OPS achieved a 28% reduction in days to implement a FT discharge (14 to 10 days). Days to submit applications in OPS improved by 75%
-Hospital-wide, rejected applications fell from 31% to 20%, though time to discharge increased by 14% and document submission times worsened

Cycle 2:
-OPS sustained improvements, with a 22% decrease in time to FT implementation and continued rapid document submission. Rejection rates in OPS remained unchanged
-Hospital-wide, rejection rates improved. The successful FT rate rose from 50% to 80%. No further efficiency in application submission observed

OPS showed clear progress reflecting strong departmental engagement. However, application rejections- in part due to incorrectly filled forms- persisted. Secondary data analysis highlighted that external delays e.g. bed availability significantly impacted timelines.

In summary, the QI project has driven positive change particularly in OPS, where application submission averages one day. Hospital-wide, application success rates improved, though meeting the 48-hour target remains unrealistic. Future steps include educating nursing staff, engaging with the local Continuing Health Care team and uploading FT resources to the intranet.

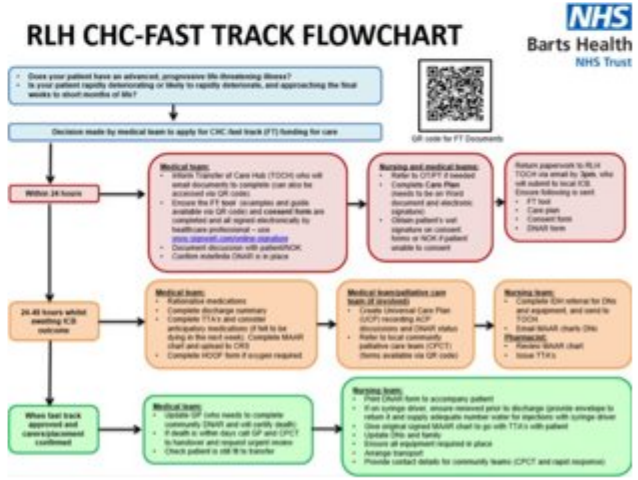


Figure 2: Fast track flowchart and QR code

1.NHS continuing healthcare - Social care and support guide. https://www.nhs.uk/social-care-and-support/money-work-and-benefits/nhs-continuing-healthcare/ Accessed 1 September 2025]

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NHS Foundation Trust

DKA in patients on SGLT2 inhibitors: A retrospective case series focusing on risk factors and management

Dr E Hughes, Dr V Hebblethwaite, Dr S Pearce

Introduction

Sodium-glucose co-transporter-2 inhibitors (SGLT2i) are being increasingly used to manage type 2 diabetes, heart failure and chronic kidney disease. However, they are associated with an increased risk of **diabetic ketoacidosis (DKA), including euglycaemic DKA**[1]. Therefore patients should be instructed to omit the drug if unwell.

Recognition and management of DKA in this group can be challenging. Delayed discontinuation of the SGLT2i, and failure to adhere to DKA management guidelines, can all worsen outcomes.

Materials and methods

We retrospectively reviewed DKA cases in patients on SGLT2i, from August 2022 to June 2024, in a 513-bed acute district general hospital.

32 patients were identified

- 26 hyperglycaemic DKA cases
- 6 euglycaemic DKA cases

Records were analysed to look at:

- Presence of known risk factors for SGLT2i associated DKA
- Adherence to trust guidelines
- Appropriate withholding of the SGLT2i by the patient and clinician

Results and discussion

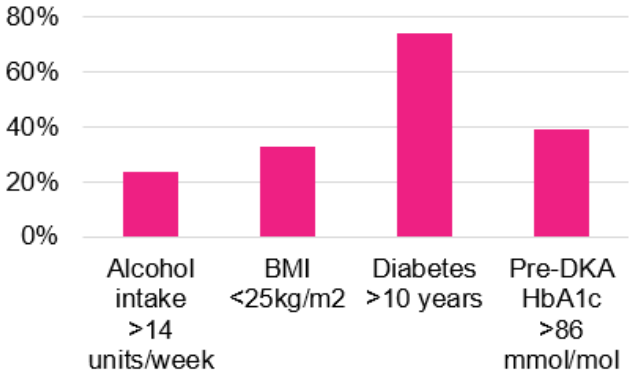
DKA episodes amongst SGLT2i-treated patients peaked in the 60–69 age group, with equal gender distribution. **81% of our patients had at least 1 of the recognised risk factors for developing SGLT2i associated DKA**[2-3], shown in graph 1. Therefore, the majority of our cases occurred in susceptible patients.

Deviations from national and trust DKA guidelines were common:

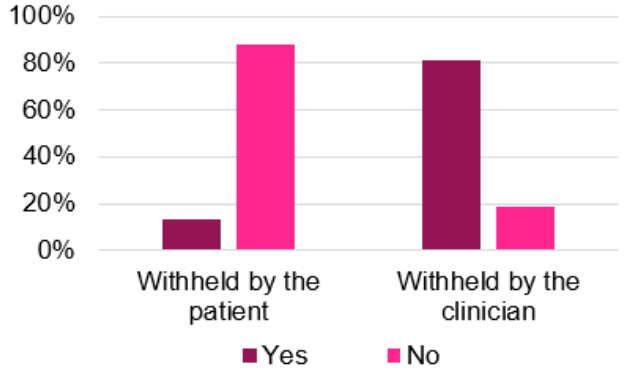
- A fixed rate intravenous insulin infusion was started promptly in 80% of hyperglycaemic DKA compared to just 33% of euglycaemic cases, with many managed incorrectly using variable rate insulin infusions.
- Intravenous glucose was omitted or delayed in 16% of hyperglycaemic and 75% of euglycaemic cases, with subsequent hypoglycaemia occurring in 75% of the euglycaemic cases.
- Long-acting basal insulin was continued in only 43% of hyperglycaemic and 0% of euglycaemic cases.

The atypical presentation of euglycaemic DKA can delay diagnosis and complicate management, highlighting the need for proactive risk reduction by teaching patients to stop their SGLT2i when they become unwell[2]. In our case series, **88% of patients failed to stop their SGLT2i when unwell**, and **19% did not have their treatment stopped appropriately by the clinician** (graph 2).

Graph 1: Percentage of cohort with recognised DKA risk factors



Graph 2: Was the SGLT2i appropriately withheld by the patient or clinician?



Next steps

These findings highlight gaps in both staff adherence to management guidelines and patient understanding of sick day rules. To address these issues, we have:

- Delivered **targeted staff education** on hyperglycaemic & euglycaemic DKA recognition and management.
- **Updated our local DKA guideline** with clear, practical recommendations.
- Developed a **patient information card** for those starting SGLT2i therapy in the secondary care setting, outlining sick day rules and guidance on when to restart treatment safely. We plan to dispense these cards with discharge medications.

These interventions aim to improve both inpatient management and patient self-care, with the goal of reducing the risk of SGLT2i-associated DKA, a potentially life-threatening complication.

References

1. Morace C, Lorello G, Bellone F, et al. Ketoacidosis and SGLT2 Inhibitors: A Narrative Review. *Metabolites*. 2024 May 6;14(5):264,
2. Dashora U, Gregory R, Winocour P, et al. Association of British Clinical Diabetologists (ABCD) and Diabetes UK joint position statement and recommendations for non-diabetes specialists on the use of sodium glucose co-transporter 2 inhibitors in people with type 2 diabetes (January 2021). *Clin Med (Lond)*. 2021 May;21(3):204-210
3. Zhao Z, Zhao F, Zhang Y, et al. Risk factors of dapagliflozin-associated diabetic ketosis/ketoacidosis in patients with type 2 diabetes mellitus: A matched case-control study. Diabetes Res Clin Pract. 2023;196:110236

Improving The Diagnostic Pathway For Patients Admitted Under General Internal Medicine With A Suspected New Cancer Diagnosis

Florence Fenner, Aaisha Saqib, Judit Prokaj, Stephanie O'Brien, Lydia Pascal

NHS
Guy's and St Thomas'
NHS Foundation Trust

Introduction

Background:

- For patients with a new cancer diagnosis, timely diagnosis is essential for initiating prompt treatment[1].
- Reliable diagnostic pathways are required to optimise this process and are well established in outpatient settings[2].
- However, no such pathway exists for *inpatients* admitted under general internal medicine (GIM) at St Thomas' Hospital.

Objective

To analyse the outcomes of patients admitted under GIM with a suspected new cancer diagnoses, to identify areas of delay in the diagnostic process for improvement.

Methods

By consulting with the acute oncology service (AOS), we identified key stages required for diagnosis:

- Performing a completed CT Chest, Abdomen and Pelvis (CTCAP)
- Obtaining a tissue biopsy of the suspected tumour for histopathological analysis

We also identified that AOS should receive an electronic referral for all patients with new suspected cancer.

Data Collection.

- We identified 132 patients admitted to hospital under GIM in 2024 and referred to AOS with a suspected new cancer diagnosis.
- 95 were included in our analysis (patients already on a diagnostic pathway before admission were not included).
- We used electronic patient records to retrospectively record the dates of key events during their admission (date of AOS Review, date of CTCAP, date of biopsy request, date biopsy performed - and reason why if not performed, date initial pathology results returned).

Results

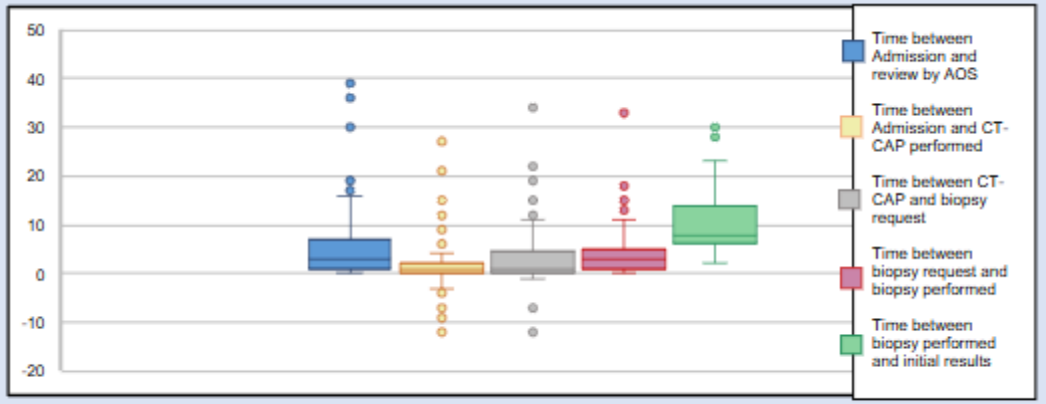


FIG. 1 - Boxplot Showing time (days) to events in diagnostic pathway for patients admitted under GIM with a suspected new cancer diagnosis

Greatest time taken in the diagnostic pathway:

- Return of pathology results once a tissue biopsy had been taken (mean = 10.34 days).
- Time taken for the biopsy to be performed once it had been requested (mean = 4.54 days) (FIG 1).

Greatest variance in the timings:

- Days between the CTCAP being performed, and the date the biopsy was requested (Var= 51.17),
- Date from admission to review by AOS (Var=49.48) (FIG 1).

Conclusions and Future Interventions

- The increased variance in the time to AOS review and between CTCAP and biopsy request dates suggests that there is uncertainty about the diagnostic process within GIM, as these actions are usually performed by GIM doctors.
  - → A clear guideline for these cases may improve understanding of the pathway and reduce delays in requesting investigations. We will therefore implement a guideline within the department (FIG 2), and re-audit following its introduction to assess effectiveness.
- The greatest areas for delay in diagnostics for GIM patients with a new cancer diagnosis lie within the IR and histopathology departments.
  - → These results will be presented to the IR and pathology departments to identify opportunities to reduce diagnostic time.

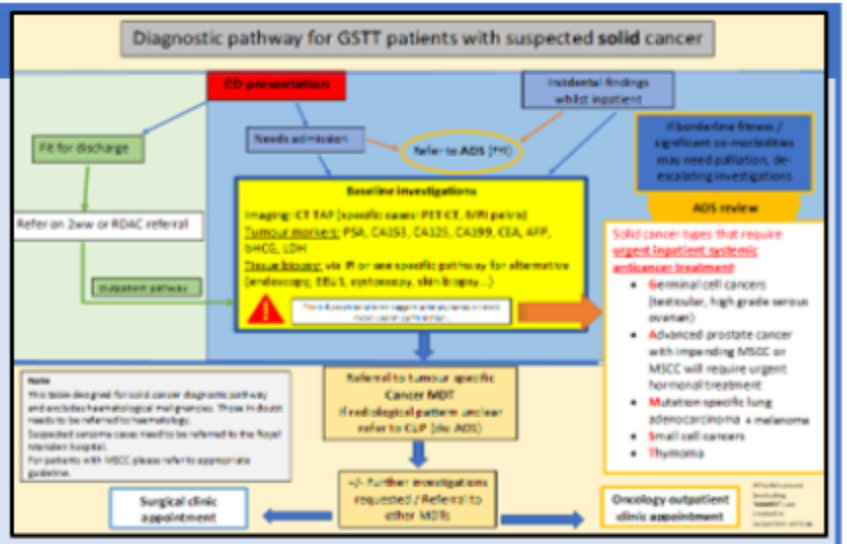


FIG. 2 – Proposed pathway for inpatient cancer diagnosis for GIM patients with suspected solid cancer

1. Richards MA. The National Awareness and Early Diagnosis Initiative in England: assembling the evidence. British Journal of Cancer [Internet]. 2009 Dec;101(S2):S1–4.
2. NHS England» Rapid cancer diagnostic and assessment pathways. www.england.nhs.uk. Available from: https://www.england.nhs.uk/publication/rapid-cancer-diagnostic-and-assessment-pathways/

Transient Posterolateral Ischemia Due to 5-Fluorouracil-Induced Cardiotoxicity: A Case Report

Muhammad Fahad Saleem[1], Pharveen Jaspal[2], Shoaib Siddiqui[3]

1. Resident Doctor. 2. Resident Doctor and Clinical Education Registrar. 3. Consultant Cardiologist

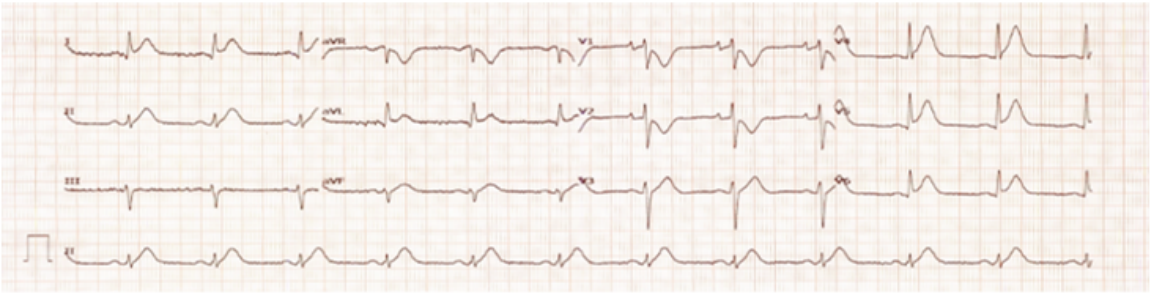
South Warwickshire University NHS Foundation Trust

Introduction

- A 74-year-old man with a history of coronary artery disease developed chest pain after receiving 5 fluorouracil (5-FU) therapy, thought to have occurred due to coronary vasospasm as there was complete resolution of symptoms following cessation of the drug.
- While gastrointestinal side-effects and myelosuppression of 5-FU is common, cardiotoxicity remains a rare but significant complication.

Case Presentation

- A 74-year-old man with a history of coronary artery disease and CABG performed 15 years earlier presented to ED with sudden-onset severe chest pain.
- Alongside a history of hypertension he was diagnosed with anorectal carcinoma, for which he had commenced his first cycle of chemotherapy with 5-FU and mitomycin infusion, 48 hours earlier.
- Having received aspirin and sublingual glyceryl trinitrate (GTN), an electrocardiogram (ECG) performed on arrival (pain-free) demonstrated normal sinus rhythm. Serum troponin level was 52 ng/L.
- Two hours later, he developed chest pain again, and a repeat ECG showed deep ST depression in the anterior precordial leads.
- Following a diagnosis of acute MI, he was given subcutaneous low molecular weight heparin, sublingual GTN, intravenous morphine, and his 5-FU infusion was discontinued.
- This resulted in resolution of symptoms and ECG changes for the next five hours. Another episode of chest pain then ensued, and a repeat ECG showed ST elevation in the lateral leads with reciprocal changes anteriorly, (Figure 1) while the troponin level rose to 184 ng/L. (Table 1)
- Following administration of sublingual GTN, the pain and ECG changes resolved.
- Although the initial working diagnosis was non–ST-elevation myocardial infarction, this was subsequently revised to ST-elevation myocardial infarction secondary to 5-fluorouracil-induced coronary vasospasm, given the transient nature of the ECG changes and chest pain.
- A transthoracic echocardiogram demonstrated regional wall motion abnormalities with an ejection fraction of 39%, without evidence of intracardiac thrombus.
- Coronary angiography further showed patent grafts and no evidence of thrombus.
- After a stable clinical course, the patient was discharged with optimised medications and follow-up; the oncologist advised against future 5-FU, and cardiology specialist review supported coronary vasospasm as a possible cause.



Laboratory Test	Reference Range	30/10/2024 21:15	30/10/2024 23:59	31/10/2024 06:26	01/11/2024 08:15
Troponin (ng/L)	<14	52	57	184	322

Discussion

The exact mechanism underlying 5-FU induced cardiotoxicity remains unclear, the most widely accepted explanation is coronary vasospasm leading to myocardial ischaemia. Hence, given the transient chest pain, ECG changes, and troponin elevation, with no thrombus, patent grafts on angiography, and no prior chest pain before 5FU initiation, the most likely cause is 5FU induced coronary vasospasm affecting territories beyond the grafts and causing transient posterolateral ischaemia.

Conclusion

Given the frequent use of 5-FU, awareness of its cardiotoxicity is essential, and alternative regimens should be considered in patients with preexisting cardiac disease. Early recognition therefore of the offending agent is crucial to prevent adverse outcomes.

References

1. Balaji N, Dixit P, Adams AM, et al. ST-elevation MI due to 5-fluorouracil cardiotoxicity. Cureus. 2024;16(1):e52864. 2.Faheem B, Kania B, Ashkar H, et al. 5-fluorouracil cardiotoxicity with coronary vasospasm. J Community Hosp Intern Med Perspect. 2022;12:71–4.3. Raber I, Warack S, Kanduri J, et al. Fluoropyrimidine-associated cardiotoxicity: a case-control study. Oncologist. 2020;25(3):e606–9.

Assessing and Improving Resident Doctors' Knowledge of Diabetic Ketoacidosis Management: A Single-Centre Educational Quality Improvement Study

Fatima Zahoor, Ammara Naeem (Supervising Consultant)

Diabetes & Endocrinology Department, Croydon University Hospital NHS Trust

NHS Croydon Health Services NHS Trust

Introduction

Diabetic ketoacidosis (DKA) is a life-threatening complication of diabetes that requires urgent recognition and prompt management by the resident doctors as they are usually the first responders managing DKA. Gaps in their knowledge poses a direct risk to patient safety. Enhancing resident doctors' understanding of guideline-based DKA management is therefore essential.

Aims & Objectives

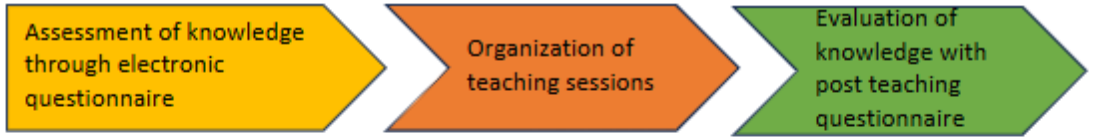
To assess the knowledge and confidence of resident doctors in DKA management in line with national guidelines, identify gaps in practice, and deliver targeted education sessions to improve knowledge and practice.

References

- Joint British Diabetes Societies for Inpatient Care. (2023, March). *The management of diabetic ketoacidosis in adults (Updated March 2023).* https://abcd.care/sites/default/files/site_uploads/JBDS_Guidelines_Current/JBDS_02_DKA_Guideline_with_QR_code_March_2023.pdf

Methodology

- An electronic questionnaire assessing knowledge of DKA management was distributed to resident doctors of all grades at Croydon University Hospital (April 2025–August 2025)
- Based on results, interactive teaching sessions were arranged and delivered to resident doctors across the Trust by the authors.
- A follow-up questionnaire was then used to evaluate changes in knowledge and confidence.



Results

31 doctors completed the pre-teaching questionnaire, and 38 completed the post-teaching questionnaire. Prior to teaching, only 42% reported confidence in managing DKA; this rose significantly to 92% following the sessions.
The following areas regarding management of DKA were assessed and the results obtained pre and post teaching session are summarized below:

	Identification & fluids	Insulin Therapy	Potassium replacement	Long-acting insulin continuation	Adjustment of insulin/Dextrose introduction	Monitoring Regimen	Recognition of Treatment Failure
Pre-teaching	96%	80%	64%	80%	45%	77%	78%
Post-teaching	100%	92%	92%	90%	94%	92%	90%

Problems identified

- Absence of local Trust guidelines
- Reliance on outdated JBDS guidelines on intranet

Future Directions

- Local Trust protocol is being developed in alignment with JBDS guidelines, ensuring standardised and evidence-based DKA management.
- The established rolling education programme to be sustained to reinforce ongoing clinical competence.
- Real-time analysis of DKA case data is being undertaken, with a structured evaluation cycle every six months to monitor outcomes and drive continuous improvement.

Conclusion

- Targeted educational interventions markedly strengthened resident doctors' confidence and competence in DKA management.
- Given the clear clinical benefits and potential to improve patient outcomes, this initiative merits national adoption, embedding structured DKA education within the Foundation and IMT curriculum as a standard of training.

Rare Case Of Multiple Cutaneous Lesions From Atypical Carcinoid Tumour Of Unknown Primary

Authors: Fatma Shah, Anesa Noor, Junaid Kayani

NHS Northampton General Hospital NHS Trust

Background

- Carcinoid tumours are rare, slow-growing neuroendocrine neoplasms.
- They most commonly originate in the gastrointestinal (62%) and bronchopulmonary (23%) systems.[1]
- Cutaneous metastases from carcinoid tumours are extremely rare even among patients with advanced disease. [2]

Case Summary

- 37-year-old ♀ with no PMHx
- Presented with progressively worsening abdominal discomfort over a few weeks.
- Associated with **unintentional weight loss** (30Kg over 6 months).
- Examination: **Numerous widespread cutaneous nodules** over her forehead, neck, back, breasts, trunk, and thighs.
- Variable sizes and characteristics (scarring/ ulceration, some were hard and fixed with no clear edges, while others were mobile).
- First lesion reportedly appeared 2 years ago
- Assessed by GP with US → presumed to be sebaceous cysts.
- Despite the extensive metastatic burden, the patient exhibited no typical features of carcinoid syndrome, such as flushing, diarrhoea, or wheezing.

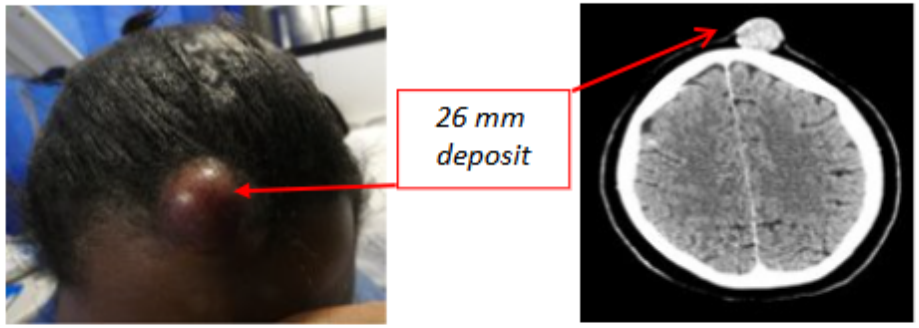


Figure – 1 gross and CT images of 26mm lesion on forehead

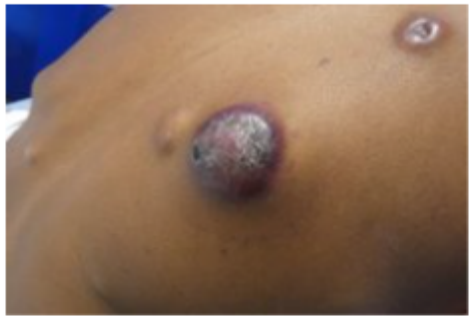


Figure – 3
Gross features of lesions on the back

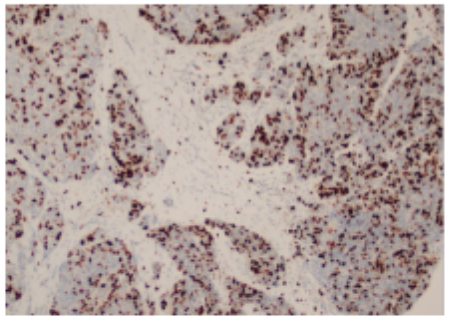


Figure – 4
Ki-67 index 30%

Investigation

- CT Scan: multiple lobulated soft tissue enhancing lesions involving the subcutaneous tissue of the **neck, chest, abdominal wall and retroperitoneum**. And deep organs such as the **brain, lungs, liver and spleen**.
- Biopsy: metastatic neuroendocrine tumour. Immunohistochemical staining was consistent with a **carcinoid tumour**.

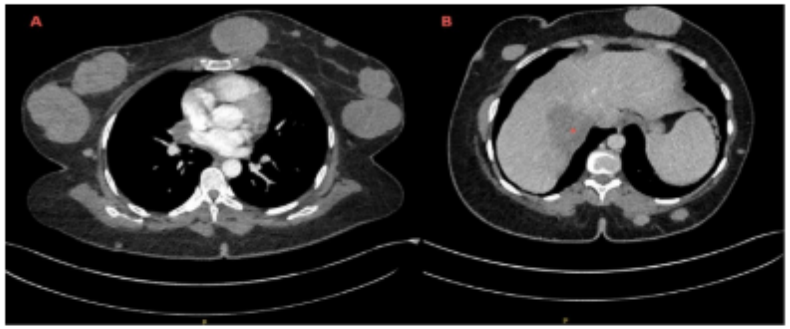


Figure – 3 (A) Multiple lobulated soft tissue density deposits in the chest wall (B) lobulated hypodense lesion in the liver

Conclusion

- Cutaneous metastases from carcinoid tumours can mimic benign dermatological conditions, leading to delays in diagnosis.
- The varied presentation of the cutaneous nodules in this case: from painless to ulcerated and from fixed to mobile illustrates the diverse morphological spectrum of such metastases.

References

1. Zuetenhorst JM, Taal BG. Metastatic carcinoid tumors: a clinical review. The oncologist. 2005 Feb 1;10(2):123-31.
2. Amorim GM, Quintella D, Cuzzi T, Rodrigues R, Ramos-e-Silva M. Cutaneous metastasis of neuroendocrine carcinoma

DNACPR Patient Information Leaflet:

A Quality Improvement Project (QIP)

Key
PL – Pre-Leaflet
PO – Post-Original
PR – Post-Revised

Yes definitely
Yes to some extent
No

Background
- Common directive
- Typically poorly understood – added 'implications' for care
- ADRT's

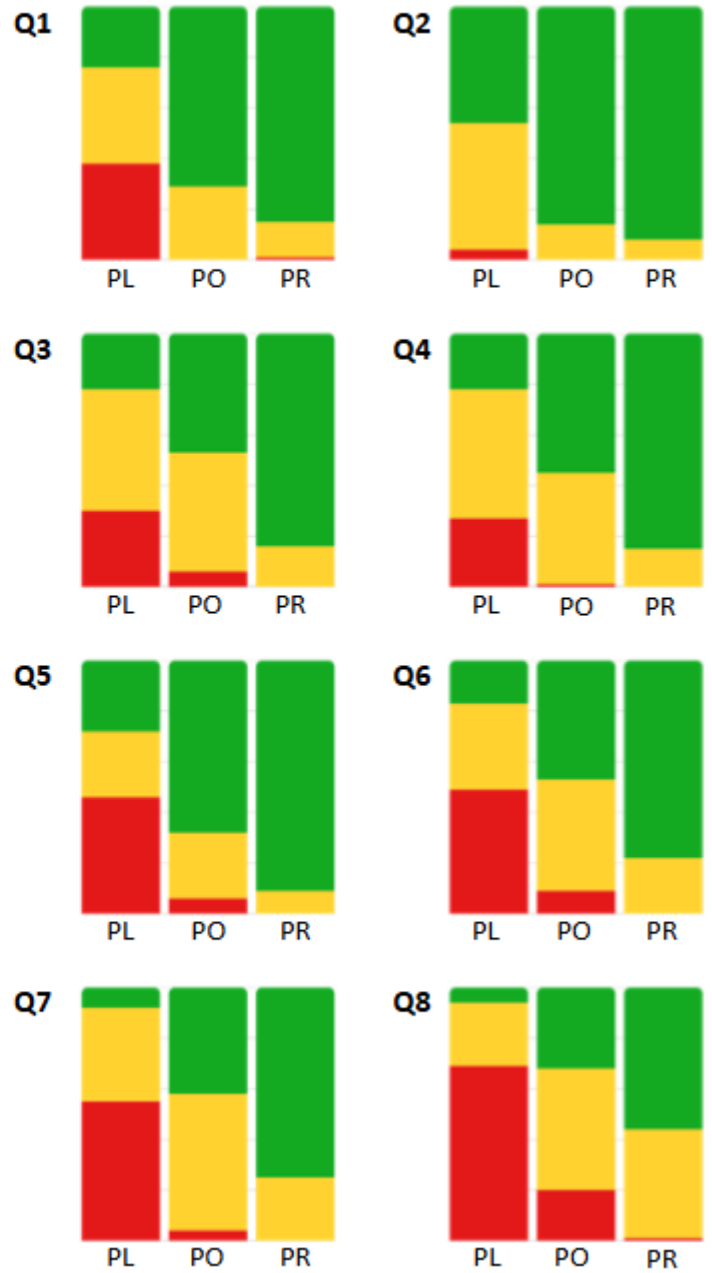
Materials and Method
- Surveyed service users Pre-Leaflet and Post-Original Patient Information Leaflet OR Pre-Leaflet and Post-Revised Patient Information Leaflet
- 8 questions surrounding DNACPR forms (briefly covers CPR and ADRT's)

Results and Discussion
- Noticeable improvement post-leaflet, especially with revised version
- Highlights utility of patient leaflets, especially ones of high quality

Conclusion
- Importance of patient's understanding of decisions relating to their care
- Benefits of having the time to read high quality information leaflets

Dr Finlay Copeland

Summary of results by survey question



Transforming handover practice: A paired electronic and verbal approach aligned with RCP standards

Authors: Dr Gabriela Bodero Jimenez, Dr Stephen Ho, Dr Faiz Shaikh, Dr Maisy Bowen and Dr Peter Hanna.

NHS
University Hospitals Coventry and Warwickshire
NHS Trust

Introduction

Efficient handovers are essential for safe patient care. The Royal College of Physicians (RCP) recommends standardised, dynamic handovers with digital and face to face components[1]. With the NHS 10 Year Health Plan driving transitions from analogue to digital[2], EPR systems are becoming an increasingly ubiquitous resource[3].

This Quality Improvement Project (QIP) examined local practice against RCP recommendations and analysed resident doctor's experiences to identify barriers to best practice. Analysis was used to devise targeted improvements that utilised a newly introduced EPR system.

Methods

Two Plan-Do-Study-Act cycles were conducted and their outcomes are outlined in Figure 1.

Cycle 1 began with a survey of resident doctors to assess views of existing practice. The results were analysed using COM-B methodology[4]. Cycle 1 implemented an EPR integrated handover and Cycle 2 added an in-person element. Following a 6-week implementation period, staff were re-surveyed to assess intervention impact.

8 and 13 resident doctors were surveyed during the first and second cycle respectively. Figure 1 illustrates the outcomes of the PDSA cycles.

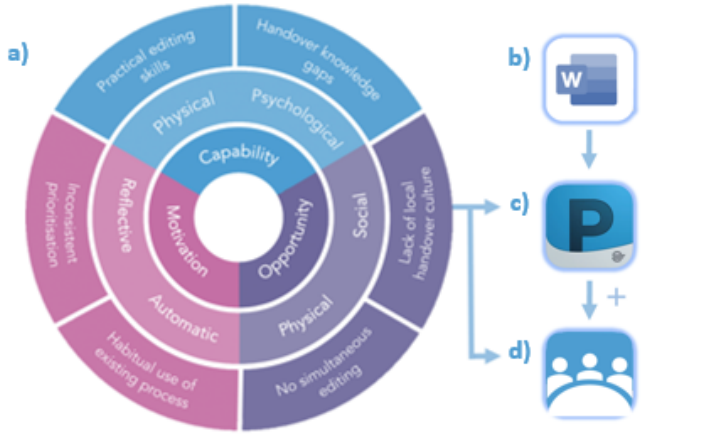


Figure 1. Methodology overview. COM-B data analysis represented as a wheel figure (a). Handover progresses from a word document on a shared file (b) to become EPR integrated (c) and then an in-person element is added (d)

Results

100%
of doctor's rated EPR integrated handover as average or above (Cycle 1)

15 minutes
time saving per shift reported by 71% by ward doctors (Cycle 1)

100%
of doctor's felt the EPR integrated handover improved their experience (Cycle 1)

-28%
Reduction in access issues (Cycle 2)

84.6%
of doctor's felt the paired digital & in-person handover improved their experience (Cycle 2)

Conclusion

This two-cycle QIP improved our handover process in line with best practice. Digital integration improved efficiency and usability with high user satisfaction, while the in-person element requires streamlining.

Our data generated local interest in a digitally integrated handover process. This led to collaboration with clinical informatics teams and our EPR provider to develop the platform to help us address unmet barriers to change.

Wider Impact

This project demonstrates that resident doctors, as frontline users, are uniquely positioned to help shape how digital systems are used in practice.

We hope our work can encourage other resident doctors to actively participate and lead on projects that optimise and develop the way trusts use digital health technology.

References:

1. Royal College of Physicians. *Acute care toolkit 1: Handover.*
2. Department of Health and Social Care. *Fit for the future: 10 year health plan for England.*
3. The Health Foundation. *Electronic patient records: why the NHS urgently needs a strategy to reap the benefits*
4. Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci.* 2011;6:42

Meropenem use in Emergency Department and Acute Medical Units: A QIP of Antimicrobial Stewardship

University Hospitals of Leicester NHS Trust

A Rubbani[1] , A Mohanan[1], M Ben[1], P Pandhya[1],NA George[1,2]

[1]University Hospitals of Leicester NHS Trust [2] Department of Microbiology, Norfolk and Norwich Hospital

Royal College of Physicians

1. Background

Antimicrobial resistance (AMR) is a rising global problem, which can be overcome with judicial use of antibiotics. This is even more relevant with the rise in Carbapenemase producing Enterobacterales (CPE) nationally.

Meropenem is initiated empirically for Red Flag Sepsis (RFS) as per UHL protocol. The guideline mandates a single 1g stat dose followed by a switch to a narrower-spectrum agent upon source identification. Inappropriate continuation drives AMR and incurs significant financial costs.

2. Objectives

- Analyse the association between key indicators and meropenem use
- Evaluate adherence to early switch guidelines for antibiotics
- Assess financial implications of prolonged meropenem treatment

3. Methodology

Design: Retrospective

Sample: 100 patients across 4 acute medical units at Leicester Royal Infirmary

Data Collected: Initiation location, NEWS, diagnosis, culture results, and Meropenem duration

4. Findings:

- No correlation between Meropenem use and clinical severity markers nor any association between Meropenem use and diagnosis was observed across both cycles
- **~20%** microbiological samples collected and sent
- Patients were given Meropenem despite penicillin drug allergy (angioedema/rash)

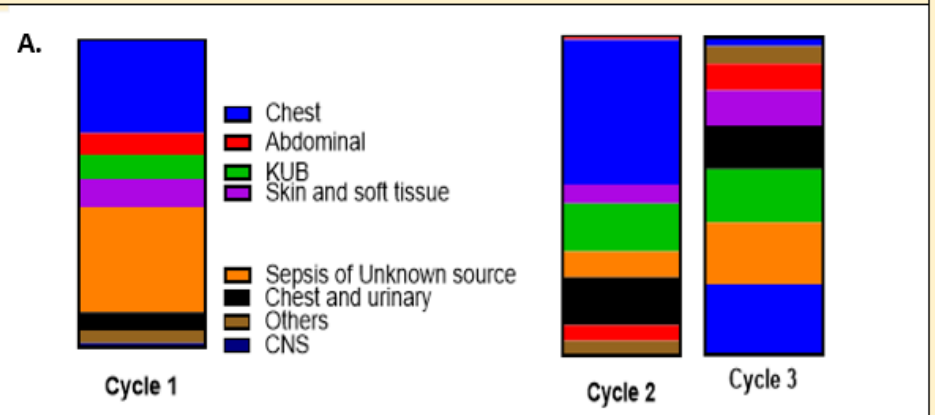
Cycle 1:

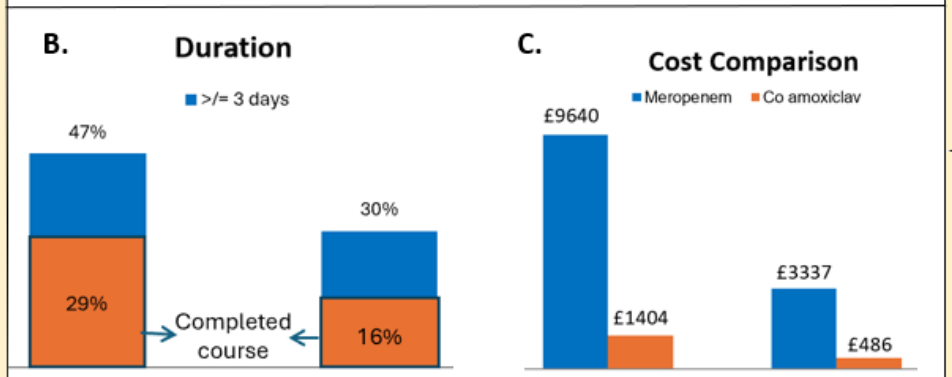
- 47% over-prescription rate despite identified source of infection in 66% patients with 29% completing the course with Meropenem
- £6875- £9625 overspent on 26 patients in 2 weeks

5. Highlights

Cycle 2:

- 17% reduction in over-prescription.
- £7560 saved through better source identification and earlier switch
- Subsequent Cycle 3 – saw a rise in the use of Meropenem by 35% compared to cycle 2; with a rise in costs by £3287





6. Conclusion

1. Send cultures before initiating antibiotics- using appropriate microbiology help guiding abx treatment
2. Adhere to "Start Smart and Then Focus" which is the NHS policy to ensure antimicrobial stewardship
3. Broader spectrum of abx does not mean better healthcare; it leads to greater health inequality
4. Utilisation of biometric parameters should be considered before initiation of abx
5. AMS rounds should be done regularly.

TAKE HOME MESSAGE:

Non-adherence to the UHL/NHS antibiotic switch protocol is a significant issue.

CPE pose a growing threat in the UK, with increasing prevalence in recent years associated with higher morbidity, mortality and healthcare costs

The prompt antibiotic de-escalation and mandatory guideline re-enforcement are critical steps for effective stewardship.

7. References

- Almadhoon, H et al. "Prevalence of carbapenem-resistant Enterobacterales in healthcare and community settings in the UK: a systematic review and meta-analysis." *The Journal of hospital infection*, vol. 165 19-31. 20 Aug. 2025, doi:10.1016/j.jhin.2025.07.030

"CLOSE ENOUGH?"- EVALUATING THE ACCURACY OF CONDITIONING REGIMEN PRESCRIPTION AGAINST THE PROTOCOL AND STANDARD OPERATING PROCEDURES.

Dr. Gloria Quansah
Dr. Edna Mensah

Imperial College Healthcare NHS Trust
University Hospital Southampton NHS Trust

Introduction

- Stem cell transplantation is a form of management with curative potential for many haematological disorders. It has changed the course of disease progression since its inception with its benefits vast.
- Conditioning regimens are therapy administered to the patient prior to receiving the transplant. It functions to eradicate haematological malignancies pre-transplant, provide sufficient immune suppression, ensure engraftment & to prevent both rejection and graft-versus-host disease (GvHD) [1].
- A wide variety of conditioning regimens are available including chemotherapy which may aim at myeloablation or lymphodepletion depending on the agent, and in some instances requiring total lymph node irradiation or even total body irradiation.
- There are protocols designed to ensure that patients are receiving the appropriate conditioning regimen based on their disease, functional state and other factors such as age, weight and renal function. Prescription of the conditioning regimen must tally with patient's specific protocol to prevent errors and ensure a successful transplant.

Objective

To assess the adherence of conditioning protocols to standard operating procedures and to determine the accuracy of prescriptions of conditioning regimen versus the protocols designed.

Methodology

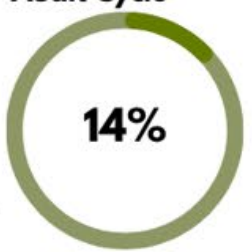
01 Retrospective data was gathered over a period of 6 months

02 Sample size consisted of 95 patients;
44- autologous stem cell transplants
46- allogeneic stem cell transplant
5 - CAR-T cell therapy

03 The conditioning regimen stated on the transplant protocol for each patient was assessed against the SOP to see if it tallied, and if not if there was any deviation from procedure documented.

04 The prescription was then checked on the electronic prescribing platform against the patient's specific protocol to see if they matched and if there were any errors in the prescription.

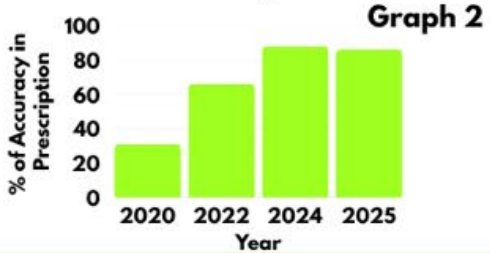
% of Prescription Errors in this Audit Cycle



Graph 1

Accuracy in prescription in the last 5 years

Graph 2



Results

Prescription errors were found in 14% of cases examined. Out of the errors found, 85% were due to dose banding. The remainder were complete deviations from protocol and the reason for deviation not stated. Similar overall rate of errors was seen in a previous audit done a year ago, which had an error rate of 12.5%. There has however been a general improvement when compared with previous years during use of paper prescriptions. (Accuracy levels: 31% in 2020, 66% in 2022, 88% in 2024

85% of errors were due to dose banding discrepancies

Figure 1

Conclusion

There is room for improvement to increase the accuracy of prescriptions. There has been a general improvement when compared with previous years during use of paper prescriptions. Collaboration between the transplant team & pharmacy is needed to reduce errors due to dose banding and to ensure patients are receiving the right medications and at the right dose.

References

1. Avichai Shimoni, Vera Radici, and Arnon Nagler. The EBMT Handbook: Hematopoietic Cell Transplantation and Cell Therapies. Internet, 2024

Swimmer's Itch in a returning traveler : an interesting case of rashes

Grace Thomas, Trust Grade Registrar, General Medicine
Croydon University Hospital

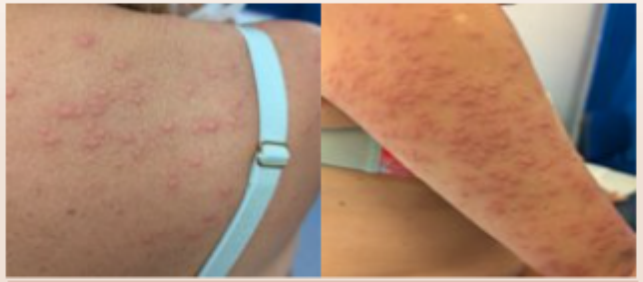
Introduction

Swimmer's itch, also known as cercarial dermatitis, is a cutaneous hypersensitivity reaction triggered by the penetration of non-human larvae into the skin, typically contracted through contact with freshwater. While it often resolves on its own, its diverse symptoms can resemble other sun-related skin conditions, especially in travelers who experience simultaneous sun exposure.

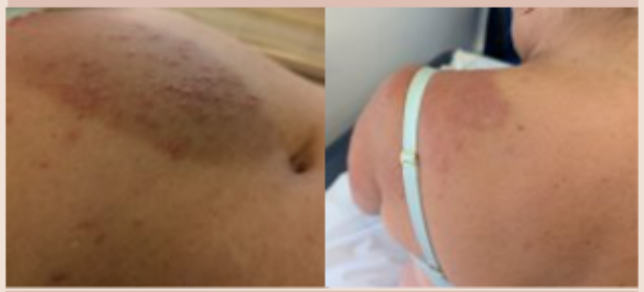
Also known as 'duck itch' (New Zealand), 'duckworms' (US), 'hoi con' (Thailand), 'kobanyo' (Japan), 'sawah' (Malaysia), and 'rice paddy itch' or 'clam diggers itch.

Case Presentation

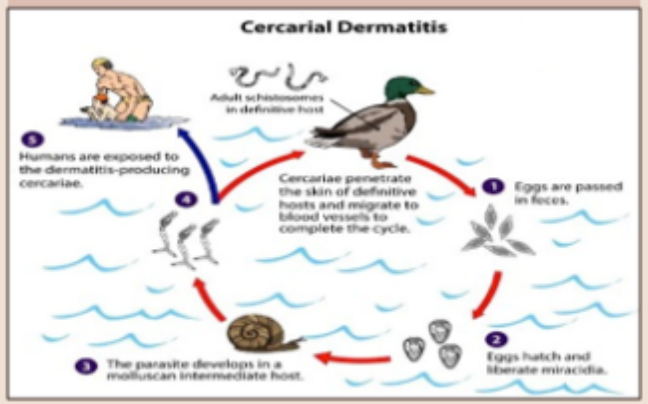
- Eastern European woman in her early 60s, residing in the UK.
- 5-day history of a pruritic erythematous rash on the arms, shoulders, and back.
- Travel history to Kenya.
- Exposure to both fresh and salt water.
- No significant past medical history except for Herpes simplex in the past.
- No significant drug history, however, took anti-Malarial prophylaxis - Malarone (proguanil/atovaquone) during her trip.
- No significant family history.
- No systemic symptoms.
- Examination: revealed monomorphic, papulo-vesicular lesions predominantly on sun-exposed areas, with a distinct oval distribution on the abdomen matching the swimwear cutout.
- Labs: normal blood counts, renal and liver function, mildly raised CRP of 25 mg/L
- Negative for HSV-1, HSV-2, and VZV.
- Skin biopsy was declined.
- Based on the exposure history, lesion morphology, and self-limiting course, swimmer's itch was considered the most likely diagnosis.



Photos depicting erythematous, monomorphic, papulo-vesicular rash



Picture above showing a tanned oval area in the abdomen corresponding to the lady's swimwear cutout.



Management

She was managed with fucibet cream and topical emollient. On follow-up via telephone, the patient reported significant improvement in her symptoms, with near-complete resolution of the rash.

She did not require any further medical intervention beyond supportive care and sun avoidance.

Discussion

Swimmer's itch typically presents within hours of freshwater contact but may have a delayed onset, particularly in first exposures or mild infestations. Distribution is often limited to exposed skin, and lesions may overlap with sun-exposed patterns, complicating diagnosis. Awareness of aquatic exposure history is essential to differentiate it from photodermatoses such as polymorphic light eruption.

A broad differential was considered - Polymorphic light eruption, sea bather's eruption, actinic prurigo to name a few.
This case underscores the importance of a thorough travel history, drug review, and dermatologic assessment in evaluating post-travel rashes. Management focuses on supportive care and sun avoidance. The patient's significant improvement on follow-up without the need for intensive intervention supports a self-limited process. A focused exposure history can guide diagnosis and avoid unnecessary investigations.

References

DermNet NZ: Swimmer's itch—aetiology, clinical features. https://dermnetnz.org/topics/swimmers-itch.

Verbrugge LM, Rainey JJ, Reimink RL, Blankespoor HD: Swimmer's Itch: Incidence and Risk Factors. Am J Public Health. 2004 May;94(5):738-741. doi: . 10.2105/ajph.94.5.738.

Pulmonary Vascular Malformation and Hyperthyroidism

Authors : Dr Greeshma Joseph, Dr Mohit Inani, Dr Thimmegowda L. Govindagowda, Dr Arpitha Jayaramegowda

Royal College of Physicians

The Shrewsbury and Telford Hospital NHS Trust

Background

Pulmonary arteriovenous malformations (PAVMs) are abnormal connections between pulmonary arteries and veins bypassing capillary network and therefore causing pathological intrapulmonary right to left shunt.

- Orthodeoxia was observed in the case, which led to suspicion of PAVM.
- PAVM was confirmed by CT Pulmonary Angiogram.
- Due to concurrent tachycardia, thyroid function tests were performed, confirming hyperthyroidism.

Objectives

- To consider PAVMs as a differential diagnosis in cases of orthodeoxia.
- To recommend embolization even in asymptomatic patients.
- To consider screening for HHT in cases of PAVM.

Presentation

A young female was noted to have low oxygen saturation during a routine examination in primary care. She appeared comfortable at rest. During observation, she was noted to be tachycardic. A loud second heart sound was audible on auscultation. No telangiectasia was observed. The patient's high intensity sports activity despite hypoxaemia made this case noteworthy.

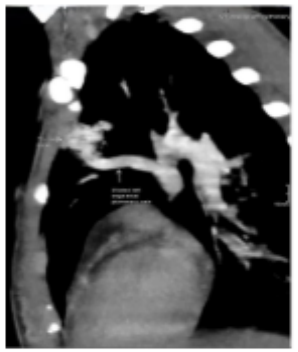


Figure 1

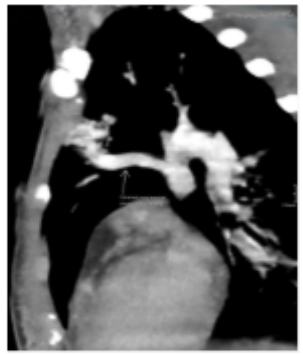


Figure 2

Investigations

- CT Pulmonary Angiography revealed vascular malformations in the anterior segment of the left upper lobe and posterior segment of the left lower lobe, which demonstrate dilated draining veins into the left pulmonary vein.
- Echocardiography revealed no abnormalities.
- TSH receptor antibody was elevated, with a value of 8.3 IU/L, confirming Grave's disease.

Arterial Blood Gas

	pH	pCO2 (kPa)	pO2 (kPa)	sO2 (%)
Initial	7.481	2.94	8.22	93.7
Lying	7.452	3.31	10.20	95.7
Standing	7.485	2.84	6.86	88.5

Table 1

Treatment

- Hyperthyroidism may have increased the shunt , making its treatment essential. Carbimazole and Propranolol were initiated with Endocrine input.
- Input from specialists regarding embolization is currently awaited.

Thyroid Function Tests

	Initial value	Post treatment
Free T4 (pmol/L)	69.8	10.0
Free T3 (pmol/L)	33.4	-
TSH (mu/L)	<0.01	1.50

Table 2

References

- Santhirapala V *et al.* Orthodeoxia and postural tachycardia in pulmonary AVMs. *Thorax* 2014; 69:1046–7.
- hoylin CL *et al.* BTS Clinical Statement on pulmonary AVMs. *Thorax* 2017; 72:1154–63.
- Danyalian A, Sankari A, Hernandez F. Pulmonary arteriovenous malformation. *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2025.

CHANGING HABITS

An evaluation of usage of the eConsent platform for procedures in Vascular Surgery

H. Mohamed, M. Howells, T. Mohideen, D. Mittapalli

NHS University Hospitals Plymouth NHS Trust

Introduction

Informed consent is vital for surgery. Electronic consent improves patient understanding, integrates with EPR, and reduces errors from paper forms. Our trust adopted eConsent to standardize practices and progress digitalization.

Objectives

Primary: Evaluate the use of eConsent for surgical procedures within the vascular department with a view to identify areas for improvement and compliance.

Secondary: Consider financial benefits.

Methodology

01 Retrospective review of all patients who underwent a vascular surgical procedure between January and March 2025 was conducted in the initial cycle. IR and non-surgical procedures were excluded.

02 Data collected included demographics, procedural details, admission pathway and compliance with eConsent.

03 Further review of patients was conducted between May and June 2025 for the second cycle, after the recommendations of the first cycle were implemented.

Figure 1: Cycle 1 compliance

Figure 2: Cycle 2 compliance

Figure 3: eConsent Compliance

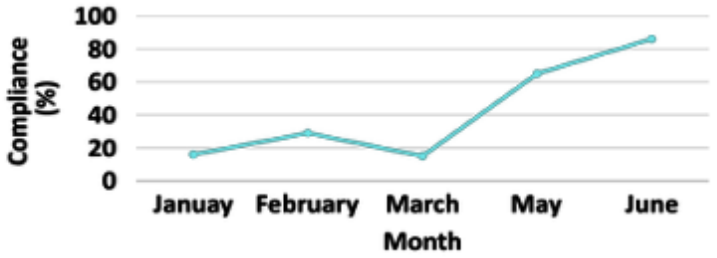


Figure 4: Estimated Cost Savings from eConsent £ per year

- Per case £0.90
- Cycle Total £61.20
- Trust-wide £61,200
- NHS england £11,000,000

Results

Cycle 1 included 124 procedures (124 patients; median age 71, 62% male) with **20%** eConsent compliance (25/124). Awareness was raised through meetings, education, posters, and a dedicated iPad for exclusive use for consenting.

Cycle 2 included 93 procedures (93 patients; median age 70, 75% male), compliance improved **73%** (68/93).

Switching to electronic consent saved £0.90 per case, totaling £61.20 during the cycle. With 68,000 procedures annually at our center and 12 million across NHS England, potential yearly savings could reach £61,200 locally and over £11 million nationally.

Conclusion

This audit showed substantial improvement in the use of eConsent platform after implementation of simple measures to enhance compliance.

Possible cost saving opportunities for trusts using paper-based systems with a switch to eConsent.

References

1. Bethune, A., Davila-Fajoo, M., Valli, M. & da Costa, L., 2018. e-Consent: approaching surgical consent with mobile technology. Canadian Journal of Surgery, 61(5), pp.339–344. https://doi.org/10.1503/cjs.016017
2. Reeves, J.J., Maykel, K.L., Waterman, R.S. et al., 2020. Association of electronic surgical consent forms with entry error rates. JAMA Surgery, 155(9), pp.777–778. https://doi.org/10.1001/jamasurg.2020.1014
3. Hoylan, R., Hussain, M.I., Martin, A.P., Ainsworth, N., Lamerigtse, C., Coombs, A.W., Job, S., Rao, C. & St John, E., 2025. Digital Versus Paper-Based Consent from the UK NHS Perspective: A Micro-costing Analysis. Pharmacoeconomics - Open, 9(1), pp.27–39. https://doi.org/10.1007/s41669-024-00536-0
4. University Hospitals Plymouth NHS Trust, 2024. Annual Report 2023–2024 (Summary). [online] Available at: https://www.plymouthhospitals.nhs.uk/annual-report-2023-2024-summary/ [Accessed 17 Oct. 2025].
5. Abbott, T.E.F., Fowler, A.J., Dobbs, T.D., Harrison, E.M., Gillies, M.A. & Pearse, R.M., 2017. Frequency of surgical treatment and related hospital procedures in the UK: a national ecological study using hospital episode statistics. British Journal of Anaesthesia, 119(2), pp.249–257. https://doi.org/10.1093/bja/aex137

First Seizure with Olfactory Aura Leading to Diagnosis of Right Medial Temporal Glioblastoma

Olfactory aura = mesial temporal lesion until proven otherwise.

Dr Haliman Khan[1], Dr Karan Jethwa[1]

[1] Department of Medicine & Surgery, Royal Lancaster Infirmary

Background:

Glioblastoma multiforme (GBM) is the most common primary malignant brain tumour in adults with a median survival of 14–15 months despite maximal multimodal therapy. Seizures are the first presenting feature in 30–50% of cases, particularly with temporal lobe involvement. Olfactory aura is a key red-flag sign localising to the mesial temporal region and mandates urgent MRI in adult first seizures.

Case:

A gentleman in his 50s presented with a first focal seizure with behavioural arrest, automatisms and a “burnt rubber” smell. He had no prior seizure history. Examination revealed mild receptive dysphasia and subtle left upper limb weakness. CT suggested a right temporal lesion; MRI confirmed a medial temporal ring-enhancing mass with vasogenic oedema and corpus callosum extension, consistent with GBM.

Management:

He received IV lorazepam, levetiracetam and dexamethasone was started for vasogenic oedema. He underwent right fronto-temporal craniotomy with near-total resection. He is under neuro-oncology review for adjuvant chemoradiotherapy.

Learning Points:

- First seizures in adults require urgent neuroimaging
- Olfactory aura strongly suggests medial temporal pathology
- CT can be normal in early tumour-related seizures — MRI is mandatory
- Early seizure + oedema management is critical
- Multidisciplinary care drives outcomes

MRI:

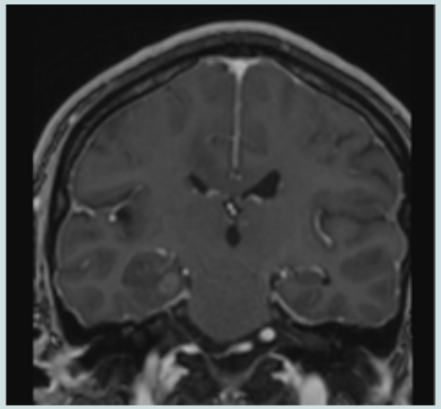


Figure 1: Coronal T1 gadolinium-enhanced MRI demonstrating a right medial temporal ring-enhancing lesion with central necrosis and vasogenic oedema.

Stage	Findings/Actions
Presentation	First focal seizure with olfactory aura, automations, arrest
Examination	Mild receptive dysphasia, subtle left upper limb weakness
Imaging	CT: right temporal lesion MRI: (Figure 1)
Acute Management	IV lorazepam, levetiracetam, dexamethasone, IV antibiotics for aspiration pneumonia
Surgery	Right frontotemporal craniotomy, near total resection

Figure 2: Diagnostic and management timeline

Hanif F et al. Asian Pac J Cancer Prev. 2015;16(9):3617–24 Englot DJ et al. Handb Clin Neurol. 2016;134:263–75 Capampangan DJ et al. Ann Emerg Med. 2010;56(4):374–7 Sullivan J, Fisher R. Epilepsy Behav. 2021;115:107648 Mousinho M et al. Eur Psychiatry. 2024;39(S1):S317 Weller M et al. Lancet Oncol. 2014;15(9):e395–403 Stupp R et al. N Engl J Med. 2005;352(10):987–96 American Association of Neurological Surgeons. Astrocytoma Tumors. 2024 Gaillard F et al. Radiopaedia. 2024 Weller M et al. Nat Rev Dis Primers. 2015;1:15017

Don't go breaking my bones: A case-control study investigating the risk factors for fractures in patients under 35 years old

K Jethwa[1], V Ready[1] & H Khan[1]

Introduction:

Fractures are a common complication of various rheumatological conditions, and because of this we have a wealth of knowledge relating to the risk factors that increase the likelihood of a fracture in patients with rheumatic diseases. However, we have not previously been able to successful identify the risk factors that increase the risk of fracture in those less than 35 years of age. As a result, the aim of this study is to investigate the risk factors for fractures in patients with rheumatological conditions aged below 35 years.

Methods:

A total of 663 patients with a range of rheumatological disease who had received a DEXA scan when they were 35 or younger were included. The odds ration of fracture was then calculated in patients who developed fractures and those who did not across the risk factors in Table 1.

The statistical significance was then determined by calculating the confidence interval for each factor.

Table 1: Risk Factors for

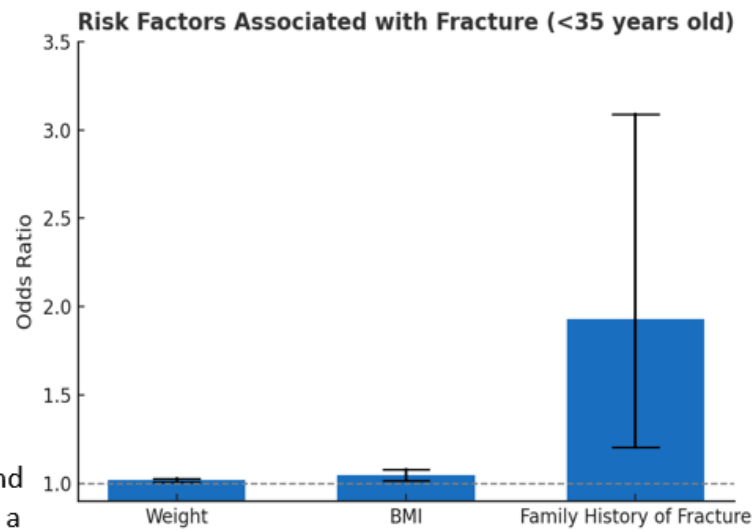
Height	Family History of a Fracture
Weight	Excess Alcohol Intake
BMI	Smoking History
History of RA	Previous Steroid Use
History of PMR	Bone Mineral Density
History of AS	History of IBD
History of PsA	History of Coeliac Disease
History of SLE	Menopausal Status

Results:

Across the 16 risk factors that we assessed, weight with an OR = 1.017555 (CI – 1.007525, 1.027685), BMI with an OR = 1.047332 (CI – 1.017308, 1.078241), and a positive family history of fracture with an OR = 1.92805 (CI – 1.203862, 3.087877) increased the risk of fracture in patients less than 35 years old.

Interestingly, co-morbid coeliac disease was found to be protective with an odds ratio of 0.5874597, notably the CI reflected that this was statistically insignificant (CI = 0.3167937, 1.089381).

Graph 1: Risk Factors Associate with



Discussion:

Across the study population we found that weight, BMI and a positive family history of fractures were associated with a statistically significant increase in risk for fracture, while the remaining risk factors that we assessed did not reflect a statistically significant increase in risk for fracture.

Analysing the positive factors further, those with a higher BMI (BMI>25 kg/m^2) had a greater frequency of fracture, similarly those who had a higher weight were also at greater odds of fracture. Expectedly, if a patient had a positive family history of fracture their odds of fracture were also increased.

Considering this, future avenues of research would be to assess further risk factors in patients under 35 years of age, as well as to reassess the above risk factors to increase validity of these results.

Key Learning points:

1) In this study of patients less than 35-years-of age we found that weight, BMI, and a positive family for a previous fracture of any bone is a statistically significant risk factor for fracture
2) Further avenues for research would be review of the above risk factors, and exploration of further risk factors

Acknowledgement: data kindly provided by M Bukhari, UHMB

Pacemaker Lead Endocarditis Secondary to Staphylococcus aureus Infection at a Flash Glucose Monitoring Site in Type 1 Diabetes: A Case Report

Linn Kyaw[1]; Al-Hayek Hamza[1]; Parsian Zahra[1]; Dalpathadu Sanjalee[1]
,Diabetes and Endocrine Department,[1]York General Hospital

Background

- Flash and continuous glucose monitoring (FGM/CGM) devices are Increasingly used to improve glycaemic control[1 2].
- Although generally safe, they may cause local or systemic infections[3], especially in poorly controlled diabetes.
- Such infections can rarely lead to severe complications , including device-related endocarditis.
- We present a case of *S. aureus* infection originating from an FGM site that progressed to pacemaker lead endocarditis.

Case Presentation

- A 45-year-old man with poorly controlled type 1 diabetes mellitus and multiple comorbidities who presented with fever, confusion, and pain at the site of his FGM sensor insertion.
  Clinical examination revealed signs of cellulitis with abscess formation (Figure 1).
- Cultures from both the wound and blood grew Staphylococcus aureus sensitive to flucloxacillin.
  Imaging identified a deep-seated shoulder infection, requiring repeated surgical washouts.
- Persistent bacteraemia raised suspicion for device-related infective endocarditis, which was confirmed by transoesophageal echocardiography, showing a vegetation on the pacemaker lead (Figure 2).
- The patient required pacemaker lead extraction and prolonged intravenous flucloxacillin therapy to achieve a full recovery.

Images

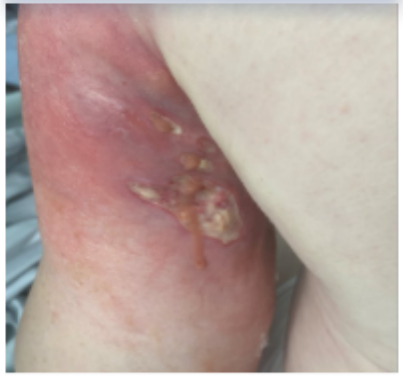


Figure 1. Examination on arrival showed erythema, swelling, and ulceration with discharge at the FGM site.

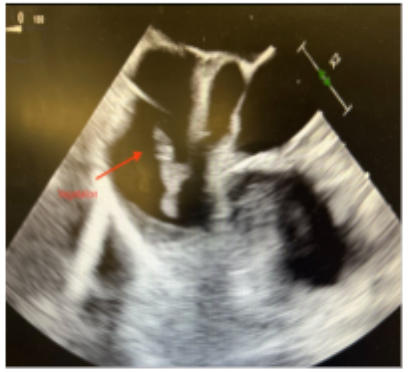


Figure 2. Transoesophageal echocardiogram demonstrating vegetations on pacing leads in the right atrium.

Discussion

- This case demonstrates how infections originating from CGM or FGM insertion sites can progress from local to severe systemic disease[1 2]
- Poor glycaemic control and comorbidities increase the risk to S. aureus infection and device-related endocarditis[3].
- Reported cases vary from local cellulitis to necrotising infection and sepsis[4 5].
- Early recognition, appropriate antibiotic therapy, and device removal with surgica intervention were essential for favourable outcomes.

Conclusion

- Infections related to glucose monitoring devices, though uncommon, can progress to serious and life-threatening complications.
  We should maintain a high suspicion for systemic infection in diabetic patients with implanted devices.
  Awareness of this rare but severe complication is essential to improve patient safety and outcomes.

References

1. Mian Z, Hermayer KL, Jenkins A. Am J Med Sci. 2019;358(5):332-339.
2. Asarani NAM et al. J Diabetes Sci Technol. 2019;14(2):328-337.
3. Attalla J, Maletkovic J. Proc UCLA Health. 2024;28(1).
4. Von Tokarski F et al. QJM. 2021;114(1):58-59.
5. Herrod SS et al. Clin Med. 2022;22(5):482-484.

A closed Loop Audit on Monitoring Visual Infusion Phlebitis score and Timely Removal of Peripheral Intravenous Cannulas

Introduction:

Phlebitis is an inflammation of the vein typically seen as pain, redness and warmth around IV cannula insertion sites. We care about phlebitis because it disrupts treatment, causes pain, extends stays, and can lead to complications like infection or thrombosis. **Early recognition and timely removal** are key to improving outcomes. Both NICE and Trust guidelines recommend documentation at insertion, thrice-daily monitoring using the Visual Infusion Phlebitis (VIP) score, and removal at **72 hours** or up to 96 hours if clinically indicated. This audit aimed to assess and improve compliance with these guidelines.

Materials & Methods:

We assessed compliance by reviewing records for all cannulas (**n=74 in cycle 1**) over a two-week period, auditing records for insertion, VIP score monitoring, and removal times. Following the first cycle, **staff feedback forms** identified key systemic - barriers including inconsistent computer system prompts, poor records of cannulas from other departments and operational challenges like understaffing and variable shifts. This guided our interventions of daily educational huddles for two weeks, **visual posters** around the wards, and discussions with IT to resolve the prompt issue.

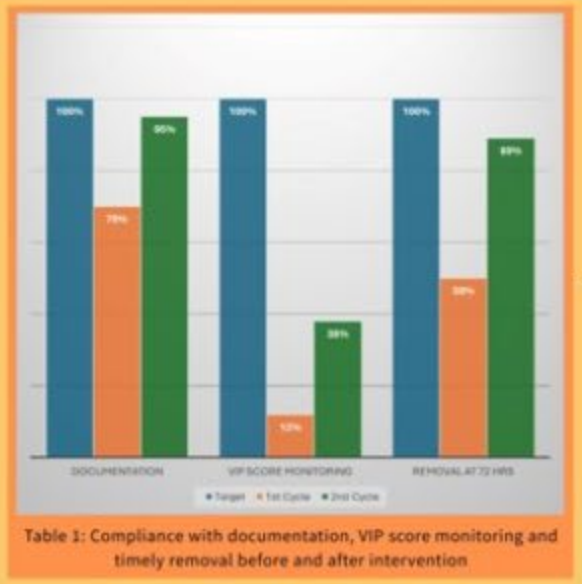


Table 1: Compliance with documentation, VIP score monitoring and timely removal before and after intervention

Image 1:Poster used for visual reinforcement.

University Hospital Southampton NHS Foundation Trust

Conclusion:

This audit successfully improved the quality of care by enhancing compliance with cannula monitoring and timely removal. It highlighted that small changes can significantly affect patient experience, with even minor discomfort impacting overall perception of care. The project also demonstrated that poor compliance was not solely due to knowledge gaps but reflected wider systemic barriers. Sustaining improvement will require ongoing education, systemic support, and trust-wide application to ensure patient safety and improved outcomes.

Results:

In the initial cycle **(n=74)** VIP score monitoring compliance was only **12%**, and timely removal at 72 hours was **50%**. In subsequent cycle **(n=66)** after introduction of change showed significant improvement to **38% and 89%** respectively. This enhancement in full protocol compliance was statistically significant, with a **p-value of 0.00065 per Fisher's Exact Test** The improvements seen following our interventions showed that small, targeted changes can lead to meaningful improvements in patient care. Educational huddles and visual prompts proved effective in raising awareness, while addressing IT barriers further supported practice change.This was the first audit on the topic within our trust, providing valuable baseline data and demonstrating the potential for trust-wide application. However, the project was limited by its relatively small sample size and short time frame. Future work should include repeating the audit across multiple wards, integrating systemic solutions, and ensuring continuous education to maintain compliance.

References:

1- www.nice.org.uk. (n.d.). Recommendations | Healthcare-associated infections: prevention and control in primary and community care | Guidance

2-University Hospital Southampton NHS Foundation Trust Intravenous Cannulation document

3-Zanella MC, Catho G, Jackson H, Lotfinejad N, Sauvan V, Chraiti MN, et al. Dwell Time and Risk of Bloodstream Infection With Peripheral Intravenous Catheters. JAMA Network Open

THE UHS WAY

Hamza Naveed Virk
Jeshwin Thamburaj
Hamna Manan

Retrospective Insights: Evaluating Computed Tomography Pulmonary Angiography for Pulmonary Embolism in Surgical Patients

Vakil H, Ahmed A, Thamburaj J, Baxter M

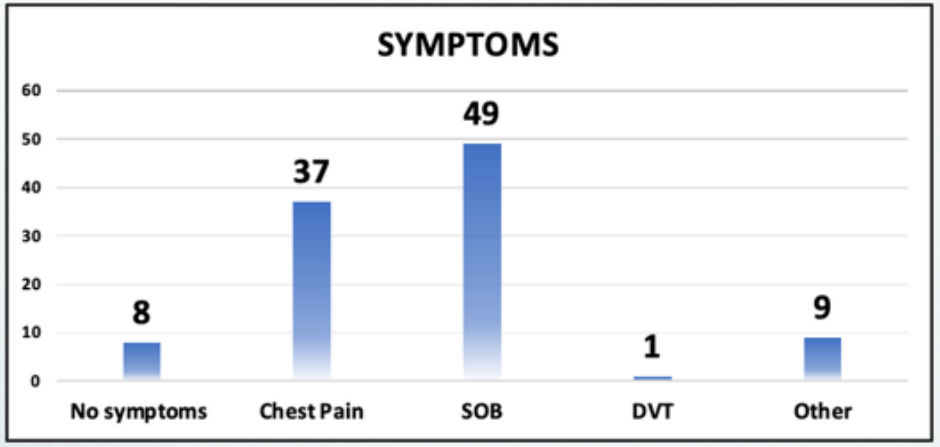
University Hospital Southampton NHS Foundation Trust

Introduction

PE is considered a common acute complication post operatively and often causes clinicians to consider it as a differential diagnosis in patients presenting with shortness of breath. This study aims to look at factors that contribute to a positive CTPA result for PE.

Methodology

Data was collected retrospectively from 2023 to 2024. Patients included in the study were those admitted with a surgical diagnosis but did not require surgery or those who had surgery during their admission. We studied factors such as age, weight, height, anti-coagulation and anti-platelet history, ECG recordings, immobilisation (more than 3 days), oxygen requirement, ongoing history of cancer and malignancy, troponin trend, egfr trend and the final CTPA reading.



Results

A total of 104 surgical inpatients were included (mean age 67.2 years; mean BMI 27.1 kg/m²). Six patients with positive CTPA had elevated troponin, while 14 patients had elevated troponin without PE. Troponin rises over 3 hours in PE-positive patients were modest (mean increase 10), and markedly elevated initial troponins (>500) were more often associated with alternative cardiac pathology such as CAD or AHF.

Clinical radiology of patients negative for PE were 48.3% with atelectasis, 22.4% with pneumonia or pleural effusion secondary to infection and 40.4% with other pathologies (cancer, heart disease).

Predictor	Estimate	SE	Z	p	Odds ratio
Intercept	-7.8477	3.1878	-2.462	0.014	3.91E-04
Surgery	0.5555	0.7408	0.75	0.453	1.743
Previous PE/DVT	-0.2253	1.4521	-0.155	0.877	0.798
Anti-platelets	0.2157	0.9596	0.225	0.822	1.241
Anti coagulant	0.359	0.8814	0.407	0.684	1.432
ECG	-0.029	0.1996	-0.145	0.885	0.971
02 req	-0.1342	0.8395	-0.16	0.873	0.874
Imobilised long period	-1.706	0.8138	-2.097	0.036	0.182
Cancer	-1.1486	0.856	-1.342	0.18	0.317
Given trt anti coag	1.1863	0.8175	1.451	0.147	3.275
Troponin	1.2749	0.7521	1.695	0.09	3.578
Age	0.0495	0.0272	1.818	0.069	1.051
egfr	-1.1752	0.9806	-1.198	0.231	0.309
Weight (Kg)	0.0151	0.0192	0.786	0.432	1.015
Symptoms	1.8022	1.237	1.457	0.145	6.063

Conclusion

Overall, the study indicated prolonged immobility (OR = 0.18, 95% CI: 0.04–0.90, p = 0.036). to be the strongest independent predictor with this dataset, indicating that those with prolonged immobility had significantly lower odds of a positive outcome. Age (OR = 1.05, 95% CI: 1.00–1.11, p = 0.069) & troponin (OR = 3.58, 95% CI: 0.82–15.63, p = 0.090) may show positive predictive, especially given their high likelihood and Odds ratios, however without a conventional strong statistical significance as indicated by their p-value.

Despite the limitations of the study, the Odds ratio being high for predicting factors suc as: symptoms, Treatment anticoagulation and Troponin indicate that further study with a larger cohort of PE Positive may be beneficial to solidify positive predictive factors for PE in surgical patients.

Takotsubo Syndrome Triggered by Atypical Pneumonia: A Case of Legionella Infection

Authors Dr I M Mohamud, Dr Hasnain Kanchwalla

Affiliations: Craigavon Area Hospital – HSCNI

Background

Takotsubo cardiomyopathy (TTC), also termed stress-induced cardiomyopathy, is a transient form of left ventricular systolic dysfunction occurring without obstructive coronary artery disease[3]. It is often misdiagnosed as acute coronary syndrome (ACS) due to overlapping features such as chest pain, ST-segment elevation, and elevated troponin levels. While emotional and physical stressors are common triggers, infections are increasingly recognized as precipitants[3,6]. Legionella pneumophila, a cause of severe community-acquired pneumonia, is rarely linked with TTC. Its cardiac complications usually include myocarditis and arrhythmias[4], with TTC only occasionally reported[1,2]. The overlap of pneumonia, sepsis, and myocardial dysfunction poses a diagnostic challenge.

Case presentation

A 68-year-old woman was admitted after an unwitnessed fall with prolonged immobility. She was confused, febrile, and had elevated inflammatory markers, acute kidney injury, and rhabdomyolysis. Chest radiography showed left basal consolidation, and intravenous antibiotics were started. A distal radius fracture was also identified. Despite initial improvement, she developed worsening dyspnoea requiring increased oxygen therapy. Repeat chest X-ray revealed progression of consolidation. ECG showed sinus rhythm with STsegment elevation in V1–V2, and serum troponin was elevated.

Investigation and management

Investigations:

Echocardiography demonstrated impaired systolic function with apical akinesis and an ejection fraction of ~40%. The left ventricular apex appeared globular, consistent with TTC. Mild aortic stenosis and trace valvular regurgitation were noted, with normal right ventricular function. Coronary angiography showed minor coronary artery disease, a patent circumflex stent, and no evidence of thrombus or plaque rupture, excluding ACS. Respiratory work-up confirmed Legionella pneumophila infection by urinary antigen testing.

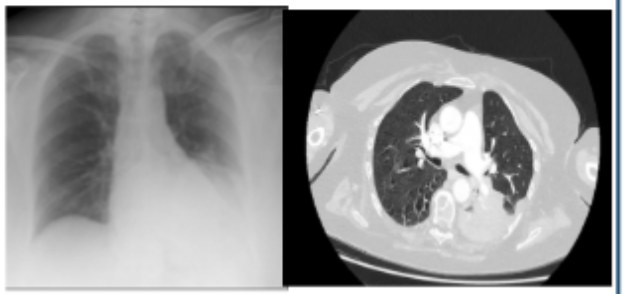


Figure 1: X-ray and CT scan results showing left lower lobe consolidation consistention with legionella pneumonia

Management and Outcome:

Antibiotics were escalated to aztreonam and metronidazole, later rationalized to oral levofloxacin. Supportive management for TTC was continued. Renal function and infection markers improved, oxygen was weaned, and the patient was discharged with further OP Cardiology follow-up and Rehabilitation

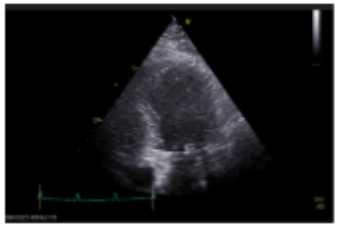


Figure 2: ECHO showing apical ballooning and hypokinesis

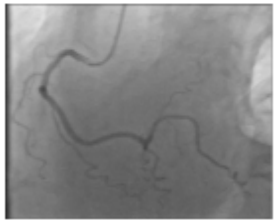


Figure 3: Angiogram showing patent vessels

Discussion

TTC accounts for 1–2% of patients presenting with suspected ACS[6]. It predominantly affects post-menopausal women and may be triggered by severe infections, particularly pneumonia[3]. Although Legionella pneumonia is usually associated with myocarditis or arrhythmias[4], rare cases of TTC have been documented[1,2]. Diagnosis relies on identifying the characteristic echocardiographic findings, reduced ejection fraction, unobstructed coronary arteries, and an identifiable stressor. This case highlights the need to consider atypical pathogens in severe or non-resolving pneumonia. Early detection of Legionella enables targeted therapy with fluoroquinolones such as levofloxacin, improving outcomes. Multidisciplinary collaboration is essential for optimal recovery

Conclusions

Conclusion:

We present a rare case of TTC complicating Legionella pneumophila pneumonia in an elderly woman. Clinicians should maintain suspicion for stress-induced cardiomyopathy in septic patients with ECG changes and elevated troponins, while also considering atypical pathogens in pneumonia. Prompt diagnosis, targeted antibiotics, and appropriate cardiac care facilitated full recovery and added to the growing evidence linking infection with Takotsubo syndrome.

References

- Elikowski W, Masek-Elikowska M, et al. Severe transient LV dysfunction in Legionella pneumonia. Pol Merkur Lekarski. 2019;47(277):19–24.
- Ahmed N, et al. My lung broke my heart! TTC due to pneumonia. F1000Research. 2018.
- Li P, Li C, Mishra AK, et al. TTC and respiratory diseases. Eur Heart J Open. 2022;2(2):oeac009.
- Gowani SA, Kumar A, Arora S, Lahiri B. Legionella pneumonia with myocarditis. Conn Med. 2013;77(6):331–4.
- Zalewska-Adamiec M, et al. TTC: early complications and 2-year mortality. Neth Heart J. 2016;24(9):511–9.
- Lyon AR, et al. Current state of knowledge on TTC: ESC HFA Position Statement. Eur J Heart Fail. 2016;18(1):8–27.

Use of modernised methods to encourage adherence to a standardised acute medical handover proforma

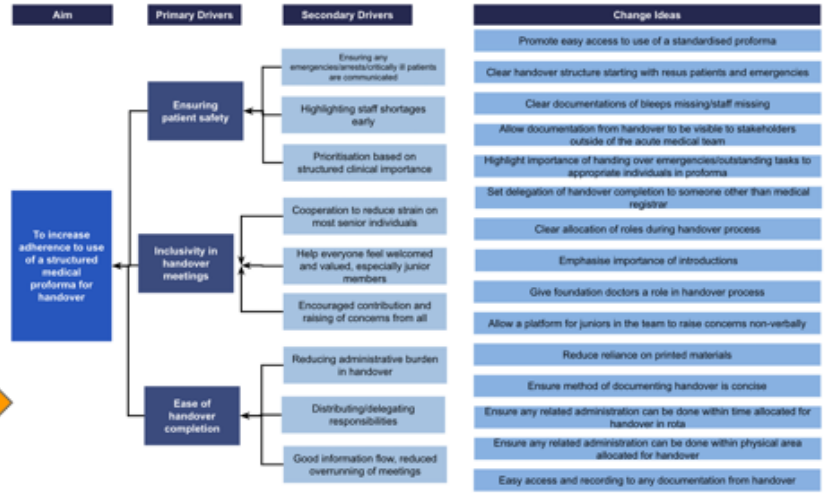
Immy Stringer, Andrew Quarrell, Daisy Manning, Kasper Weber, Rizwan Khan

Scunthorpe General Hospital/Humber Health Trust

Introduction

Without structured medical handover, information about unwell patients may be missed, on-call clinicians feel unprepared to take over care and patient safety suffers. **NICE guidance and RCP acute care tool-kits** highlight the importance of adoption of a **standardised handover process** to ensure smooth transition of care.

Initially, we implemented documentation with a paper proforma developed beyond the RCP 'Handover proceedings sheet' to encourage use of a structured process. Over four months, poor completion rates were identified; 64% (34/53) of handover periods produced **no handover process documentation.**

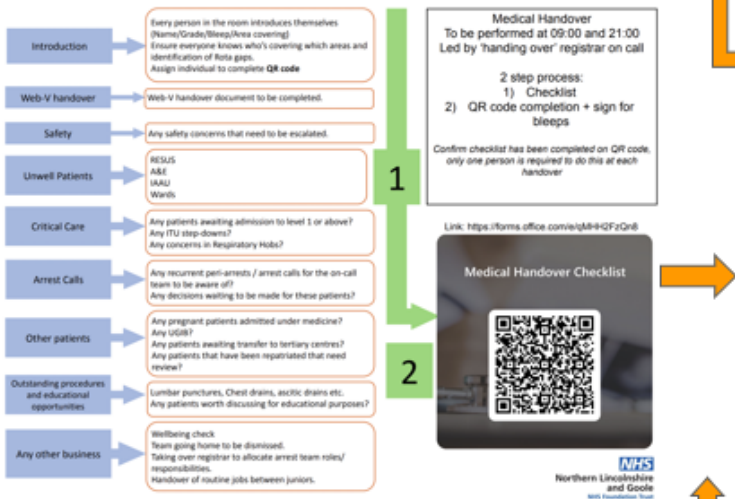


The problem - engaging consistently in good quality, safe and guideline-led handover requires a systems approach to increase accessibility and ease of handover completion.

Figure 1 (left): Driver Diagram *tool detailing key drivers in delivering the three main project aims. These were used to develop a SMART framework.*

Methodology

A QR code (see right) connected to a visual aid covering the same handover domains was implemented in acute medicine areas to encourage use of the structured handover. Responsibility for form completion was assigned to the on-call foundation doctor; the form output was available to QIP leads and rota coordinators to enable identification of missing bleep-holders.



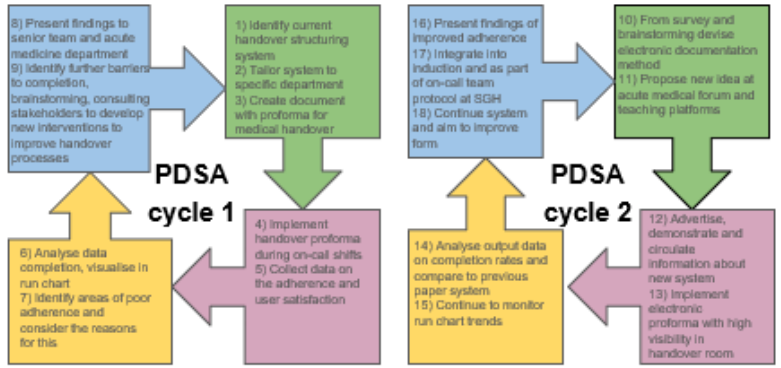
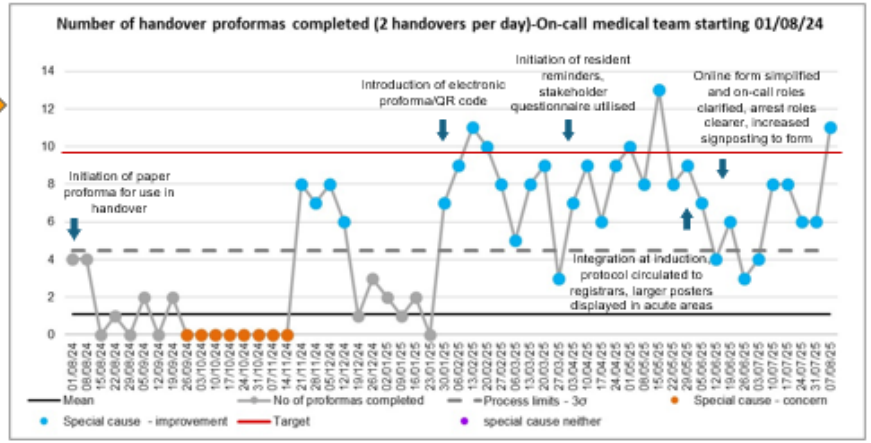


Figure 2 (above)*: Visual Aid displayed as large posters in acute medicine areas.*

Figure 3 (left): *visual representation of PDSA cycles used in the project.*



Results: ***SPC Run-chart (above)*** showing number of completed proformas per week. Evidence of improvement and special cause variation shown by >7 blue dots over process line. Red line represents the original project target of completion in 70% of handovers. Interventions plotted along run-chart as horizontal annotations.

Conclusions and lessons learned

Results demonstrate increased use of the structured proforma and adherence to a handover process when converted to an **easy-use electronic format, with modernisation of documentation and better visibility** of the process.

Compliance and completion of more domains within our proforma can be improved further; the project is now in its second year with a focus on streamlining the form, whilst the system is being implemented at another hospital site.

Secondary Prevention in N-STE ACS

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[1]Betsi Cadwaladr University Health Board (BCUHB), [2]Royal College of Surgeons in Ireland (RCSI)

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Betsi Cadwaladr University Health Board

Background

Non-ST Elevation Acute Coronary Syndrome (NSTE-ACS) is a frequent presentation in acute medical settings and carries a high risk of recurrent cardiac events. Effective secondary prevention, initiated during the index admission, plays a crucial role in improving long-term outcomes. According to NICE Guideline NG185 (2023), all patients with NSTE-ACS should: Be started on high-intensity statin therapy (Atorvastatin 80 mg) unless contraindicated. Have HbA1c and lipid profile measured during the admission to guide risk stratification and future management[1]. Local observation suggested that adherence to these standards was variable, particularly among patients admitted under the acute medical team. This audit aimed to evaluate local practice and assess the impact of targeted educational interventions.

Aims

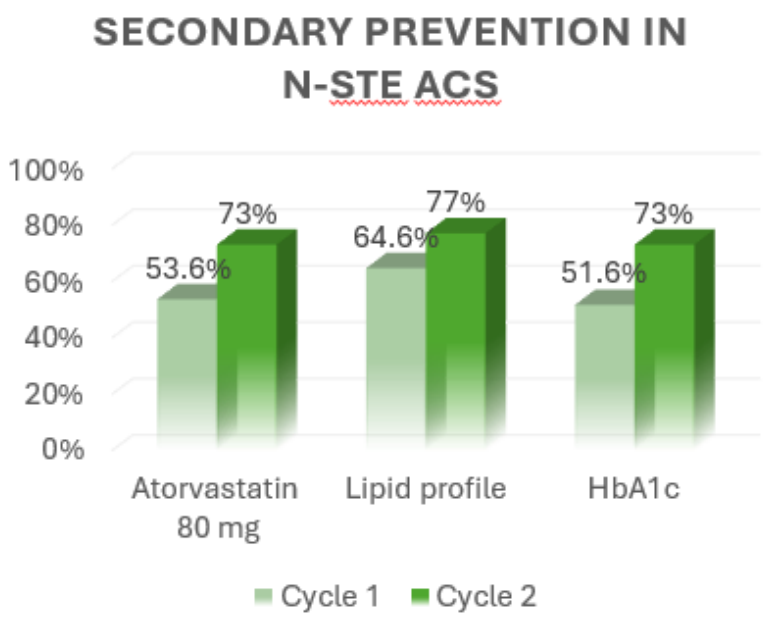
- To evaluate adherence to NICE NG185 recommendations for secondary prevention in NSTE-ACS patients.
- To implement low-cost, practical interventions to improve compliance.
- To assess the effectiveness of these interventions through a re-audit cycle.

Methods

Retrospective data were collected for patients admitted with NSTE-ACS in July 2024 (Cycle 1, n=31) and October 2024 (Cycle 2, n=30). STEMI and statin-intolerant cases were excluded. Parameters audited: prescription of Atorvastatin 80 mg, lipid profile, and HbA1c testing. Interventions after the first audit cycle included posters in clerking rooms, flyers in doctor offices, and targeted teaching for junior doctors.

Results

Cycle 1 results showed: 53.6% Atorvastatin 80 mg, 64.6% lipid profiles, 51.6% HbA1c testing. Cycle 2 improved to 73%, 77%, and 73% respectively following interventions, reflecting enhanced awareness and practice.



Discussion

Improvement across all parameters indicates that low-cost, education-based interventions can drive adherence to NICE guidance. Engagement during clerking and use of reminders helped reinforce prescribing and testing habits among acute medical teams.

Conclusion

Embedding NICE NG185 recommendations into daily practice through education, electronic prompts, and re-auditing can sustainably improve early secondary prevention for ACS patients.

Key Learning Points

- D-dimer is sensitive but non-specific; elevated levels require context.
- Early adherence to NICE guidance prevents cardiovascular complications.
- Simple educational measures can yield sustained improvement.
- Regular re-auditing ensures continuous quality enhancement.

Next Steps

- Incorporate electronic prescribing prompts for Atorvastatin 80 mg.
- Develop automatic lab order sets for lipid and HbA1c testing.
- Incorporate ACS guideline reminders into the clerking proforma.
- Extend audit cycles across other BCUHB sites to ensure system-wide improvement.

Reference

1.NICE. Acute coronary syndromes. NICE guideline [NG185]. Upd ated Nov 2023. Available at: www.nice.org.uk/guidance/ng185

Silencing the Chaos: Bleeping Less, Healing More

A Quality Improvement Project at the Wrexham Maelor Hospital

Conducted by Dr Jennifer Champion and Dr Patrick Perryman-Owens

1. Introduction

Resident Doctors on call receive a large number of bleeps which are often related to non time critical jobs[1]. This interrupts the workflow of the on call resident doctor, leading to less available time for clinical concerns[2]. This quality improvement project was created from concerns raised to the resident doctors' forum regarding bleep burden and aimed to reduce bleep burden.

2. Materials and methods

Data was requested from switchboard of number of bleeps to the medical ward cover bleep over 3 days, randomly selected from the month through a random number generator. The timing of the bleeps was then divided into weekday evening shifts, weekend day shift and night shifts.

The "4 bleep rule" was then established following discussion with the clinical director and head of nursing. This stated that the on call doctor should only be bleeped for the following:

1. A sick patient where advice or review is required
2. A patient who has suffered a fall/accident. A patient who has suffered any fall with obvious harm
3. To confirm death in a patient who appears to have passed away.
4. To give advice or perform any necessary function to ensure that time critical medication or fluids are not delayed.

Following the intervention being established and used across all medical wards, a further period of data collection occurred over two weeks. Data was collected both from switchboard, and also via questionnaires given to the on-call do----

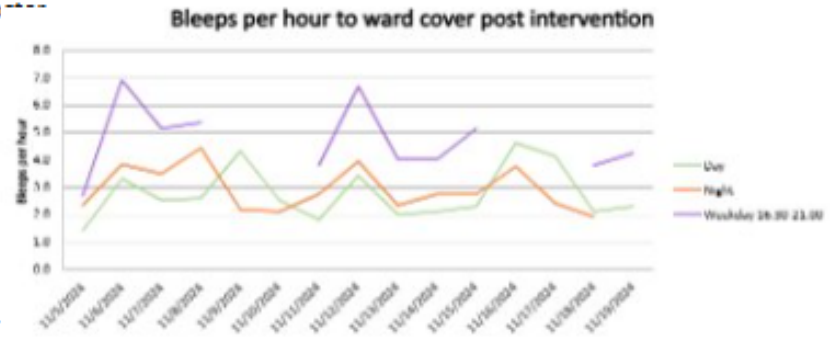


Fig. 1

3. Results and discussion

Prior to the "4 bleep rule", on average (mean), the following bleep frequency was observed: 5.38 bleeps/hour per weekday evening, 4.48 bleeps/hour on a weekend day and 3.36 bleeps/hour per night. Following the introduction of the rule, bleep frequency over all three shifts were observed to have fallen: 4.7 bleeps/ hour per weekday evening, 2.8 bleeps/hour per weekend day and 2.9 bleeps/hour per night.

From questionnaire results, 391 bleeps were recorded by the resident doctor over 2 weeks (response rate of 52%). When assessing appropriateness of bleeps, the 69 bleeps unanswered on one end were excluded. Of the 322 remaining bleeps, 49 were inappropriate (15.2%), with 55% of the inappropriate bleeps being for non urgent medications.

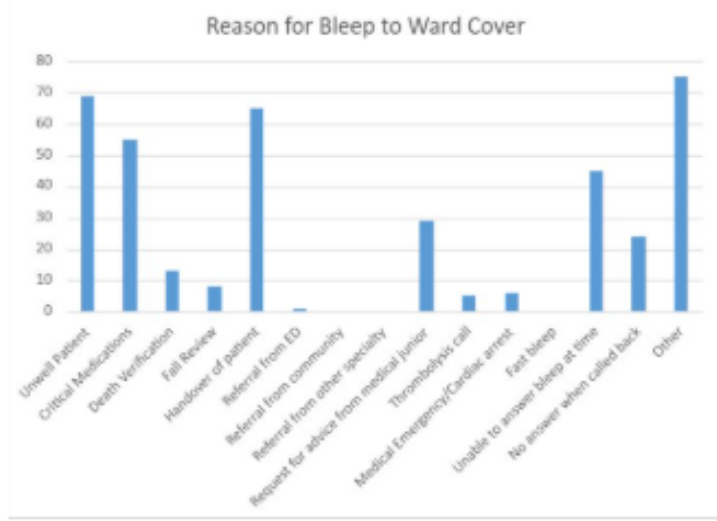


Fig. 2

4. Conclusion

Introducing the 4 bleep rule has helped to reduce bleep burden on resident doctors on call, allowing more time for clinical tasks. The evening ward cover shifts remains the busiest shift. To address this, a 3pm huddle is being introduced to address routine jobs within day time hours. The bleep system is presently used for doctor to doctor handovers – alternative systems are being now explored.

References: 1. Katz MH, Schroeder SA. The sounds of the hospital. Paging patterns in three teaching hospitals. N Engl J Med. 1988 Dec 15;319(24):1585-9. doi: 10.1056/NEJM198812153192406. PMID: 3200267. 2. Fargen KM, O'Connor T, Raymond S, Sporrer JM, Friedman WA. An observational study of hospital paging practices and workflow interruption among on-call junior neurological surgery residents. J Grad Med Educ. 2012 Dec;4(4):467-71. doi: 10.4300/JGME-D-11- 00306.1. PMID: 24294423; PMCID: PMC3546576.

Optimising the Use of Repeat MRI Spine in Patients with Known or Suspected Axial Spondyloarthritis

Ishan Sen[1], James Kimpton[2]
[1]Great Western Hospital, [2]Royal United Hospital Bath

BACKGROUND

The role of inflammatory protocol magnetic resonance imaging (MRI) of the spine to aid the diagnosis of axial spondyloarthritis (axSpA) is well established.[1] However, the clinical value and optimal timing of repeat MRI scans remain uncertain, both for diagnostic clarity in individuals with risk factors and clinical suspicion for axSpA but negative initial imaging, and for guiding treatment escalation decisions in those with established axSpA.[2-3]

From a healthcare service perspective, our organisation has seen a 39% increase in MRI inflammatory spine requests between 2022 and 2025. This has contributed to system-wide radiology capacity pressures, potentially aggravating MRI waiting times. Identifying opportunities to rationalise the use of repeat imaging could mitigate

AIMS

The aims were to evaluate the utility of repeat MRI inflammatory spine scans in patients with known or suspected axSpA, and to assess their impact on clinical management by reviewing clinic letters before and after MRI requests.

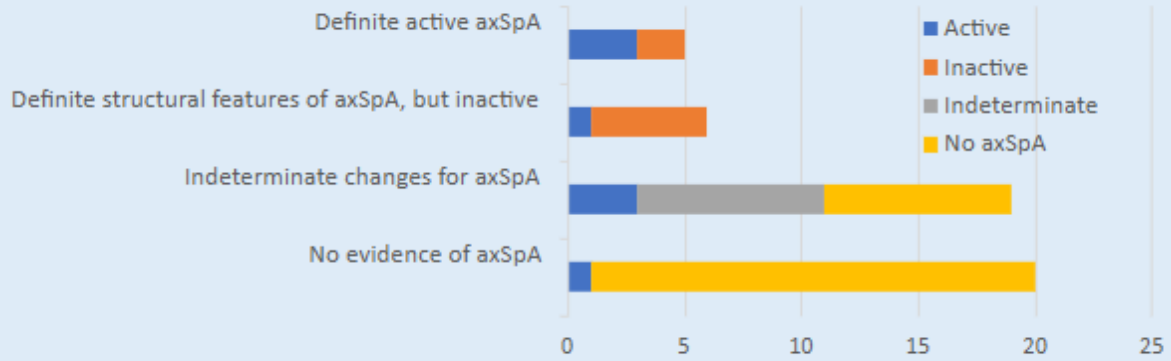
METHODS

A retrospective review was performed of patients undergoing ≥2 MRI inflammatory spine scans at a UK national specialist centre between January 2022 and February 2025. Data collected included demographics, clinical features (HLA B27 status, extra-musculoskeletal manifestations), imaging results, reasons for repeat scan, and clinical outcomes. Patients were stratified into the following categories, based on the findings of their initial and repeat imaging:

- Definite active axSpA
- Definite structural features of axSpA, but inactive
- Indeterminate changes for axSpA
- No evidence of axSpA

RESULTS

50 patients (median age 36 years, 76% female) were included; 54% were HLA-B27 negative and 32% had EMMs. The median interval between scans was 499.5 days.



Notably, none of the patients with negative initial imaging, HLA-B27 negativity, and no EMMs developed new axSpA changes on repeat MRI and 50% of them were discharged.

CONCLUSION

Repeat MRI spines appeared to have limited value in patients with negative initial MRI, HLA-B27 negativity, and no EMMs, none of whom developed new axSpA changes on repeat scans. These findings support consideration of earlier clinical discharge in this subgroup without repeat imaging.

Further prospective studies would be helpful to validate these findings and refine imaging pathways in axSpA.

References:

1. *Ramiro S, Nikiphorou E, Sepriano A, et al. ASAS-EULAR recommendations for the management of axial spondyloarthritis: 2022 update. Annals of the Rheumatic Diseases 2023;82:19-34.*
2. *Navarro-Compán V, Ramiro S, Landewé R, et al. Disease activity is longitudinally related to sacroiliac inflammation on MRI in male patients with axial spondyloarthritis: 2-years of the DESIR cohort. Annals of the Rheumatic Diseases 2016;75:874-878.*
3. *Navarro-Compán V, Ramiro S, Landewé R, et al. In patients with axial spondyloarthritis, inflammation on MRI of the spine is longitudinally related to disease activity only in men: 2 years of the axial spondyloarthritis DESIR cohort. Annals of the Rheumatic Diseases 2018;77:470-472.*

Battling Persistent COVID-19 Pneumonitis in Immunocompromise: A Remdesivir Success Story

Dr J Collins, Dr W Butterfield, Dr R Sheridan
Royal Devon University Healthcare NHS Foundation Trust

Introduction

Patients with chronic lymphocytic leukaemia (CLL) have impaired immunity, making them highly vulnerable to severe COVID-19, particularly when treated with anti-CD20 therapies like Rituximab. Their weakened innate and adaptive immune responses lead to poor viral clearance, prolonged infection, and high mortality [1-3]. Our case demonstrates successful off-label Remdesivir use in a CLL patient with late-stage COVID-19, resulting in rapid recovery where treatment options are otherwise limited.This case demonstrates successful off-label Remdesivir use with rapid clinical and virological improvement.

Case Presentation

64-year-old man with CLL (on Venetoclax maintenance, prior Rituximab), COPD, T2DM, AF on Rivaroxaban, and prior CABG, presenting with fever, cough, and breathlessness. Vaccinated with 4 COVID-19 doses (2× AstraZeneca, 2× Pfizer mRNA).

Day	Event / Intervention
1	Admission → Bronchodilators, IV Dexamethasone (RECOVERY TRIAL [4])
2-9	IV → Oral steroids. Amoxicillin/Doxycycline → Piperacillin with Tazobactam → Meropenem under microbiology guidance based on sensitivities
10	8L High-Flow Nasal Oxygen initiated (Figure 1)
19	Unable to wean <5 L O_2; CTPA: Bilateral Ground-Glass Opacities → COVID pneumonitis (based on CT (Figure 2), lack of antibiotic response + persistently low Cycle threshold (Ct) of 23)
20	Remdesivir started → Marked improvement
24	Weaned off oxygen therapy
30	Ct 37 → Viral clearance (Figure 3); Discharged

Figure 3. Serial SARS-CoV-2 PCR Ct values over hospital stay

Figure 1. Timeline of oxygen requirement pre- and post-Remdesivir.

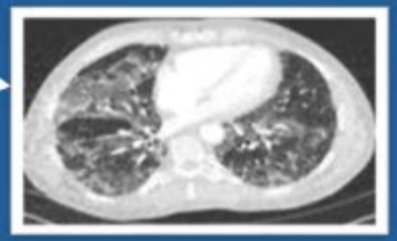


Figure 2. CT pulmonary angiogram on day 19 demonstrating COVID-19 Pneumonitis

COVID Antiviral Considerations

- Sotrovimab withheld (Ab >500 U/mL – Local Protocol)
- Paxlovid contraindicated (Rivaroxaban interaction – Liverpool COVID-19 Interaction Checker [5])

Discussion

- Patients with CLL treated with venetoclax and anti-CD20 therapy have a higher risk of SARS-CoV-2 infection (OR 1.75) with infection rates up to 62.9% [6].
- Low RT-PCR Ct values, indicating high viral load, correlate with greater COVID-19 severity and mortality, especially Ct <25 versus >30 (OR 2.31) [7–9]. In this case, persistently low Ct values and minimal clinical improvement supported a diagnosis of persistent COVID pneumonitis.
- Remdesivir, an RNA polymerase inhibitor, reduces mortality, ICU admissions, and hospital stay length [10,11]. Our case suggests Remdesivir may benefit immunocompromised patients even when started late (>Day 7).
- Further research is needed to optimise antiviral timing in prolonged COVID-19 cases.

Conclusions

In immunocompromised patients, persistent COVID pneumonitis should be considered with ongoing O_2 need and rising inflammatory markers.
Ct trends and imaging aid in assessing viral persistence.
Remdesivir may be effective even >7 days after symptom onset, offering a key option when other antivirals are unsuitable.
This case underscores the need for updated treatment pathways and specific guidance for high-risk haematology patients.

(1) Scarfò *et al.* (2020) reported on COVID-19 severity and mortality in CLL through the ERIC and CLL Campus collaboration (*Leukemia*), (2) Akbarzadeh *et al.* (2024) conducted a systematic review and meta-analysis of COVID-19 outcomes in CLL patients (*Rev Assoc Med Bras*), (3) Arellano-Llamas *et al.* (2022) discussed the impact of the SARS-CoV-2 pandemic on CLL management (*Curr Oncol Rep*), (4) the RECOVERY Collaborative Group (2021) demonstrated the benefit of dexamethasone in hospitalized COVID-19 patients (*N Engl J Med*), (5) the University of Liverpool COVID-19 Drug Interactions resource provided guidance on antiviral and drug interaction management, (6) Autore *et al.* (2023) examined COVID-19 outcomes in CLL patients treated with Venetoclax with or without anti-CD20 therapy (*Blood*), (7) Bustin and Mueller (2005) described the diagnostic utility of qRT-PCR (*Clin Sci*), (8) Rao *et al.* (2020) reviewed the clinical utility of SARS-CoV-2 cycle threshold (Ct) values (*Infect Dis Ther*), (9) Shah *et al.* (2021) conducted a meta-analysis linking Ct values with COVID-19 outcomes (*Open Forum Infect Dis*), (10) Libra *et al.* (2023) evaluated the effects of Remdesivir on hypoxia and inflammation in COVID-19 pneumonia (*Viruses*), and (11) Bigman-Peer *et al.* (2022) described biphasic COVID-19 courses in anti-CD20–treated patients (*EJCRIM*).

An Unusual Manifestation of a Common Disease

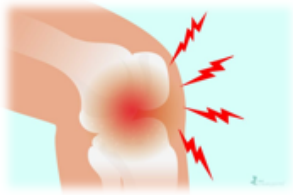
A 27-Year-Old Man with Tophaceous Gout

Dr Clare Chown, Dr Sophie Langdon, Dr Ed Wheatley, Dr Jasper Mogg

Clinical Case

Presentation

27-year-old with a large, tender effusion to left knee



Background

Left tibial plateau fracture 13 years prior

Initial Investigations/Management

- Apyrexial with normal observations
- Unremarkable inflammatory markers
- X-ray: large effusion, no evidence of fracture
- Managed as a soft tissue injury with orthopaedic follow-up

Orthopaedic Clinic

- MRI: well-demarcated bone erosion to lateral margin of patella
- 22 x 15 x 12mm mass of indeterminate soft tissue material
- Referred to the sarcoma MDT

Differentials

- Giant cell tumour of the patella
- Pigmented villonodular synovitis
- Gout
- Synovial chondromatosis

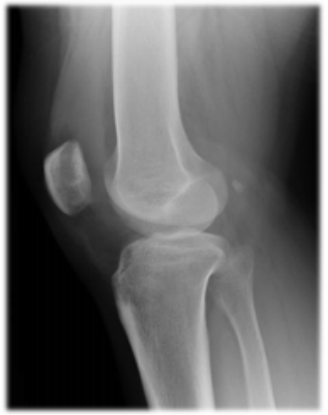
Further Investigations

- Core biopsy: variably-sized deposits of pale, acellular, crystalline material surrounded by fibrous tissue consistent with tophus
- Serum urate: 595µmol/L

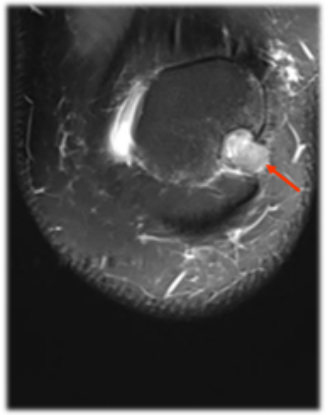
Diagnosis

Tophaceous gout, commenced on urate lowering therapy

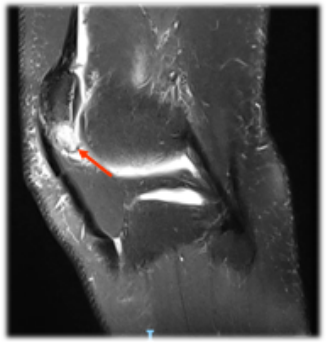
Imaging



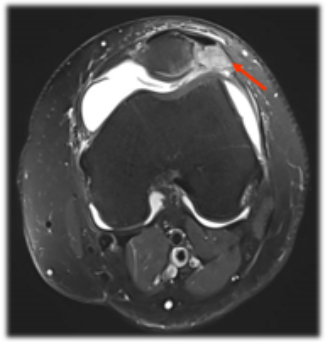
Plain lateral XR L knee – large effusion, small calcified body, no other abnormalities



MRI L knee T2 FS coronal – well-demarcated lateral patellar lesion



MRI L knee T2 FS sagittal – well-demarcated lateral patellar lesion



MRI L knee T2 FS transverse – well-demarcated lateral patellar lesion

Discussion

- Gout is rare under the age of 30 with an estimated prevalence of 0.4% [Li 2019]
- Gouty tophi typically emerge after at least 10 years of uncontrolled gout [Rana 2021]
- Tophi as a presenting complaint of gout is unusual [Salavastru 2020]
- The patella is a rare location for tophi [Clark 2016]

Learning Points

1) **Think gout in young patients**

   Gout should be actively considered in the differential diagnosis of atraumatic, or mildly traumatic, joint pain even in young adults

2) **Consider cardiovascular risk**

   Early-onset gout is associated with increased cardiovascular risk and effective treatment may reduce this risk

3) **Tophi can be the first presentation of gout**

   These can affect the patella, and can go unnoticed on plain imaging

4) **Tophi are not always easily identified**

   Radiologically, gouty tophi can be indistinguishable from several inflammatory and neoplastic Conditions, so biopsy may be needed

5) **MDT is important in diagnostic uncertainty**

   Gout does not necessarily follow a straightforward diagnostic pathway.

References & Feedback

HIV and a sore ankle:

A rare case of calcium pyrophosphate deposition in a young patient living with HIV

Dr Sophie Langdon, Dr Ed Wheatley, Dr Clare Chown, Dr Jasper Mogg

INTRODUCTION

Atraumatic arthritis is frequently seen in the UTC. Some cases can be life threatening and significant morbidity can result. The presence of an HIV diagnosis leads to additional considerations in this patient group, which are illustrated here. This case also highlights a rare cause of joint pain in younger people and suggests a possible unrecognised association with HIV or its treatment.

CLINICAL CASE

A 36-year-old male presented to the urgent treatment centre.

Chief complaint: Nine-day history of pain and swelling of the left ankle.

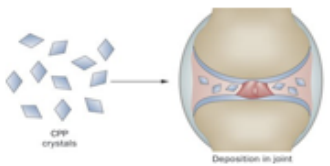
History of present illness: He had been self-medicating with ibuprofen and paracetamol, but his symptoms persisted.

- No similar previous episodes
- No preceding illness.
- No trauma
- No new or high-risk sexual partners
- Nil other symptoms

Past medical Hx: HIV infection, stably undetectable.
Social Hx: non-smoker, occasional alcohol use, no substance use. BMI 30.
Medication: Stribild OD (elvitegravir, tenofovir-DF & emtricitabine).
Family Hx: nil

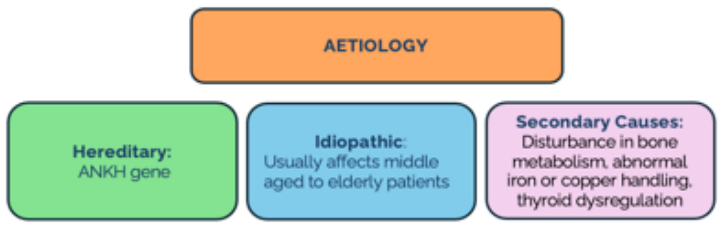
WORKUP/ MANAGEMENT

Examination: ankle effusion
Investigation: microscopy revealed calcium pyrophosphate crystals.



Management: prednisolone 20mg OD 1/52

DISCUSSION



Studies have shown a link between HIV, or ART, and secondary causes of CPPD. It could be expected, given this overlap with the risk factors for CPPD, that increased incidence would be seen in HIV patients, but this is not a recognised association at present. However HIV patients are at risk of developing gout, which is felt likely to be related to ART, in particular ritonavir. Furthermore, 30-40% of HIV patients commonly experience arthralgia,

CONCLUSION

Given that crystal arthritis diagnoses are often made without the gold standard test of crystal microscopy, it begs the question as to whether CPPD being underdiagnosed and could be responsible for more morbidity in this patient population than is recognised.

LEARNING POINTS

- Young people presenting with CPPD should be investigated for secondary causes.
- HIV or its treatment may be associated with secondary CPPD
- Despite its rarity, CPPD should be considered as a cause of arthritis in those younger than the typical demographic.
- Over the counter medication such as ibuprofen can interact with ART
- People with HIV need not be considered as immunocompromised if they are known to have an undetectable viral load.

References: . Hammoudeh M et al. 1998. Pseudogout in a young patient. *Clin Rheumatol* 17:242–5. doi:10.1007/BF01451057. 2. Kleiber Balderrama C et al. 2017. CPPD and comorbidities in US veterans. *Arthritis Care Res* 69:1400–6. doi:10.1002/acr.23160 3. Dala-Ali BM et al. 2010. Pseudogout hip pain in HIV. *Case Rep Med* 2010:842814. doi:10.1155/2010/842814 4. Rho YH et al. 2012. Risk factors for pseudogout. *Rheumatology* 51:2070–4. doi:10.1093/rheumatology/kes204

Isolated Coronary Arterial IgG4-Related Disease

When the Diagnosis Doesn't Fit the Criteria

Dr Jasper Mogg, Dr Clare Chown, Dr Edward Wheatley, Dr Sophie Langdon, Dr Christopher Goode, Dr Hannah Sinclair, Dr Kirstin Laverick

1 Patient Background

65-year-old male plumber

- Idiopathic left optic neuritis (40)
- Peyronie's disease (50)
- Hypercholesterolaemia (51)
- Atypical chest pain (52)
- Bilateral sensorineural hearing loss (58)
- Hypertension (63)
- Family history of ischaemic heart disease, hip fracture, and unspecified arthritis
- Never smoker, 20 units alcohol/week. 177cm, 100kg, BMI 32

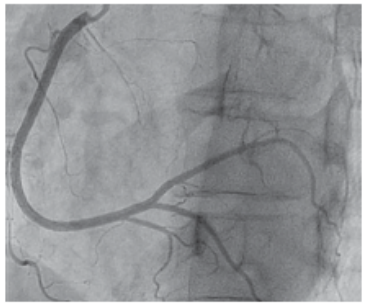
2 Lead-up

2021

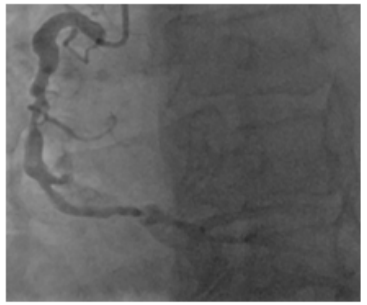
- Ischaemic chest pain and raised serum troponin.
- Flow-limiting atheromatous lesions in LAD and LCx with ectatic, dominant RCA.
- Drug-eluting stents, DAPT, statins, and holistic secondary prevention.

July 2023

- Further troponin-positive chest pain.
- Invasive angiography showed LAD and RCA aneurysms and stenoses.
- CT coronary angiogram (CTCA) showed markedly concentrically and eccentrically thickened segments of all coronary artery walls and perfusion defects in inferior segments suggested RCA flow restriction.



Normal right anterior oblique view of RCA



Aneurysmal and stenosed RCA seen in this patient

3 Rheumatology Review - December 2023

- Stable angina, occipital headaches, fatigue, and myalgia for 1 year.
- Arthralgia of hands, feet, elbows, knees, and neck with 1 hour morning stiffness.
- Red, maculopapular rash occurring on the trunk once a week.
- No other CTD features, pathergy, testicular pain, fever, VTE history, weakness, muscle wasting, synovitis, or effusion.
- Normal inflammatory markers (CRP <0.6mg/L, ESR 22mm/hr) and CK.
- Raised IgG4 (5.7g/L, normal <1.1g/L) and mild eosinophilia (0.51x10^9/L).
- Negative ANCA, CTD, and infection screening (see QR code for full list).
- PET-CT showed coronary FDG avidity and reactive mediastinal lymph nodes.

Differential Diagnosis

- Fibromuscular dysplasia (FMD), polyarteritis nodosa, Takayasu's, or IgG4-RD.
- CT angiography demonstrated no evidence of FMD.

IgG4-RD Diagnosis

- Substantially raised IgG4 levels and mild eosinophilia
- Lack of extracardiac findings on PET-CT
- Typical demographic
- Typical pattern of coronary involvement[3]

4 IgG4-Related Disease

- Autoimmune condition causing fibroinflammatory lesions in nearly any organ.
- Morbidity and mortality driven by obstructive or compressive pathology indirectly from organomegaly or directly by cellular infiltration and fibrosis.[1]
- Requires clinical, serological, radiological, and histological correlation.[2]
- Coronary IgG4-RD vasculitis is a recognised but uncommon manifestation of the condition (1-3%)[5], but appears to be very rare in isolation.[3]

2019 ACR/EULAR Classification Criteria[4] and 2020 Japanese Revised Comprehensive Diagnostic Criteria[1]

- Characteristic histopathology of lymphoplasmacytic infiltrate and storiform fibrosis (most diagnostic).
- Serum IgG4 level (5x upper limit of normal highly indicative).
- Clinical or radiological involvement of characteristic organ: glands/thorax/hepatopancreatobiliary/kidney/retroperitoneum.

5 Management

Monthly prednisolone taper commenced (40-30-20-15-10-9-8-7-6-5-4-3-2-1-0).

One-Month Review

Much improved angina and energy levels, excellent response to steroid therapy.

Six-Month Review

CTCA on 9mg prednisolone OD showed marked improvement. IgG4 had fallen to 0.91g/L. Clinical, radiological, and serological response to steroid strengthened diagnostic confidence. Maintenance rituximab treatment initiated.

6 Discussion

- The two main systems of IgG4-RD classification and diagnostic criteria are centred around histology and non-cardiac presentations, so this case of isolated coronary involvement does not reach their thresholds.[4]
- Confirmatory biopsy not possible due to procedural risk, but the diagnosis appears secure based on the clinical, radiological, and serological profile.
- Review of the patient's past medical history reveals conditions that could be linked to IgG4-RD, but PET-CT has demonstrated no other ongoing inflammation. The relevance of these findings is currently unknown.
- This case represents a rare but important presentation of IgG4-related disease.

7 Learning Points

- IgG4-RD can present with isolated coronary involvement.
- The coronaries are rarely (1-3%) involved.
- Typical findings are aneurysms and/or periarteritis.
- The criteria for IgG4-RD do not cover all instances of the condition.
- Rheumatologists and cardiologists should be aware of this pattern of disease.
- Future diagnostic or classification criteria should take into account this possibility.

References, Results & Feedback

When Elevated D-Dimer isn't VTE

Isa Alshamsan[1], Reem Alameri[2], Hari Nair[1]
Betsi Cadwaladr University Health Board[1], Royal college of Surgeons in Ireland[2]

Background

D-dimer is a fibrin degradation product routinely measured to exclude venous thromboembolism (VTE). Although highly sensitive, it lacks specificity and may be raised in infection, inflammation, malignancy, trauma, or after surgery and anticoagulation. Markedly elevated levels without evidence of VTE can pose a diagnostic challenge. This case highlights spontaneous splenic rupture as a rare but serious cause of extreme D-dimer elevation.

Case Presentation

An 88-year-old woman presented with a two-week history of intermittent, non-exertional, left-sided pleuritic chest pain. She denied breathlessness, leg swelling, or abdominal pain. Past medical history included paroxysmal atrial fibrillation, varicose veins, and recent shingles. Regular medications were Edoxaban and Amlodipine.

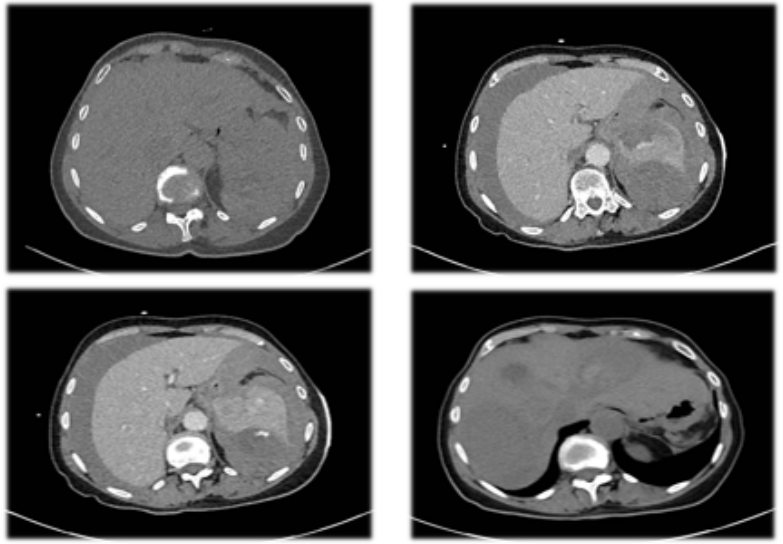
On examination, she was haemodynamically stable and afebrile, with normal cardiovascular and abdominal findings. Initial investigations showed a markedly elevated D-dimer of 10,000 ng/mL, rising to >14,000 ng/mL the same day. Other blood tests were normal, ECG confirmed atrial fibrillation, and CT pulmonary angiogram excluded pulmonary embolism. She was admitted for observation and intravenous antibiotics.

Investigations & Outcome

During the first night of admission, the patient experienced an acute collapse with transient loss of consciousness and hypotension. Despite an initial fluid challenge, she remained hypotensive and appeared clammy and peripherally shut down. Venous blood gas revealed a haemoglobin drop from 119 g/L to 77 g/L, raising suspicion for internal bleeding. Examination showed a distended, tender abdomen, with no evidence of gastrointestinal bleeding.

She received fluid resuscitation, high-dose intravenous proton pump inhibitors, and a blood transfusion. Once stabilised, an urgent CT abdomen and pelvis demonstrated a large-volume haemoperitoneum with suspected splenic rupture and active bleeding. Edoxaban was reversed, and she underwent emergency laparotomy confirming splenic rupture, with surgical haemostasis achieved.

Postoperatively, she required 48 hours of ICU monitoring, followed by transfer to the surgical ward. She recovered well and was discharged home after three additional days, with appropriate follow-up arranged.



Discussion

D-dimer is widely used in acute medicine to help exclude venous thromboembolism (VTE) because of its high sensitivity. However, it lacks specificity and may be elevated in infection, inflammation, malignancy, trauma, surgery, or with advancing age. Markedly raised D-dimer in the absence of thromboembolism presents a significant diagnostic challenge.

In this case, the patient presented with pleuritic chest pain and markedly elevated D-dimer but had no pulmonary embolism on CT pulmonary angiogram. Her subsequent haemodynamic collapse and abdominal distension revealed a spontaneous splenic rupture - a rare but life-threatening cause of internal bleeding. This underscores the importance of maintaining a broad differential diagnosis when faced with unexplained biochemical abnormalities.

Spontaneous splenic rupture, though uncommon, is recognised in patients on anticoagulation and in those with splenic pathology or infection. In this instance, Edoxaban may have contributed to the severity of bleeding. Early recognition, prompt reversal of anticoagulation, and timely surgical intervention were crucial for a favourable outcome.

Ultimately, elevated D-dimer should never be interpreted in isolation. Clinicians must integrate results within the clinical picture and remain alert to atypical causes, particularly when the patient's condition deteriorates unexpectedly. Vigilance and broad diagnostic thinking are essential to ensure timely diagnosis and appropriate management.

Learning Points

- D-dimer is highly sensitive but non-specific; interpretation requires careful clinical correlation.
- Spontaneous splenic rupture is a rare but life-threatening cause of acute abdomen, especially in anticoagulated patients.
- Markedly elevated D-dimer without VTE should prompt investigation for alternative diagnoses.
- Early recognition and prompt surgical management are vital to improve outcomes.

An Interesting Case Of An Unusual Triad: Case Report On A Forgotten Syndrome; Milk-Alkali Syndrome

Introduction & Case Presentation

- A 54-year-old male presented with confusion and vomiting.
- **Past medical history:** Treated tonsillar carcinoma.
- **Initial findings:** Severe Acute Kidney Injury (AKI), hypercalcaemia, hypokalaemia, and metabolic alkalosis.
- **Treatment:** He was treated with intravenous fluids and potassium replacement, then discharged with outpatient follow-up. However, three months later, he re-presented with dysphagia and similar biochemical abnormalities (AKI, hypercalcaemia, metabolic alkalosis).

Diagnostic Workup

- **Hypercalcaemia workup:** Normal PTH, vitamin D, and myeloma screen. Elevated phosphate. Low magnesium.
- **Renal workup:** Significant proteinuria and anaemia. Renal ultrasound suggested intrinsic renal disease.
- **Key Finding:** Renal biopsy revealed chronic tubulointerstitial damage with abundant calcium phosphate deposits.
- **Crucial History:** Uncovered a daily intake of >2 pints of milk mixed with baking soda (for indigestion) and high-dose Vitamin D3 (3200 IU/day).

Diagnosis

"Milk-Alkali Syndrome"
Diagnosed based on the classic triad:

1- Renal Failure
2- Hypercalcaemia
3- Metabolic Alkalosis

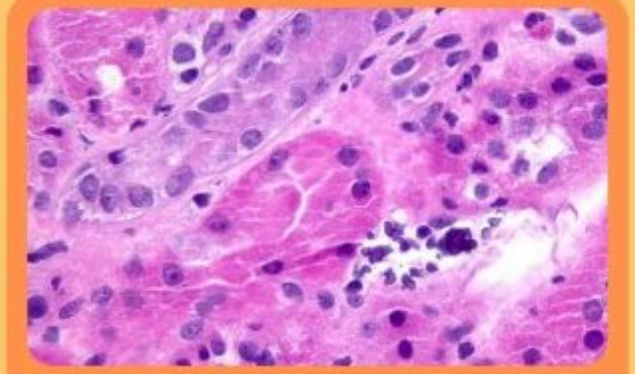
...alongside the supportive history and biopsy findings.

Management & Outcome

- **Intervention:** Dietary modification, reduced milk intake, increased non-dairy fluids, and discontinued baking soda/Vitamin D3.
- **Outcome:** Gradual improvement in calcium and renal function.
- **Final Status:** Patient's renal function & hypercalcaemia improved. Education provided on potential kidney transplant/haemodialysis.

Key Take aways:

- Milk-alkali syndrome is a reversible cause of hypercalcaemia and AKI, but delayed diagnosis can lead to irreversible renal failure.
- It is the third most common cause of hypercalcaemia.
- Clinical Pearl: Suspect this syndrome in any patient with the classic triad and meticulously take a dietary and over-the-counter supplement history.
- Prompt recognition and withdrawal of the inciting agents are crucial to prevent chronic kidney damage.



Courtesy of Alexei Mikhailov, M.D., Ph.D & PathologyOutlines.com see URL
www.pathologyoutlines.com/topic/kidneynephrocalcinosis

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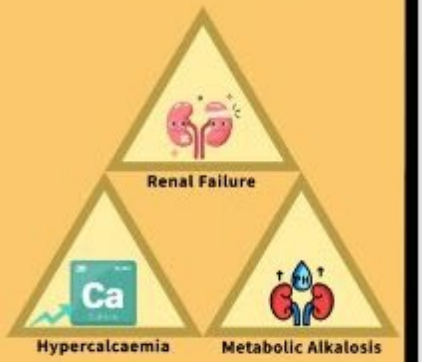

References:

1. Patel AM, Goldfarb S. Milk-Alkali Syndrome. StatPearls. Treasure Island (FL): StatPearls Publishing; 2024. https://www.ncbi.nlm.nih.gov/books/NBK557500/ [Accessed 15 August 2025]
2. Medarov BI. Milk-alkali syndrome. Clin J Am Soc Nephrol. 2010;5(4):691–9

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A Rare Intersection of Systemic and Ocular Disease: Purtscher's Retinopathy Secondary to Alcoholic Pancreatitis with Spontaneous Recovery

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NHS Humber Health Partnership

References

Background

Purtscher's retinopathy is an **occlusive microangiopathy causing retinal ischemia and haemorrhages** [1]. It presents as sudden painless loss of vision unilaterally or bilaterally and is rare (0.24 cases per million) [2].

Case report

Initial presentation

- 50s male presented with vomiting and abdominal pain for 3/7 and **sudden bilateral blurred vision**
- Past medical history:

Alcohol excess (500-1000ml vodka/day), controlled asthma, no previous visual problems or prescription

- Assessment:

Severe generalised tenderness on abdominal palpation. Witnessed generalised tonic-clonic seizure which self-terminated without head injury

Initial Investigations

Test	Result
CRP	238mg/L
Amylase	387u/l
LFTs	Isolated rise in GGT
CT abdomen	Pancreatic fat stranding

Fig 1. Table showing significant initial investigations and results

Initial Management

- He was treated for acute pancreatitis and alcohol withdrawal
- Pancreatitis managed with IV 0.9%NaCl and IV co-amoxiclav for 5 days
- Pain managed with IV paracetamol and oral liquid morphine
- Alcohol withdrawal managed with a reducing regime of chlordiazepoxide

Ophthalmology Assessment

Despite treatment of pancreatitis and alcohol withdrawal he continued to **experience bilateral visual blurring, dark spots on central vision, impaired light and colour differentiation**.

On examination he had significantly reduced visual acuity bilaterally (Fig 2) which improved over time. He was referred for ophthalmology examination (fundoscopy, fluorescein angiography and OCT)

	VA Rt eye	VA Lt eye
Presentation	6/60 (6/48)	Finger counting
At 1 week	6/24 (6/9.5)	6/60 (6/19)
At 12 weeks	6/4.8	6/6
At 9 months	6/4.8	6/4.8

Fig 2: visual acuity over time (VA) ()=pinhole correction

Fig 3. FA of Rt eye in the late venous phase. Yellow: hyper-fluorescence likely arteriolar leakage, Blue: masking of choroidal fluorescence likely ischemia

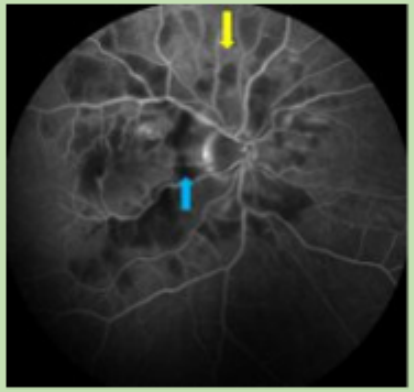
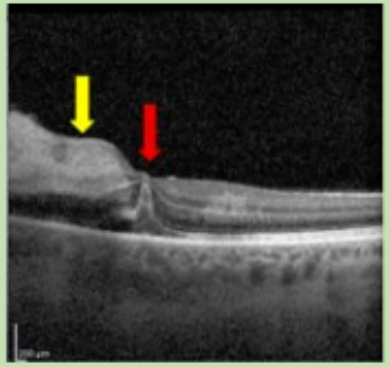


Fig 4. OCT Lt eye. Red arrow: Fovea obliteration. Yellow arrow: papillo-macular bundle swelling with hyper-reflective lesion likely cotton wool spot



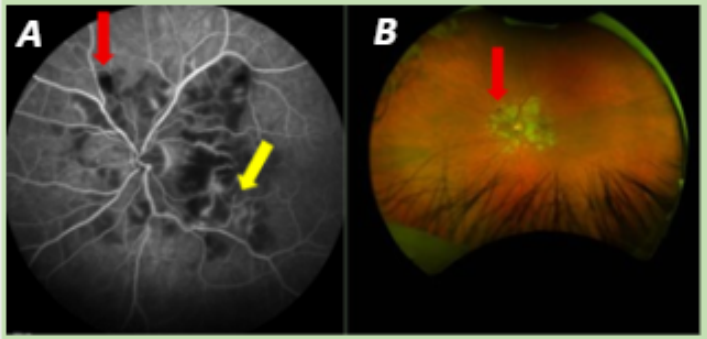


Fig 5: A: Lt eye FA, late venous phase. Red: hypofluorescence representing blot haemorrhage. Yellow: arteriolar vessel leakage. Background choroidal vessel drop out likely ischaemia. B: Lt eye Optos on initial assessment. Red: corresponding blot haemorrhage

Summary of findings

Fundoscopy: patchy whitish areas surrounding discs with blot haemorrhages

Optical Coherence Tomography (OCT): retinal oedema bilaterally

Fluorescein Angiography/Optos: bilateral macular oedema, cotton wool spots (CWS)

Diagnosis: Purtscher's Retinopathy

Management and follow up

- Patient counselled on **unclear prognosis**
- **Conservative management** due to unclear benefit of steroids/anti-VEGF and lack of high-quality data
- Subjective experience was that vision had **improved gradually**, left eye remains worse than right. He still suffers with cloudy spots. Overall, he **reports negligible affect on quality of life**
- His visual acuity has returned to above average baseline by 9 months, but he has a significant nasal steppe on formal visual fields assessment bilaterally

Purtscher's Retinopathy

- Rare and poorly reported (2024 review found only 114 cases) [3]
- Diagnosis: 3/5 of Purtscher's flecken (polygonal retinal whitening), Retinal haemorrhages, Cotton wool spots, Probable aetiology, Complementary investigations (leaky vessels, oedema) [4,5]
- Classically related to trauma (RTAs, CPR, Valsalva manoeuvre) or systemic diseases (Purtscher's-like retinopathy) [6] (pancreatitis, SLE, DIC, sepsis)

Pathogenesis:

- Occlusion of terminal arterioles causing infarct of the capillary bed caused by emboli such as cholesterol, fibrin, leukocyte aggregates and fat [1].

Prognosis:

- No clear prognosis or prognostic indicators identified
- No significant difference in outcomes from cases managed with steroids vs without [7]

Lessons

This case adds to the limited literature by documenting **significant spontaneous recovery without intervention**. Consideration of this rare differential with early referral to ophthalmology should be considered in patients with acute pancreatitis who report visual loss.

Beyond Resilience & Wellbeing

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Dr Rupal Shah Professional Development Team London NHS England

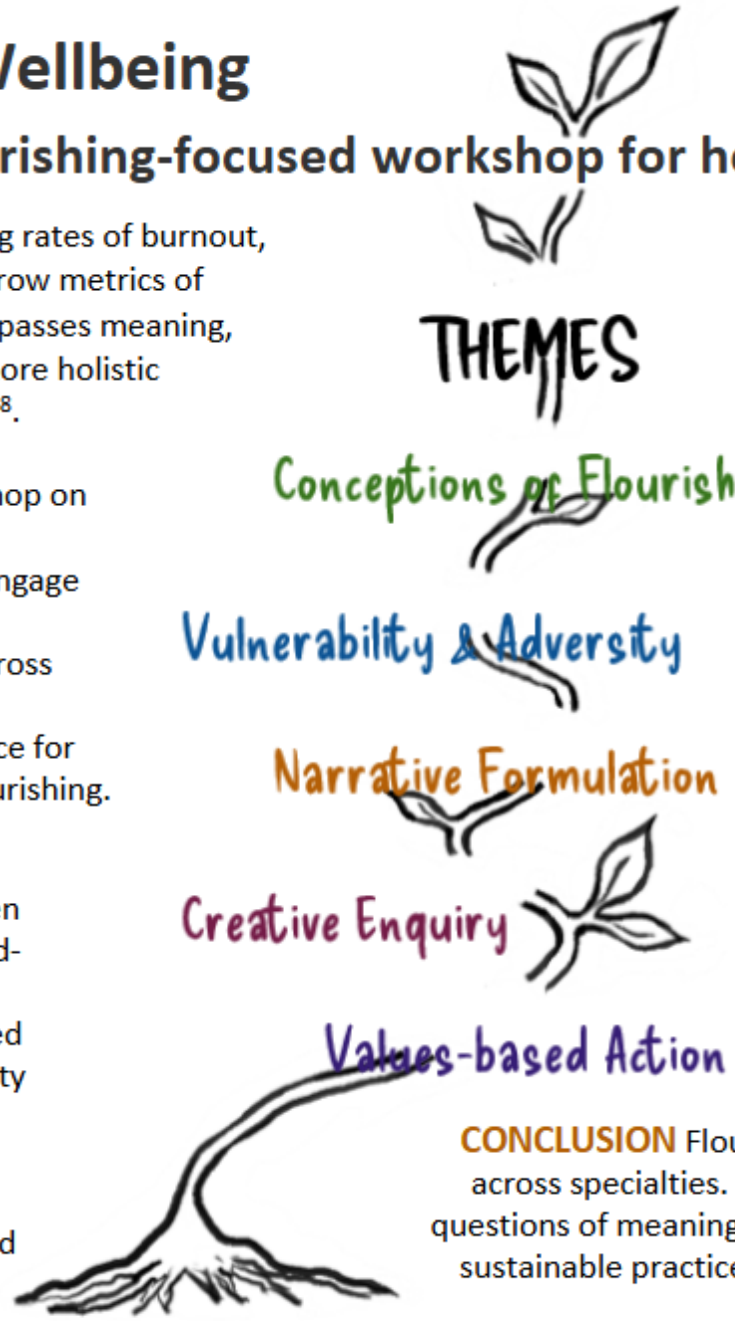
Evaluation of a one-day flourishing-focused workshop for healthcare professionals

INTRODUCTION Interventions to tackle rising rates of burnout, moral injury, and attrition[1] often focus on narrow metrics of resilience and wellbeing[2-4]. Flourishing encompasses meaning, values, vulnerability, and growth, offering a more holistic framework for approaching these challenges[5-8].

AIMS To design and deliver a one-day workshop on flourishing for healthcare professionals that:

- Moves beyond resilience and self-care to engage with meaning, values, and identity.
- Is applicable to healthcare professionals across levels of training and specialties.
- Creates a safe, reflective, collaborative space for discussion of professional and personal flourishing.

MATERIALS & METHODS Four in-person Flourishing workshops were delivered between March 2024–2025. They were offered as stand-alone days or as part of a wider four-day programme on Generalism. Attendees included individuals of all levels of seniority and a variety of allied healthcare professionals. Responses were predominantly from resident doctors. Themes were drawn from written feedback (n=40) to identify perceived impact, utility, and suggestions for improvement.



RESULTS & DISCUSSION All participants would recommend the workshop to colleagues with unanimous positive responses.

RELEVANCE & APPLICABILITY Participants valued the importance of protected space to explore these ideas, and the chance to "reframe" challenges, recognise the role of vulnerability, and reconnect with personal and professional values.

LEARNING METHODS Small-group discussions, narrative exercises, and creative tasks (e.g. story exploration through art) were described as *"inspiring," "memorable," "engaging,"* and *"empowering."* Incorporating philosophy and creativity into training was noted to deepened reflection and promoted openness.

IMPACT Attendees reported personal and professional growth:

"Opens your eyes into how change can be made, how to look forward to a future in medicine and that hope is out there for the profession"
"Fantastic, really well structured… it should be compulsory for all clinicians."
"This is the best workshop that I have ever attended,"
"Reframed my whole career."

Suggestions for improvement included more time for discussion, use of case examples, and further engagement with consultants, managers, and allied health professionals to facilitate culture shift.

CONCLUSION Flourishing-based training is novel and highly valued by healthcare professionals across specialties. Unlike wellbeing- or resilience-focused interventions, it engages with deeper questions of meaning, identity, and systemic context. This offers a timely reflective framework for sustainable practice, and personal and professional transformation, highlighting the importance of values-based action in the face of adversity.

REFERENCES 1. Ocean N, Meyer I. Trends in work-life balance, burnout and stress across ten years of National Health Service staff surveys in England: a longitudinal retrospective study. PLoS One 2023;18(4):e0284300. 2. Montgomery A, [illegible] O. Creating healthy workplaces in healthcare: are we delaying progress by focusing on what we can do rather than what we should do? Front Public Health 2023;11:1105009. 3. Traynor M. Resilience as a mid-level theory of human development: a critical evaluation. J Adv Nurs 2018;74(6):1394–1401. 4. Robertson HD, Elliott AM, Burton C, et al. Resilience of primary healthcare professionals: a systematic review. BJGP 2016;66(647):e423–e433. 5. Pattison S, Edgar A. Flourishing in health care. Health Care Anal 2016;24(2):101–104. 6. Pavlova N, Paine S-J, Sinclair S, et al. Working in value-discrepant environments inhibits clinicians' ability to provide compassion and reduces well-being: a cross-sectional study. J Intern Med 2023;293(6):704–723. 7. Delgado J, de Groot J, McCaffrey G, et al. Towards collective moral resilience: the potential of communities of practice during the COVID-19 pandemic and beyond. J Med Ethics 2021;47(6):374–382. 8. Younie L, [illegible] D. Creative enquiry and the clinical encounter. BJGP 2020;70(690):26–27.

Lipid Management: 'Fire and Forget' - A Quality Improvement Project

Dr Jia Wei Tan *IMT* | **Dr Su Maung** *IMT* | **Dr Eswaran Rajaratanam** *SpR* | **Dr Clint Maart** *Consultant*

Norfolk and Norwich University Hospitals NHS Foundation Trust

Introduction

- Lipid management is a cornerstone of secondary prevention in ACS. However, in clinical practice, follow-up testing and lipid optimisation are often inconsistent.
- This audit explores adherence to guidelines and opportunities for improvement.
- Both European Society of Cardiology (ESC) and NICE guidelines recommend that patients should have fasting lipids checked on admission, though they differ on recommended intervals for subsequent follow up checks.

Objective

To assess adherence to lipid management guidelines in ACS patients at NNUH during admission and post-discharge, and to implement targeted interventions to address identified gaps.

Methods

Patients admitted with ACS (NSTEMI/STEMI) were audited against 4 standards:

1. **Full fasting lipid panel on admission**
2. **High-dose statin prescribed**
3. **Discharge summary includes lipid follow-up recommendation**
4. **Lipid profile rechecked at 3 months post-discharge**

- First cohort: 166 patients recruited between April to May 2023
- Second cohort: 169 patients recruited between May to June 2024

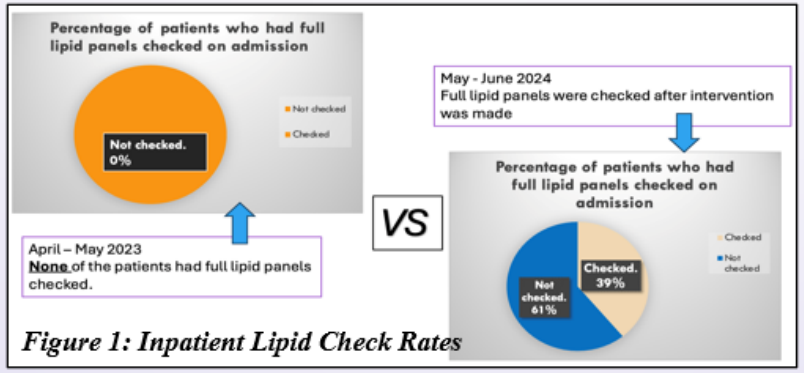


Figure 1: Inpatient Lipid Check Rates

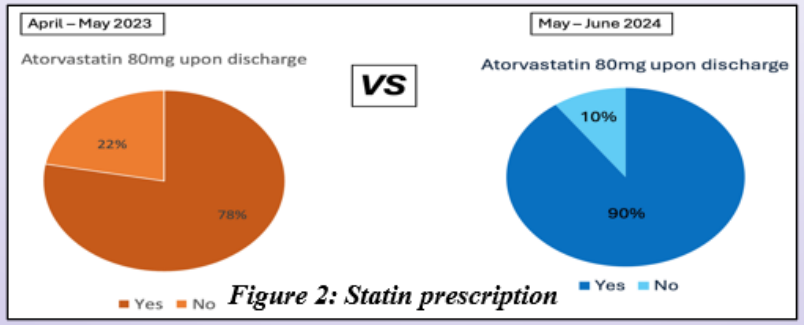


Figure 2: Statin prescription

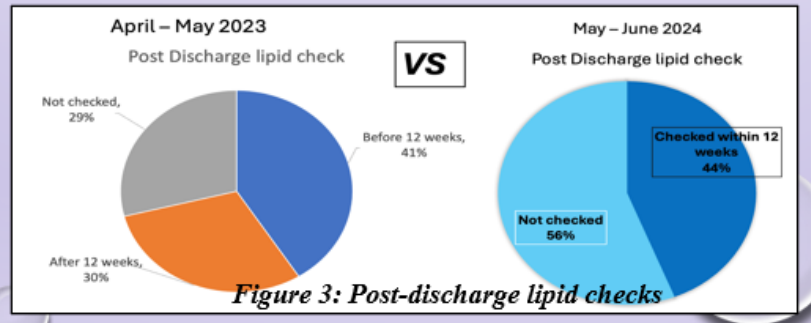


Figure 3: Post-discharge lipid checks

Discussion

- **Improved inpatient lipid checks (0% → 39%)**
- **Improved discharge summary advice (84% → 100%)**
- **Statin prescription remains high (~84%)**
- **No significant improvement in 3-month post-discharge lipid checks (41% → 44%)**

- Interventions such as embedding prompts into angiogram forms and updating discharge summaries led to measurable improvements in inpatient lipid monitoring and communication with GPs.
- However, community lipid follow-up remained low, highlighting challenges in cross-sector collaboration and patient adherence.

Conclusion

- This QIP demonstrated that simple, low-resource interventions can significantly improve inpatient adherence to lipid management guidelines.
- Improving community follow-up requires further system-level changes, such as dedicated post-MI clinics or better integration with primary care.

Proposed interventions

1. Ensure full lipid panel is taken on admission ✓
2. Amend the advice on statins in the discharge letter that is in line with the guidance ✓
3. Provide more information to GP ✓
4. Prompt on angiogram forms to state full fasting lipid levels as part of the investigation ✓
5. Advocate statin intolerance guidelines ✓
6. Organise teaching for junior doctors and nurses, as well as in other department ✓

References

1. François Mach et al. ESC Scientific Document Group , 2019 ESC/EAS Guidelines for the management of dyslipidaemias: *lipid modification to reduce cardiovascular risk*: The Task Force for the management of dyslipidaemias of the European Society of Cardiology (ESC) and European Atherosclerosis Society (EAS), *European Heart Journal*, Volume 41, Issue 1, 1 January 2020
2. Cardiovascular disease: risk assessment and reduction, including lipid modification. NICE Guidelines Dec 2023

Severe Adenovirus Pneumonia in a medical registrar : a case report

Dr Kabita Pathak [1], Dr Selina Zakri [1], Dr Kushagra Mathur [1]

Medical Registrar, Acute and General Medicine, William Harvey Hospital [1]

INTRODUCTION

Human adenovirus is known to cause mild to severe forms of respiratory infections. While most of them are self-limiting, specific strains and host factors can lead to severe forms as well [1]. On the week that this case presented, the weekly PCR positivity rate in the UK was 4.05%. [2] The common symptoms of adenovirus infection are runny nose, fever, and cough sometimes with expectoration. It usually presents as a severe infection in immunocompromised individuals, including diabetics, elderly and the ones undergoing chemotherapy. It is also common in individuals with poor lung reserves like chronic smokers, ones with chronic obstructive pulmonary disease and fibrosis.

CASE HISTORY

- A 52-year-old male physician presented with a 7-day history of flu-like symptoms. His past medical history included COPD due to long-term heavy smoking (40–60 cigarettes/day), type 2 diabetes mellitus managed with oral hypoglycaemics , diet-controlled hypertension, hypercholesterolemia, and spinal claudication.
- Initially treated with co-amoxiclav in the community, his symptoms progressed to include fever, productive cough, and dyspnoea. He was admitted for suspected community acquired pneumonia and started on intravenous antibiotics and steroids. Within 24 hours, his condition deteriorated with sudden confusion, hypotension, faecal incontinence, and a fall, necessitating ITU admission
- Laboratory findings were disproportionate to clinical severity: CRP 98 mg/L, normal white cell count, mild lymphopenia (1.2 $\times 10^9$/L), and a normal renal function.
- Chest CT revealed bilateral multifocal consolidations and mediastinal lymphadenopathy (as seen in figures: 1 and 2).
- He was started on Piperacillin-Tazobactam and supplemental oxygen. Respiratory viral PCR was positive for adenovirus with an unusually high viral load (5.2 million copies/mL).
- Based on microbiology advice, he was treated with oral Ribavirin and Clarithromycin.
- The patient showed clinical and biochemical improvement within 72 hours, was weaned off oxygen, and discharged in stable condition.

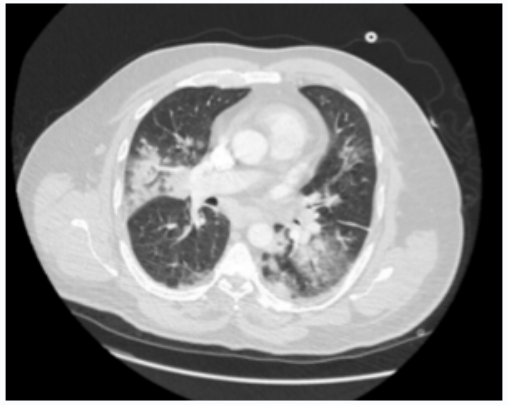


Figure: 1

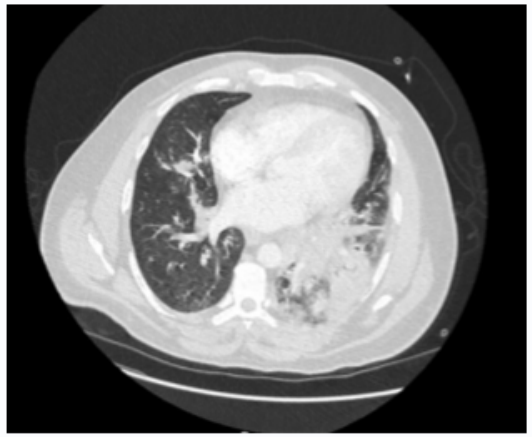


Figure: 2

DISCUSSION

Adenovirus is known to cause mild upper respiratory infections, but it is not unheard to cause lower respiratory tract infections. A case published by Larson et al in 2005 discussed a similar case in a 52-year-old chronic smoker who had severe adenovirus infection, requiring ventilatory support and antibiotics

REFERENCES

1) Hakim FA, Tleyjeh IM. Severe adenovirus pneumonia in immunocompetent adults: a case report and review of the literature. Eur J Clin Microbiol Infect Dis. 2008 Feb;27(2):153-8. doi: 10.1007/s10096-007-0416-z. PMID: 18030505; PMCID: PMC7101838.

3) Zhao B, Yang T, Zheng R. Adenovirus pneumonia should not be overlooked in immunocompetent youths and adults. Epidemiol Infect. 2021 Sep 10;149:e199. doi: 10.1017/S0950268821001485. PMCID: PMC8414599.

4)Larsen IK, Nielsen H. Community-acquired adenovirus pneumonia in a patient with chronic lymphatic leukaemia. Eur J Clin Microbiol Infect Dis. 2005 Mar;24(3):217-9. doi: 10.1007/s10096-005-1288-8. PMID: 15761721; PMCID: PMC7087800.

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HYBRID EPICARDIAL-ENDOCARDIAL ABLATION VS CATHTER ABLATION FOR NON-PAROXYSMAL ATRIAL FIBRILLATION

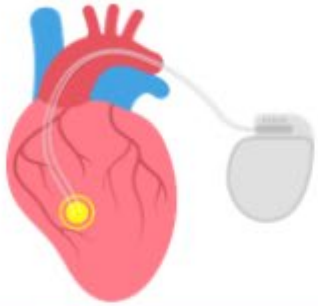
A Systematic Review and Meta-analysis of Randomized Controlled Trials

Introduction

Cathter Ablation (CA) has revolutionized Atrial Fibrillation (AF) care - BUT not for everyone

Non-paroxysmal Atrial Fibrillation (AF) often recur despite antiarrhythmic therapy and repeat cathter ablations (CA)

Hybrid Endocardial - Epicaridal ablation (HA) tackles the arrhthmogenic substrate from both atrial surfaces - aiming for more durable lesions, posterior wall isolation, and improved rhythm control



Objective

To systematically review and pool evidence from randomized controlled trials comparing hybrid epicardial-endocardial ablation with cathter ablation in non-paroxysmal/ persistent atrial fibrillation

Key Sources and Acknowledgements

RCTs Included:

- Kress 2024
- DeLurgio 2020 (CONVERGE)
- Pison 2014
- Bisleri (2019)
- Gehi 2023

Authors:

- Kanita Farooq (King's College NHS Foundation Trust)
- Zuha Akhtar (University of Oxford and Frimley Health NHS Foundation Trust)
- Maria Babu (Lancashire Teaching Hospitals)
- Ishpreet Singh (Royal Cornwall Hospitals NHS Trust)

Methodology

01 Systematic review and Meta-analysis conducted in accordance with **PRISMA 2020** and registered on **PROSPERO**

02 Search Strategy:

Electronic searches of PubMed, Embsase, Cochrane CENTRAL, Scopus, and ClinicalTrials.gov using:

("Atrial Fibrillation" [Mesh/tiab]) AND ("Hybrid ablation" OR "Convergent ablation") AND ("Catheter ablation")

PubMed syntax shown; equivalent terms adapted for other databases

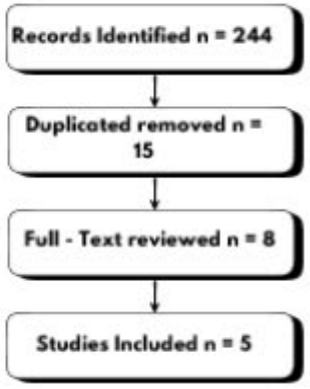
03 Inclusion Criteria:

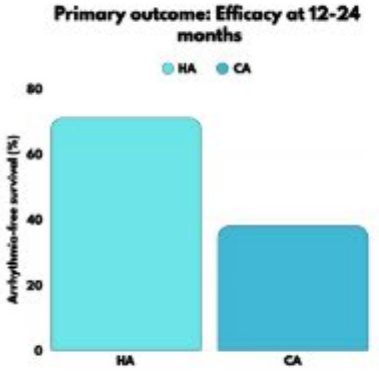
- *Population*: Adults (≥18 years) with non-paroxysmal or long-standing AF
- *Intervention*: Hybrid Epicardial-Endocardial Ablation
- *Comparator*: Catheter Ablation alone
- *Outcomes*:

1. Primary Outcome: Maintenance of sinus rhythm at 12-24 months without antiarrhythmic therapy
2. Secondary Outcome: Complications (procedural related e.g., tamponade, stroke), repeat intervention (ablarion or cardioversion), quality of life improvement

04 Analysis and Data extraction:

Random-effects meta-analysis using Review Manager 5.4 to pool risk ratios (RR) with 95% CIs. Data were independently extracted by two reviewers and cross-checked for accuracy



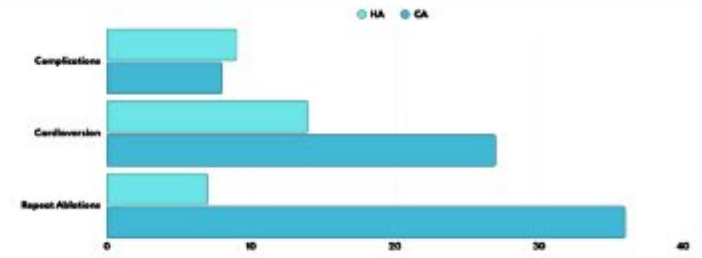


Results

- 5 RCTs were included - n ≈ 450
- Rhythm control: At 12-24 months HA achieved arrhythmia-free survival in **65-76 %** vs **32-43 %** for CA representing an absolute pooled benefit of ≈ +30% ($p<0.001$). Off anti-arrhythmic drugs, HA maintained superior sinus-rhythm durability (≈ **57-72 %** vs **28-41 %**)
- Safety: Major complication rates were comparable (HA **8-11 %** VS CA **6-10 %**); no procedural mortaility reported. Serious adverse events (e.g., tamponade, stroke) were infrequent.
- Re-interventions: HA required fewer repeat procedures - cardioversions **12-16 %** vs **24-29 %** and repeat ablation (**5-8 %** vs **34-37 %**)

Analysis

- HA achieved higher long-term rhythm control than CA, plausibly by enabling durable posterior-wall and epicardial lesion sets with endocardial gap closure.
- Comparable safety across RCTs supports feasibility, although Across RCTs, 30-day major complications were similar between strategies, supporting procedural feasibility, though technique heterogeneity (lesion sets, energy source, staging) limits cross-trial comparison.
- The treatment effect is also likely modulated by substrate burden; refining selection within non-paroxysmal AF (e.g., larger LA, greater fibrosis, prior failed CA) may optimize benefit and avoid unnecessary invasiveness.



Conclusion

HA ablation offers superior arrhythmia-free survival compared with CA in persistent AF, with similar safety. These findings support its consideration as a treatment option for selected patients. Further multicentre RCTs should refine patient selection and evaluate long-term durability

IMPROVING ADHERENCE TO ASTHMA MEDICATION: IDENTIFYING THE MOST CLINICALLY AND COST-EFFECTIVE STRATEGIES FOR ADULTS WHO ARE NON-ADHERENT TO PRESCRIBED TREATMENT

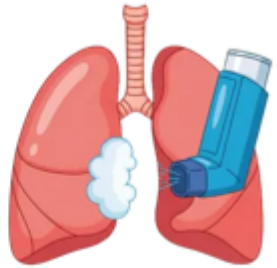
A Systematic Review of RCTs and Observational Studies

Introduction

Optimal asthma control depends on both **pharmacological treatment** and patient **self-management,** including correct inhaler technique, consistent medication adherence, and trigger avoidance. Non-adherence is a major determinant of poor asthma outcomes, leading to hospital admissions, increased exacerbations, and preventable deaths.

In the United Kingdom, asthma affects over **5.4 million** people, costing the NHS **approximately £3 billion annually**, much of which is preventable. Evidence shows that up to **two-thirds of these deaths are preventable with effective asthma control and adherence support.**

According to the NICE Guideline previously NG80 2017 (updated 2025 NG245), effective asthma control requires personalised action plans, regular inhaler reviews, support for adherence, and tailored education.



Objective

To systematically evaluate evidence from randomised controlled trials and observational studies to identify the most clinically and cost-effective interventions that improve medication adherence in adults with asthma.

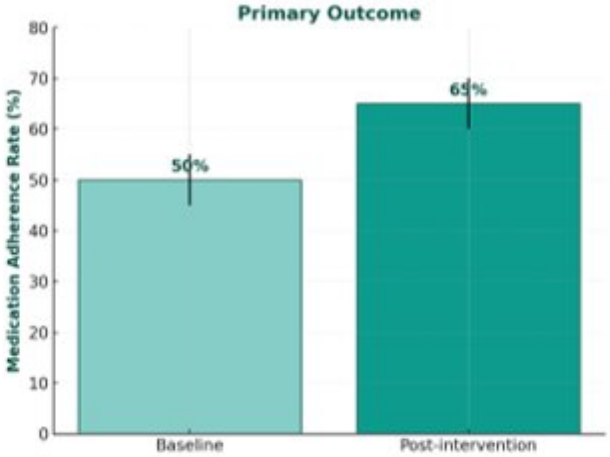
Methodology

01 A systematic review was conducted in accordance with PRISMA 2020. The protocol was prospectively registered on PROSPERO.

02 **Search Strategy:**
Electronic searches of PubMed, Embase, ClinicalTrials.gov, and the Cochrane Library (2015–2025) using search terms "Asthma," "Medication Adherence," "Pharmacist-led," "Digital Tools," "Inhaler Technique," "Patient Activation," "Reminder," "Cost-effectiveness." (MeSH terms were adapted using PubMed syntax for database uniformity.)

03 **Inclusion criteria**
- **Population:** Adults (≥18 years) diagnosed with asthma.
- **Intervention**: Strategies to improve adherence to prescribed asthma medication.
- **Comparator:** Standard care or alternative adherence interventions.
- **Outcomes:**
  - **Primary outcome**: Medication adherence rate measured via prescription refill data, electronic monitoring, or validated self-report scales.
  - **Secondary outcomes**: Asthma control, exacerbation frequency, hospitalisations, quality of life, and cost-effectiveness.

04 **Analysis and Data Extraction**
Pooled risk ratios (RR) and 95% confidence intervals (CI) were computed for comparable outcomes. Data was independently extracted by three reviewers and cross-checked for accuracy



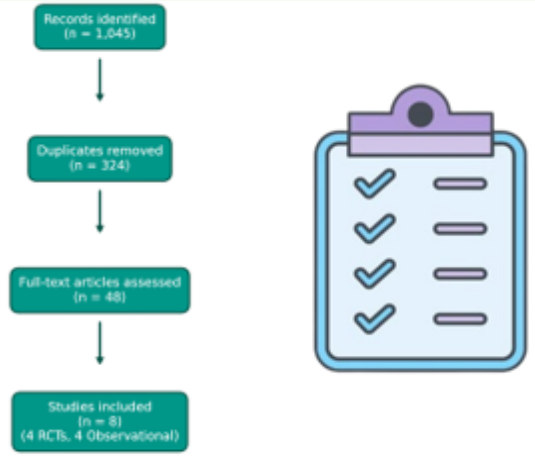
Medication adherence improved from 50% to 65%

Results

8 studies were chosen: 4 RCTs and 4 Observational Studies from a total of 324. Interventions evaluated include:
- **Pharmacist-led interventions:** +25–30% adherence
- **Specialist follow-up:** +35% adherence
- **Digital tools:** +20% adherence
- **Pictorial plans**: +18% improvement in understanding

Pharmacist-led interventions and specialist follow-up achieved the largest adherence gains and sustained asthma control at 3–6 months

Cost-effectiveness:
- Pharmacist-led education → **£185–£230 saved** per patient annually via **27%** fewer emergency visits and **22%** fewer hospitalisations.
- Digital activation tools → **12–18%** reduction in healthcare costs and 20% improvement in refill adherence.
- Specialist follow-up → **25%** fewer unscheduled GP visits, saving £0.9–£1.2 million per year.



Conclusion

Specialist follow-up and pharmacist-led education were most effective, improving adherence by up to 35% and reducing hospitalisations by over 20%, with potential NHS savings exceeding £1 million annually. Digital innovations, such as reminder apps and remote monitoring, enhanced adherence with cost-effective scalability.

Future work should focus on integrating digital technology with personalised follow-up and behavioural support to sustain adherence, address real-world barriers, and ensure equitable, patient-centred asthma.

Key Sources & Acknowledgements

- Zia et al., 2020
- NICE Guideline NG245, 2025
- NICE NG80/10, 2017
- Asthma + Lung UK, 2024
- Rackow et al., 2025
- Amorha et al., 2020
- Hynes et al., 2022
- Bidwal et al., 2017
- Cvietusa et al., 2023

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Maria Babu (Lancashire Teaching Hospitals)
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Documented fluid balance assessments in hyponatraemic patients on a neurosurgical ward: A quality improvement project

Dr Katherine Makris, Mr Robert Aspoas (Auckland City Hospital, New Zealand)

AIM **For 75% of patients with a sodium ≤133mmol/L on the neurosurgical ward to have a documented fluid balance assessment within 3 months**

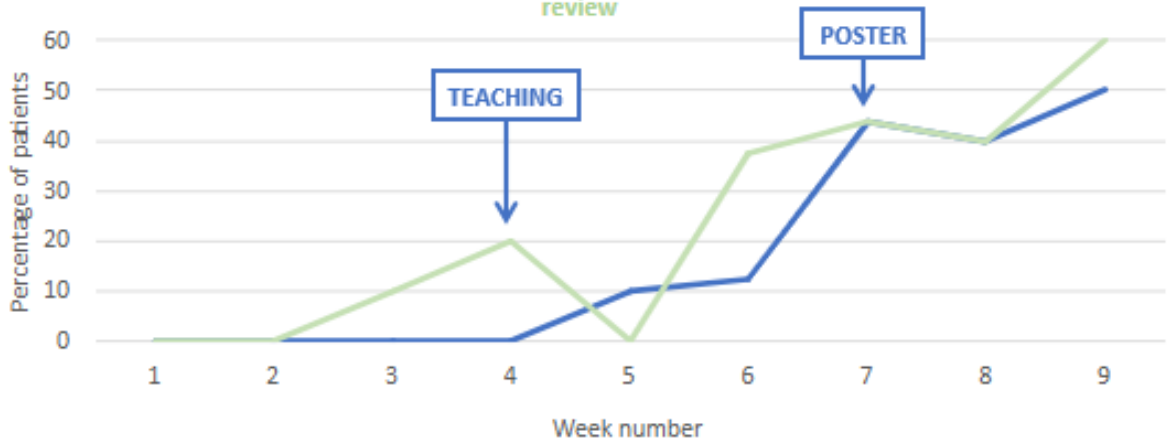
INTRODUCTION

- Hyponatraemia is a frequent neurosurgical complication[1,2] associated with increased inpatient mortality[3] and longer hospital stays for neurosurgical patients[2]
- Accurate diagnosis of the cause is critical to ensure appropriate treatment[1]
- Fluid balance assessments can help to differentiate between causes but were rarely undertaken and documented

MATERIALS AND METHODS

- Clinical notes from a random 10 neurosurgical patients with a sodium ≤133mmol/L were checked each week for a documented clinical fluid assessment, medication review and other hyponatraemia investigations performed
- Intervention 1 (end of week 3): teaching to the neurosurgical house officers
- Intervention 2 (end of week 6): poster displayed in the ward doctors' office

Graph 1: Weekly percentage of patients with a documented fluid balance assessment and medication review



RESULTS

- Prior to interventions, there were no documented fluid status assessments
- Following intervention 1, 2/28 (7.1%) had a documented fluid assessment. This increased further to 13/29 (44.8%) after intervention 2
- The percentage of patients with a documented medication review also increased following the interventions
- Graph 1 shows the run chart with the week-on-week change in percentage of documented fluid reviews and medication review

DISCUSSION

- There was an increase in documented clinical fluid assessments, especially after the poster (possibly due to it acting as a convenient aide memoir in the doctors' office)
- The increase may have been from better awareness of hyponatraemia but also possibly due to the awareness of the project happening. More data is needed to determine if the increase was maintained
- The increase was not as large as aimed for. This may be because fluid assessments were being done but not documented due to time constraints during clinical work. Further interventions, e.g. a hyponatraemia proforma, are required to further increase fluid assessments to ensure appropriate treatment

CONCLUSION

- **Interventions of teaching and a poster helped to increase documented fluid balance assessments as well medication reviews for hyponatraemic neurosurgical patients**
- Further interventions are required to increase the number of documented assessments to meet the aim

REFERENCES

1. Hannon MJ and Thompson CJ. Neurosurgical hyponatremia. J Clin Med. 2014;3(4):1084-1104.
2. Sherlock M, O'Sullivan E, Agha A et al. Incidence and pathophysiology of severe hyponatraemia in neurosurgical patients. Postgrad Med J. 2009;85(1002):171-175.
3. Sturdik I, Adamcova M, Kollerova J et al. Hyponatraemia is an independent predictor of in-hospital mortality. Eur J Intern Med. 2014;25(4):379-382.

Understanding the "Why"- Job Satisfaction and Retention among Junior Hospital-Based Physicians in the UK: An Integrative Literature Review

Dr. Kennisha Powell MBBS(Hons.), MRCP, MBA - Edinburgh Napier University; NHS Northwest Anglia FT

Introduction

- The NHS faces a **staff retention crisis**, losing ~5% of doctors from the GMC register annually.
- Junior doctors are increasingly opting out of training; only **37.7% of FY2 doctors** continued into run-through programmes in 2018 (vs. ~70% in 2011).
- Burnout, low morale, and lack of work-life balance are major drivers of attrition.
- With the recent industrial actions taken from 2023-2025 it is of paramount importance to identify the root cause of dissatisfaction.

Aim/Objective

- To identify factors influencing job satisfaction and retention among UK junior doctors to inform NHS workforce strategies.

Methodology

- **Design:** Integrative literature review.
- **Data sources:** EBSCOhost and PubMed (MEDLINE, CINAHL, APA PsycArticles, Psychology & Behavioural Sciences).
- **Inclusion:** 12 Primary UK-based studies on Junior doctors.
- **Analysis:** Thematic content analysis using NVivo 12.
- **Process:** Identified factors → Coded into overarching themes

Results

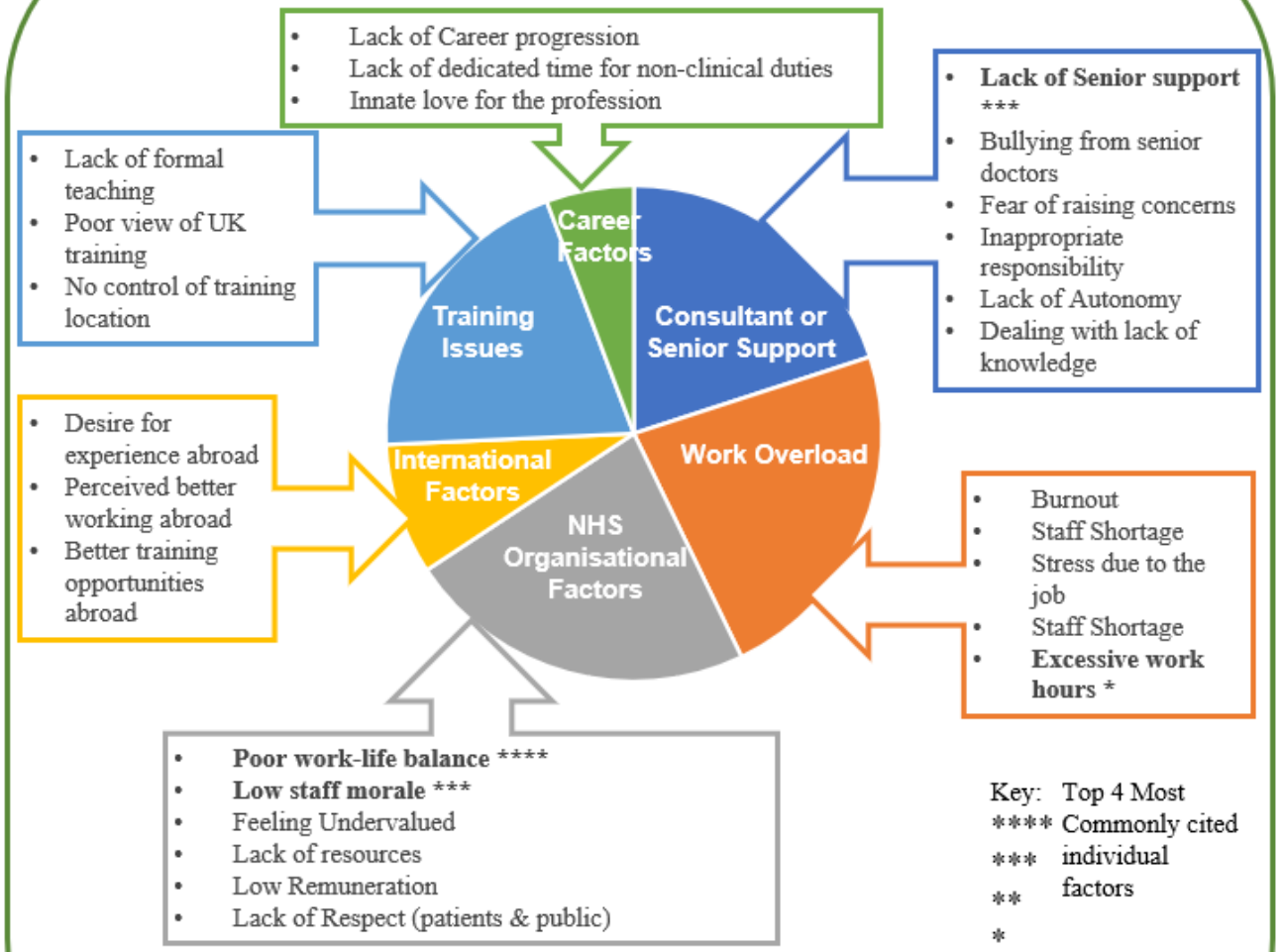


Figure 1: Factors influencing Job Satisfaction and retention among junior doctors in the UK

Conclusions

- Factors which influence Job satisfaction and retention are **multifactorial** and **inter-related.**
- **Poor Work-life balance** was the single most important contributor to dissatisfaction.
- Variations in responses suggest that satisfaction and retention strategies should be individualised to a doctors' circumstances.
- Addressing the why is the key to solving this complex, evolving problem

Implications in Practice

- **Workforce sustainability among doctors requires urgent reform.**
- **Long-term strategies** and **Short-term solutions** are required to tackle this complex issue
  - Improve staffing levels and scheduling
  - Strengthen mentorship and consultant support
  - Protect training time and career development
  - Foster a culture of respect and psychological safety

Scope for Future Research

- Primary data was relatively under-represented in the literature.
- This study serves as a baseline which could encourage collection of more recent, primary data on a National level >> Larger sample size >> More powerful study
- Demographic-specific factors (age, gender, specialty etc.)

Fetal bradycardia prompting parental diagnosis of Long QT Syndrome

Kiruthika Ananthan, Sian Chivers, Will Regan, Antonio de Marvao, Trisha Vigneswaran, Eric Rosenthal, Vita Zidere, John M. Simpson, Rachel M. Bastiaenen, John Whitaker

Background and objectives

Long QT syndrome is primarily an inherited condition associated with risk of sudden cardiac death. Due to variable phenotypic expression, a prolonged QT interval is not always present. LQTS may present in the fetus with persistent bradycardia, including sinus bradycardia or functional 2:1 atrioventricular (AV) block. We report our experience of fetal bradycardia prompting parental assessment for inherited LQTS.

Methods

Retrospective review of electronic health records of fetuses with bradycardia referred to our fetal cardiology tertiary centre **(143)**

VT/structural heart disease excluded

Autoimmune AV block excluded (+ve maternal Ro/LA antibodies)

Assessment via fetal echo: fetal bradycardia defined as HR Z score <-2 for gestational age **(20)**. Sinus bradycardia **(16)** 2:1 AV block **(4)**

LQTS panel genetic testing offered based on clinical judgment on a case-by-case basis performed either antenatally*/postnatally

Advanced GA

1 mother declined testing

Comprehensive assessment was undertaken in 12 mothers and 11 fathers including review by a cardiologist specialised in Inherited Cardiac Conditions (ICC), a clinical geneticist and cascade genomic testing.

**Antenatal genetic screening involved either amniocentesis or testing maternal blood*

Results and discussion

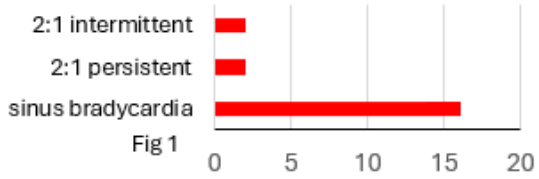


Fig 1

Amongst 20 fetuses, 16 had sinus bradycardia and four had 2:1 AV block (intermittent = 2; persistent =2) *(Figure 1)*.

Genetic testing was undertaken in 12 fetuses. Pathogenic LQTS genetic variants were found in 11 fetuses (KCNQ1=8; KCNE1=1; KCNH2=1; CALM2=1)

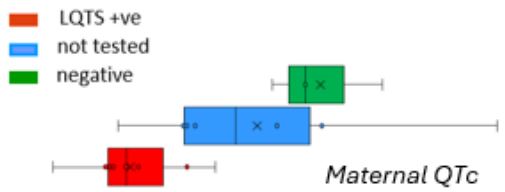
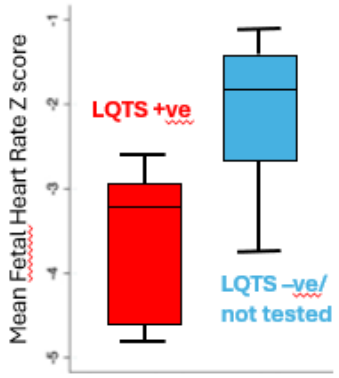


Fig 4

Maternal QTc was higher in those with pathogenic variants compared to those who did not undergo genomic testing (456.9+/- 11.6 vs 425.9+/-28.7msec, p=0.009) but <400msec in the paternal carrier.

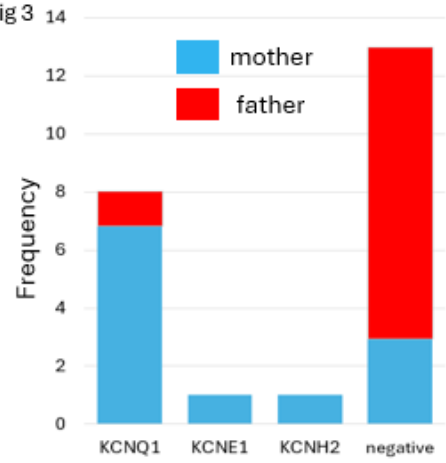
Fig 2



Fetuses with LQTS variants had a lower median HR z score than those without a genetic variant or who were not tested (-3.20 vs -2.35, p=0.03) *Figure 2*

Cascade genetic testing was offered to 12 mothers and 11 fathers. Pathogenic LQTS variants were identified in nine mothers (KCNQ1=7; KCNE1=1; KCNH2=1) and one father (KCNQ1=1). *Figure 3*

Fig 3



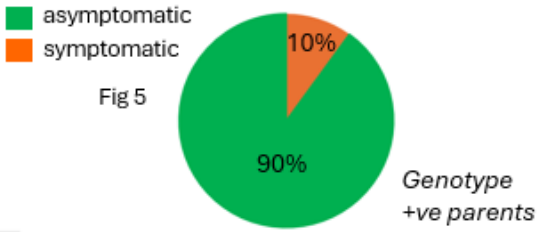


Fig 5

Genotype +ve parents

Of parents with pathogenic LQTS variants:
- all except one parent were asymptomatic
- three parents had a normal QTc
- only one patient had a Schwartz score ≥3
- none fulfilled the NHS England criteria for genomic testing for LQTS.

Bisoprolol was initiated prophylactically in 6 genotype +ve mothers (4 pre- and 2 post-partum). In one case this was following a +ve treadmill test.

Conclusion

Persistent fetal bradycardia may be the **first** and **only indicator** of parental LQTS and we propose expansion of the criteria for genomic testing to reflect this. This should prompt consideration of this diagnosis even with a normal maternal QTc and lead to the initiation of specific management strategies for pregnancy and delivery prior to the results of genomic testing being available.

Right Tests, Right Time: A Digital Bundle Boosts Early Hyponatremia Investigation and SIADH Identification

Authors: Dr Kundan Thakur[1], Dr Ruma Raut[1], Dr Hayder Al-Khalafawi[2]
[1]Southend University Hospital | [2]Kingston & Richmond NHS Foundation Trust

Introduction

Hyponatremia is one of the *most frequent electrolyte disturbances* in hospitalised patients.
It causes effects ranging from **mild confusion → seizures → coma → death**, and is linked to **increased morbidity, mortality, and longer hospital stays**.

🧠 **Problem:** Early investigations are **often incomplete**, delaying diagnosis and resulting in **suboptimal management**.

📊 **Baseline (Kingston Hospital, June 2023):**
Only **10.53 %** of patients with **Na < 129 mmol/L** had a *full hyponatremia bundle* completed within 48 hours.

QIP Aim:

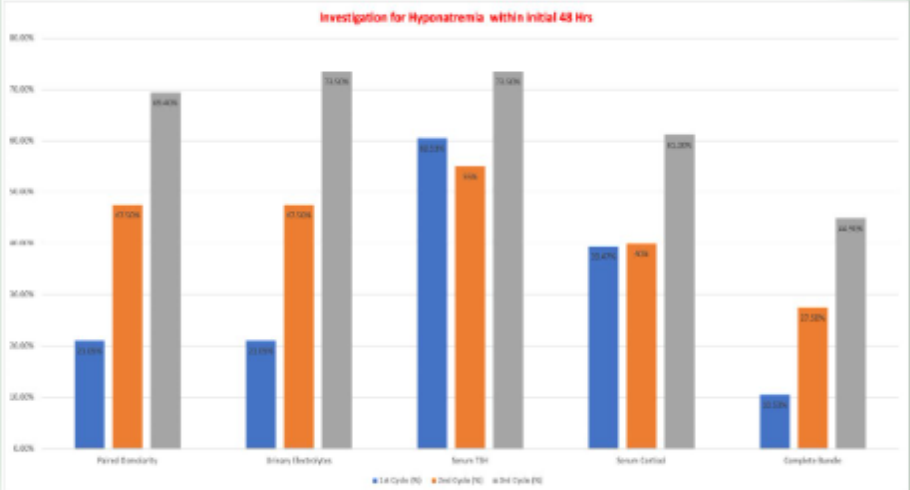
To enhance early and complete investigations through a **digital, standardised bundle**, incorporating : Paired **serum + urine osmolality**, **Urinary electrolytes**, **Thyroid function**, **Cortisol.** Enabling **earlier SIADH identification** and improved patient outcomes

Careset - Hyponatremia

Component
☑ Urine Electrolytes
☑ Osmolality Serum
☑ Cortisol Serum
☑ Thyroid Function
☑ Urine Osmolality (Osmolality Urine)

Materials and Methods

1. **Setting:** Kingston Hospital, three-cycle QIP.
2. **Cycle 1 (June 2023):** Retrospective review of 38 patients presenting to the medical take with hyponatremia (Na <129 mmol/L) to establish baseline investigation rates.
3. **Intervention:** Development and implementation of a **digital CRS hyponatremia bundle**.
4. **Awareness strategies:** educational posters, informal teaching, departmental meetings, and targeted A&E engagement to promote use of the bundle.
5. **Cycle 2 (Jan–Feb 2025):** Retrospective review of 40 patients under identical criteria to evaluate improvement post-intervention.
6. **Cycle 3 (Jun–Aug 2025):** Review of 49 patients to assess **sustainability and adherence** following full CRS integration.



Results & Discussion

1. **Marked improvements** were observed across all three QIP cycles.
2. **Paired osmolality and urinary electrolyte completion** rose from **21.05 % → 47.5 % → 69.4 %**.
3. **Full bundle completion** improved from **10.53 % → 27.5 % → 44.9 %** within 48 hours of admission.
4. Five patients in Cycle 2 and three patients in Cycle 3 were diagnosed early with **SIADH**, demonstrating the clinical value of complete testing.
5. Early identification of underlying causes enabled **safer prescribing**, avoided **inappropriate fluid therapy**, and reduced **complications from rapid or delayed correction**.

Conclusion

Embedding a **standardised digital hyponatremia bundle** within the CRS system significantly improved early investigation rates within 48 hours of admission. This QIP demonstrates that **system-based digital interventions**, combined with staff engagement, can **bridge practice gaps** and promote **safer, more timely patient care**.

References

1. *Grant P, Ayuk J, et al. Eur J Clin Invest. 2015; 45(8): 888–94.*
2. *Spasovski G, Vanholder R, et al. Nephrol Dial Transplant. 2014; 29(Suppl 2): i1–i39.*
3. *Ellison DH, Berl T. N Engl J Med. 2007; 356(20): 2064–72.*

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Seven miscarriages and pain in abdomen: A rare case report

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INTRODUCTION

Rheumatoid Arthritis is a chronic, systemic, connective tissue disorder with mainly affects joints and soft tissues but is known to involve organs like liver, spleen or even heart. In many individuals, it can often affect the reproductive system of females leading to a wide range of issues- from mild cervicitis to ovarian tube blockages. There is evidence that the symptoms arise due to a chronic inflammatory condition of the body[1].

Here, we present a case of one such female with atypical presentation

Case

A 32-year-old woman with multiple admissions for abdominal pain, initially treated as acute cholecystitis and recurrent abdominal infections, underwent a CT scan showing perihepatitis and ultrasound showing splenomegaly, despite normal inflammatory markers.

She had a history of 7 miscarriages and 2 successful deliveries. Further evaluation revealed negative miscarriage screens, with mild positivity for anticardiolipin antibodies. However, strong positivity for ANA and rheumatoid factor (30 IU/L) directed us towards the possibility of an autoimmune condition. After multidisciplinary discussions, her liver lesions, splenomegaly, and miscarriages were diagnosed as extra‑articular manifestations of Rheumatoid Arthritis.

CONCLUSIONS

Early diagnosis and targeted treatment for RA have since stabilized the patient's condition, demonstrating the importance of recognizing atypical systemic presentations of RA for proper management and improved patient outcome

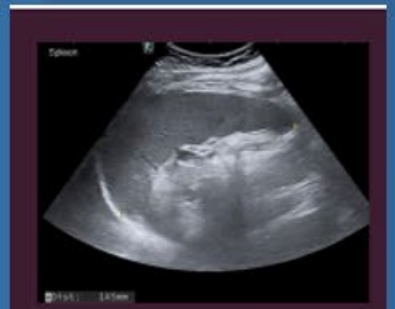

Figure 1 : Ultrasound scan showing splenomegaly (14cm)

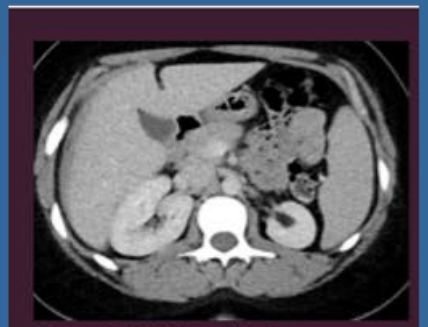

Figure 2 : CT abdomen showing (i)perihepatic inflammation and (ii) significant atrophy of left kidney as compared to right kidney.

DISCUSSION

The patient's presentation of raised rheumatoid factor, strongly positive ANAand CT findings of perihepatic inflammation, splenomegaly, and left renal atrophy were indicative of extra-articular manifestations of rheumatoid arthritis (RA).

Despite initial treatment for recurrent abdominal infections, a multidisciplinary evaluation confirmed the link between her autoimmune condition and these symptoms.

The association of RA with recurrent miscarriages further supports RA's systemic impact beyond joint involvement

REFERENCES

1.Krause M et al. Management of rheumatoid arthritis during pregnancy: challenges and solutions. Open Access Rheumatol. 2016 Mar 23;8:23-36.

2. Guo D et al. Causal association between rheumatoid arthritis and pregnancy loss and intrauterine growth retardation: A bidirectional two-sample Mendelian randomization study. Medicine (Baltimore). 2024 Jan 12;103(2):e36873

Neuromyelitis Optica Spectrum Disorder presenting with Area Postrema Syndrome

Dr La Win Phyu Phyu
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Introduction

Neuromyelitis optica spectrum disorder (NMOSD) is an autoimmune astrocytopathy mediated by aquaporin-4 (AQP4) antibodies. The 2015 International Consensus Criteria recognise area postrema syndrome (persistent nausea and vomiting) as a core clinical feature.[1] Delayed recognition increases the risks of relapse, treatment resistance, and permanent disability.

Case summary

Presentation & Initial Assessment

- 28-year-old woman
- 3-week history: intractable vomiting, dizziness, unsteadiness
- Similar past episode treated as reflux disease

- **Initial investigations**
  - OGD, barium study, CT abdomen - **normal**
  - CT head -**normal**

- Despite fluid and electrolyte correction , unsteadiness and dizziness persisted, vomiting refractory to antiemetics

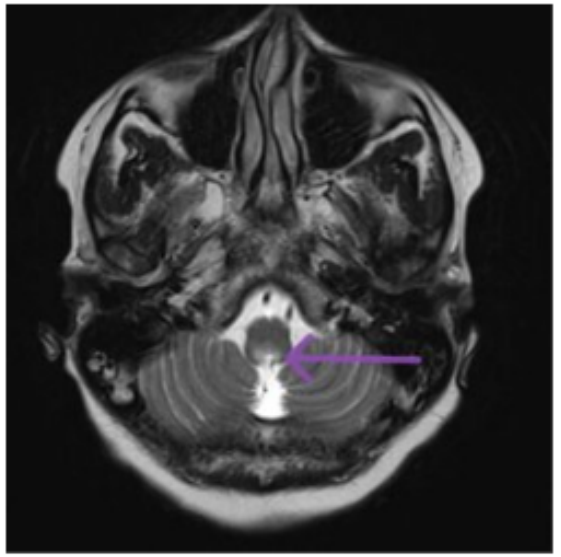
- **Progression of symptoms**: ascending paraesthesia, tongue numbness, dysarthria

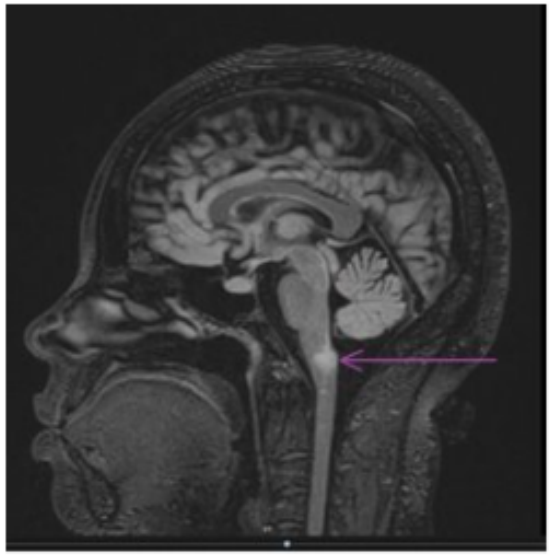
Further Assessment, Management & Outcome

- **MRI brain**: asymmetric T2/FLAIR hyperintensity in dorsal medulla (right area postrema)
- **CSF/serology**: AQP4 antibodies detected in CSF & serum
- **MRI spine** – normal

- **Treatment**
  - IV methylprednisolone x 5 days - limited response
  - (Persistent dizziness, oscillopsia, upbeat nystagmus)
  - Referred to tertiary NMOSD centre for **plasma exchange**

- **Outcome**: Clinical improvement, discharged with outpatient neurology follow-up





Discussion

NMOSD can mimic gastrointestinal disease, delaying diagnosis.2,3 Area postrema lesions explain intractable vomiting, with dorsal medullary spread causing oscillopsia, unsteadiness, and upbeat nystagmus.4 Myelitis-like symptoms may occur despite a normal spinal MRI. Steroid-refractory cases require rapid escalation to plasma exchange to prevent long-term disability.

Conclusion: Persistent vomiting with vestibular or ocular motor signs should raise suspicion for NMOSD with area postrema syndrome and prompt urgent brain MRI and antibody testing. Early recognition and timely escalation of treatment, including plasma exchange when steroid response is limited, are critical to prevent irreversible neurological damage. Reporting this case highlights that appropriate escalation can lead to recovery and safe discharge with neurological follow-up.

References

1. Wingerchuk DM, Banwell B, Bennett JL, Cabre P, Carroll W, Chitnis T, et al. International consensus diagnostic criteria for neuromyelitis optica spectrum disorders. Neurology. 2015;85(2):177-89.
2. Apiwattanakul M, Popescu BF, Matiello M, Weinshenker BG, Lucchinetti CF, Lennon VA, et al. Intractable vomiting as the initial presentation of neuromyelitis optica. Ann Neurol. 2010;68(5):757-61.
3. Raj A, Valappil A. Area postrema syndrome: an unusual presentation of neuromyelitis optica spectrum disorder. Cureus.2023;15(4):e37925.
4. Oh SY, Kim JS, Dieterich M. Nystagmus and oscillopsia in medullary lesions. Neurology. 2011;76(11):918-24.

Airway Physiology is a Stronger Contributor to Asthma Exacerbation Risk than Type 2 Inflammation

Authors: Layla Zeitouni, Chris Popoola, Jessica McKeever, Brian Lipworth, Marcello Cottini and Rory Chan

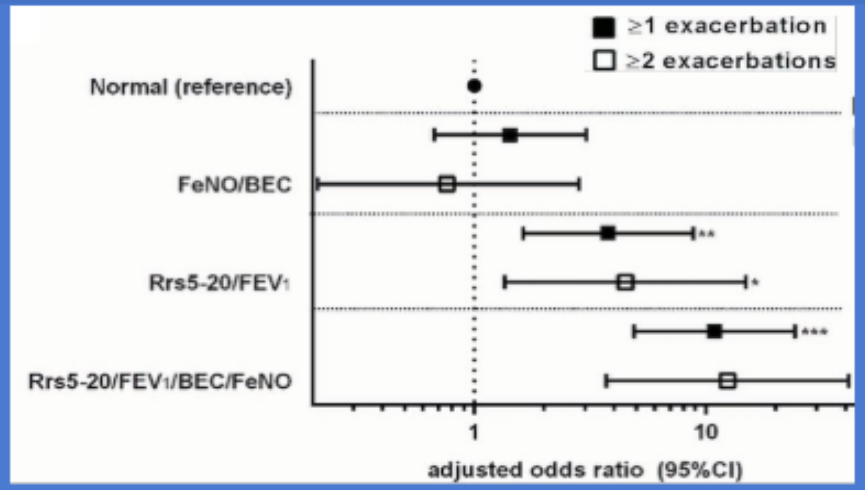
Introduction:

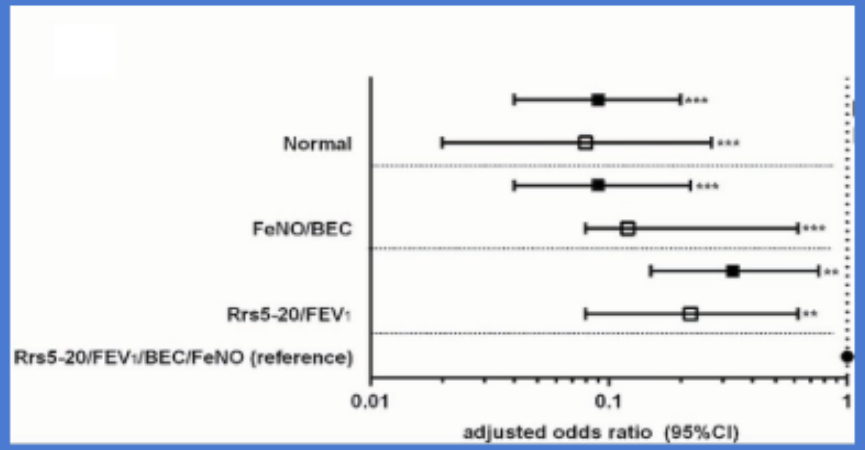
- Key hallmarks of asthma include airway inflammation, variable airflow obstruction and bronchial hyperresponsiveness.
- Oscillometry is a non-invasive method of measuring small airways dysfunction.

Methods:

- Oscillometry Asthma Registry (OAR) included 937 adults diagnosed with asthma according to GINA.
- Data collected from Ninewells Teaching Hospital, UK and Allergy and Pneumology Outpatient Clinic in Italy. Ethical approval was granted by the local institutional review board/Caldicott Guardian.
- Severe exacerbations defined as episodes requiring ≥3-day course of prednisolone 25mg.

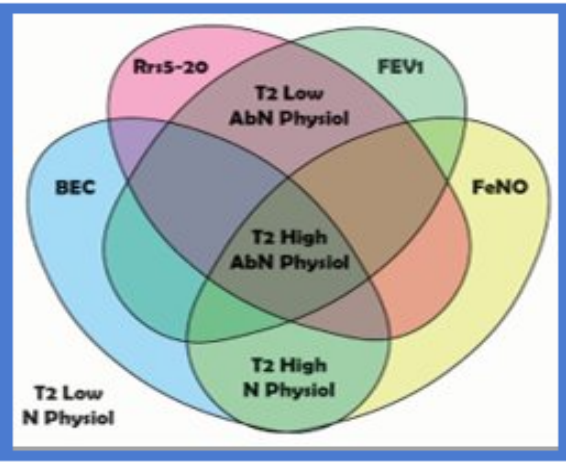
	Rrs 5-20 (kPa/L/s)	FEV_1	BEC (cells/µL)	FeNO (ppb)
Group 1 - Normal	<0.10	≥80%	<300	<25
Group 2 - T2 high only	<0.10	≥80	≥300	≥25
Group 3 - Abnormal physiology only	≥0.10	<80%	<300	<25
Group 4 - Abnormal immuno-physiology	≥0.10	<80%	≥300	≥25





Results:

- Individuals with abnormal physiology only (Group 3) had a higher exacerbation risk compared to those with the normal phenotype (Group 1).
- There was no significant difference in exacerbation rates between those with normal physiology (Group 1) versus those with T2 high only (Group 2).
- Individuals with the quadruple asthma phenotype (Group 4), exhibited a significantly higher risk of exacerbations compared to other three cohorts.



Conclusion:

- While T2 inflammation is a key driver of asthma pathology, physiological parameters should be considered when monitoring exacerbation risk.
- We propose to integrate small airway dysfunction into the framework of predicting asthma control.

Ultrasound-guided Phlebotomy & Cannulation Training for Acute Medicine Phlebotomists and Nurses: Improving Patient Flow and Early Intervention in AMU and SDMA

Royal Cornwall Hospitals NHS Trust

Omoleegho Adio, Hafsa Habib, Katie Wallace, Hare Hariyadurai

Department of Acute Medicine, Royal Cornwall Hospitals NHS Trust, Truro.

Introduction

- Timely vascular access is crucial in acute care, especially for patients needing urgent treatment like suspected neutropenic sepsis because a delay in cannulating may result in catastrophic harm.
- Majority of phlebotomist and nurses on the unit had no experience in ultrasound cannulation.
- This highlighted the need to enhance vascular access skills among phlebotomists and nurses in Acute Medical Unit (AMU) and Same-Day Medical Admissions (SDMA)

Objective

- Instant phlebotomy and cannulation for every patient coming into triage, thus allowing quicker diagnostics and management.
- Allowing prompt treatment of acutely unwell patients
- Improving patient experience, by reducing waiting times.
- Enhance vascular access skills among frontline staff.
- Opportunity to start empirical treatment as soon as patients come through the door.

Methodology

- **Baseline**: Pre-training 54 patient encounters reviewed as control group.
- **Parameters measured**: Time to Cannulation, Number of attempts required and Need for Doctor Assistance.
- **Half-day structured course** by experienced and certified tutors in USS vascular access.
- **Post-training data**: 41 encounters were reviewed as a study group according to the parameters stated above.

Results

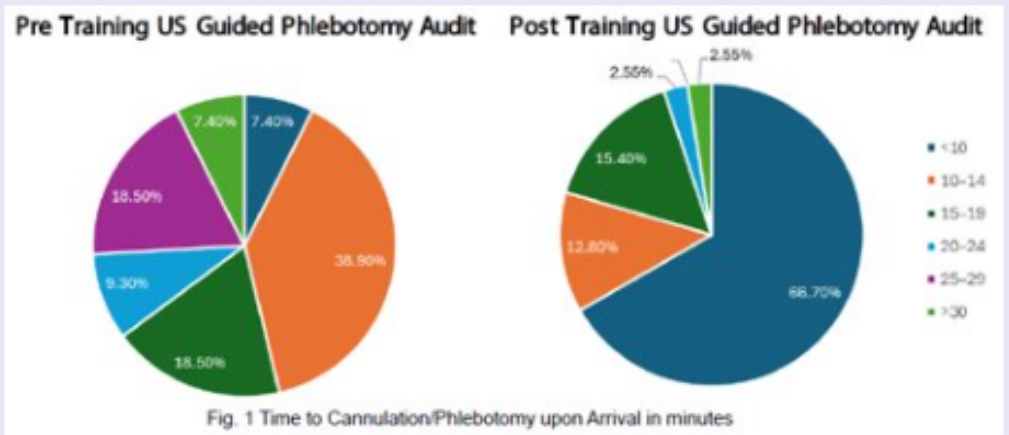


Fig. 1 Time to Cannulation/Phlebotomy upon Arrival in minutes

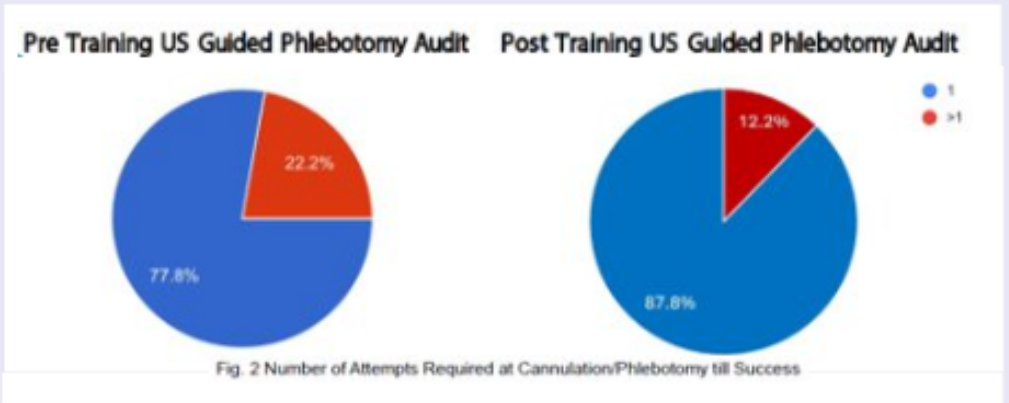


Fig. 2 Number of Attempts Required at Cannulation/Phlebotomy till Success

Key Takeaway

A single half-day training reduced time to cannulation to under 10 minutes, which has led to faster diagnostics, earlier treatment, smoother patient flow, and better patient care.

Discussion and Summary

- Ultrasound-guided vascular access training boosted staff skills and confidence, cut triage times, and enhanced both care quality and patient experience.
- Annual training has been approved by the AMU Governance Committee to maintain these gains and extend training to a wider group of staff.

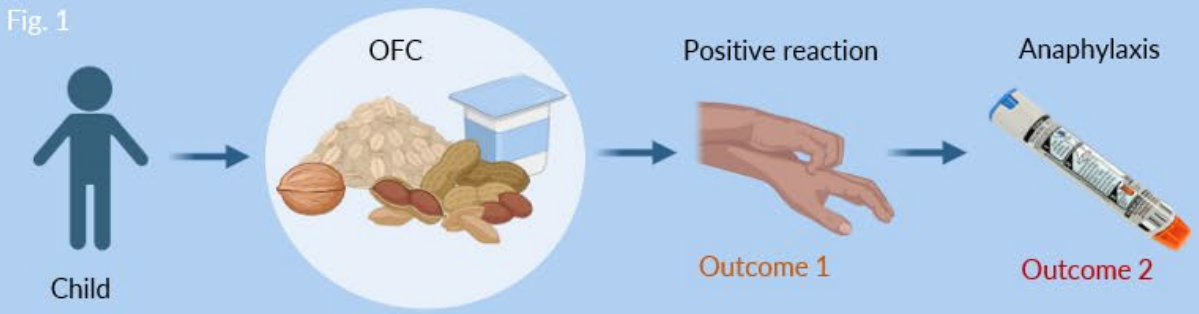
References

- Huyck E, Ocampo B, Duncan L, Reilly K, Hill-Starks T. Ultrasound-guided phlebotomy in primary care for people who inject drugs. J Am Board Fam Med. 2023;36(2):330-4.
- Jørgensen K, Christensen U, Jensen P, Sloth E, Lassen AT. Education in the placement of ultrasound-guided peripheral venous catheters: a systematic review. Scand J Trauma Resusc Emerg Med. 2021;29(1):142.
- Rodríguez-Herrera R, Nuñez S, Pujol E, Dalmau E. Use of the ultrasound technique compared to the standard technique for the improvement of venous cannulation in patients with difficult access. Healthcare (Basel). 2022;10(2):261.
- Sabak M, Al-Hadidi A, Demashkieh L, Zengin S, Hakmeh W. Homemade phantoms improve ultrasound-guided vein cannulation confidence and procedural performance on patients. Ulus Travma Acil Cerrahi Derg. 2022 Sep;28(9):1312-6.
- Pham H, O'Leary R, Ward D, et al. Implementation of ultrasound-guided cannulation training in peripheral intravenous access: impact on success rates and patient safety. Cureus. 2024;16(4):e59141.

Paediatric Oral Food Challenges: A UK Retrospective Review with International Comparison

L. Heeringa, F. MacCarthy

Fig. 1



Introduction:

Oral food challenges (OFCs) are the gold standard diagnostic tool for food allergies. Before undergoing an OFC, children often have a skin prick test (SPT). However, no UK national guidelines specify cut-off points for patient selection or target positivity rates to avoid anaphylaxis. Physicians need to use clinical judgement to balance the risk of adverse reactions with the need for diagnosis.

To assess our patient selection, we benchmarked our rates of positive challenges and anaphylaxis against published cohorts. We concurrently assessed anaphylaxis recognition and treatment to inform future service changes.

Methods:

We conducted a retrospective service evaluation using electronic patient records to review all OFCs from September 2024 to August 2025. For benchmarking, we conducted a structured search (PubMed) from 2005 to 1st September 2025 to extract data

Results:

A total of 300 OFCs were reviewed. The overall reaction rate was 33% (99/300), and anaphylaxis occurred in 1% (4/300) (Fig. 2).

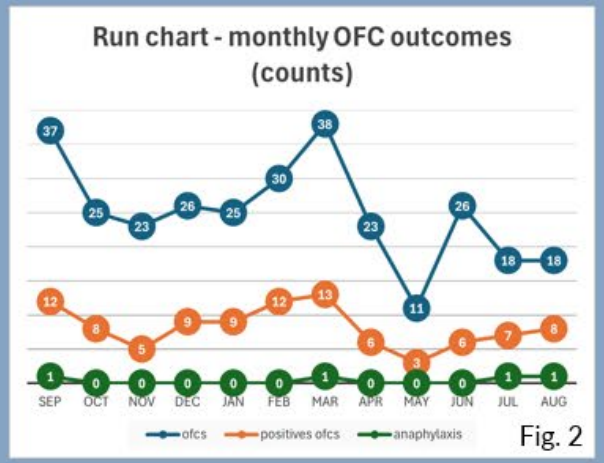
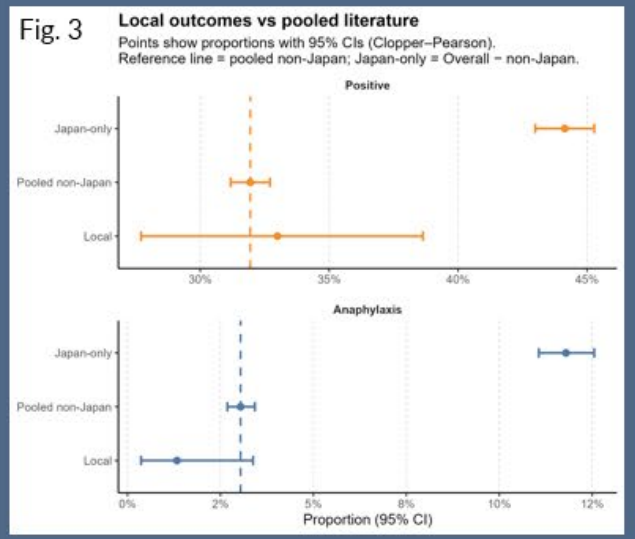


Fig. 2

This was lower than the international average of 36% for positive challenges and 7% for anaphylaxis. However, when excluding Japanese studies, which had significantly higher rates of adverse outcomes, the averages were 32% and 3% respectively (Fig. 3).

Our results were not statistically different from these averages (RR = 1.03 (95% CI 0.88–1.22), p = 0.7436; Anaphylaxis 0.44 (95% CI 0.17–1.18), p = 0.116).

Fig. 3



SPT diameters were a moderate predictor for a positive OFC (SPT per 1 mm: OR 1.29, 95% CI 1.13–1.50, p<0.001, AIC 373, R^2 0.032) but not for anaphylaxis. The model improved when food groups were taken into account (SPT per 1 mm: OR ≈ 1.13; 95% CI 1.03–1.24; p ≈ 0.01, AIC 368.3075, R^2 0.194). Milk was significantly less likely to lead to a reaction (OR 0.17 (0.04–0.66), p-value 0.004, AIC 364, R^2 0.022) (Fig. 4). We found that a 2.5 mm or larger wheal is a sensible risk indicator but should not be used as a hard cut-off. Out of the four potential anaphylactic reactions, only one child received adrenaline.

Conclusions:

We have shown that our OFC outcomes do not vary significantly from most international studies. SPT results could aid patient selection but given the small sample size of this study we cannot confirm whether these predictors would persist in a larger cohort. The low adrenaline use for anaphylaxis highlights a safety gap; next steps include local teaching, visual prompts in OFC settings, and prospective evaluation. It would also be beneficial to explore the global definitions of anaphylaxis, particularly Japan. We were limited as a single-centre dataset, but collaboration across centres could enable evidence-based guidelines and standardise practice in the UK.

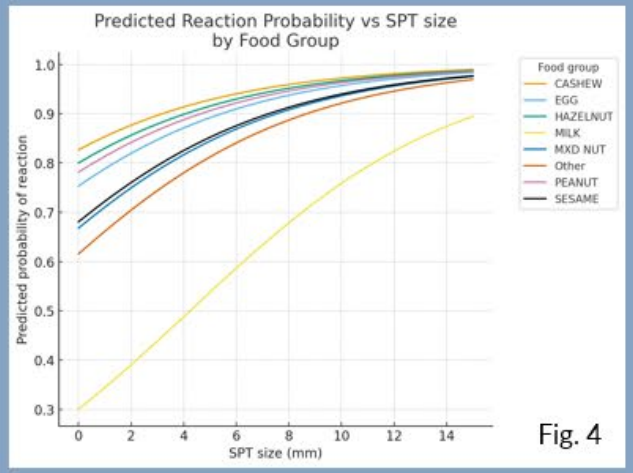


Fig. 4

References:
Fig. 1 created in https://BioRender.com

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NHS Foundation Trust

EVALUATION OF THE GASTROINTESTINAL TRACT IN PATIENTS WITH ISOLATED HYPOFERRITINAEMIA

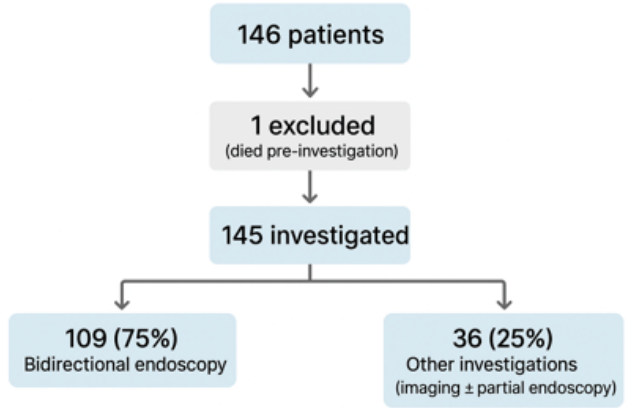
Hebden LA and Hebden JM. University Hospitals Bristol and Weston NHS Foundation Trust and Sheffield Teaching Hospitals NHS Foundation Trust

Introduction

Bidirectional endoscopy is standard practice in the investigation of iron deficiency anaemia patients, revealing colonic carcinoma in 5-10%. However, the value of investigating isolated hypoferritinaemia is unclear. The BSG guidelines on iron deficiency suggest consideration of endoscopic investigation in those aged >50 after discussing the risk and potential benefit.

Methods

We prospectively evaluated 146 consecutive patients seen by a single consultant gastroenterologist who had been referred from primary care with isolated hypoferritinaemia. All patients were offered investigation as per iron deficiency anaemia (IDA) guidelines following clinic consultation. Data was collected from the initial consultant consultation letter and from Infoflex (endoscopy) and Sunquest ICE system (blood results, radiology and histology). Lesions judged to be sources of significant blood loss were as defined by Rockey et al[1] (carcinomas, adenomatous polyps >15mm, vascular ectasia ≥5 or >8mm, duodenal / gastric / colonic ulcers >1cm, oesophagitis [LA grade D], erosive gastritis and active colitis).



Diagnostic yield in isolated hypoferritinaemia

Pathology	Frequency (percentage)
Normal/non-significant	135 (93.1%)
Colonic polyps	3 (2.1%)
Extra GI cancers (HCC, lung, ovarian)	3 (2.1%)
Erosive/haemorrhagic gastritis	2 (1.4%)
Hyperplastic/regenerative polyp	2 (1.4%)
Coeliac disease	1 (0.7%)
Colonic cancer	1 (0.7%)
Complex renal cyst	1 (0.7%)
Oozing gastric polyp	1(0.7%)

Results and discussion

One-hundred-and-forty-six patients (median age 68 {30-93}; 108 females) were seen over an 11-year period (2014-2025). One patient was excluded (died before investigations from new glioma). Fifty-nine patients (40%) were asymptomatic (no symptoms or lethargy only). One-hundred-and-nine patients (75%) had bidirectional endoscopies, with the remaining a combination of endoscopic and radiological imaging, or imaging alone. Colonic carcinoma was discovered in 1 patient (0.7%). This was significantly less than in a group of patients with IDA previously described from the same clinic (1/145 versus 17/261, $p<0.04$)[2]. No gastric carcinomas were found. Other significant findings were: colonic polyps in 3 (2%); erosive/haemorrhagic gastritis in 2 (1.4%); hyperplastic/regenerative gastric polyps in 2 (1.4%); coeliac disease (serology negative, Marsh 3a) in 1 (0.7%); complex renal cyst resulting in nephrectomy in 1 (0.7%) and an oozing gastric polyp in 1 (0.7%). There were no significant gastric or duodenal ulcers or angiodysplasias. Investigations were normal or non-significant in 135 (92%) patients. Lung carcinoma was discovered in 1 patient who had a CT for associated weight loss, and ovarian carcinoma in 1 patient who had a CT for associated abdominal pain. Hepatocellular carcinoma was identified in 1 patient on renal tract ultrasound.

Conclusions

Gastrointestinal malignancy is rarely found in the investigation of isolated hypoferritinaemia

References

1. Rockey DC and Cello JP. Evaluation of the gastrointestinal tract in patients with iron deficiency anaemia. N Engl J Med 1993; 329: 1691-5
2. Lau M, Schembri J, Sanders D, et al. The Yield of Bidirectional Investigations in Iron Deficiency Anaemia – Are Gastroscopies Redundant? Gut 2016; **65:** A65.

A Case Series: Fast, Broad and Irregular Tachycardia – A Treatable Life-Threatening Arrhythmia

Gan, Yi Lung; Win, Kyaw Zaw; Marshall, Howard; de Bono, Joseph; Lencioni, Mauro; Ensam, Bode; Kalla, Manish

Royal College of Physicians

NHS University Hospitals Birmingham NHS Foundation Trust

Introduction:

A broad complex tachycardia is defined by a QRS duration >120 ms on ECG. When rapid and irregular, it typically indicates pre-excited atrial fibrillation (AF) with rapid ventricular response — a life-threatening rhythm requiring immediate cardioversion. [1] We present two young patients with pre-excited AF who underwent successful accessory pathway ablation.

Case Summaries:

Case 1: 28-year-old male with out-of-hospital cardiac arrest. ECG showed broad, irregular tachycardia consistent with pre-excited AF. EPS demonstrated a left-sided accessory pathway successfully ablated at the 4 o'clock position of the mitral annulus.

Case 2: 19-year-old male with palpitations and near-syncope during exercise. ECG revealed short PR and pre-excitation. EPS and electro-anatomical mapping confirmed a left-sided pathway which is successfully ablated.

Both patient had adenosine challenge test post ablation showing AV block without pre-excitation which confirmed pathway elimination.

Case 1 Figures:

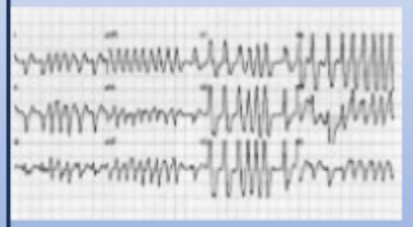


Figure 1A. Presenting ECG showing Pre-excited AF with positive QRS in V1 suggestive of left sided WPW.

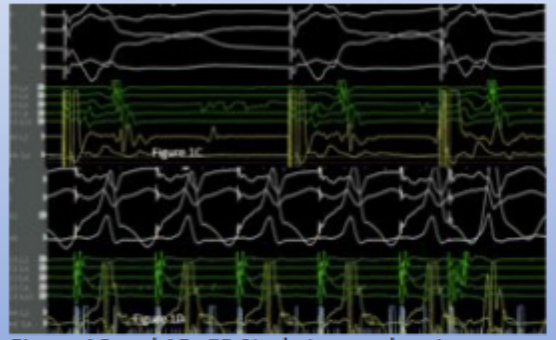


Figure 1C and 1D. EP Study traces showing eccentric CS activation and pre-excitation.

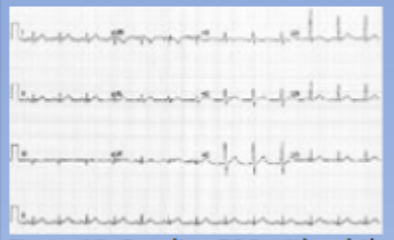


Figure 1B. Baseline ECG with subtle Delta waves.

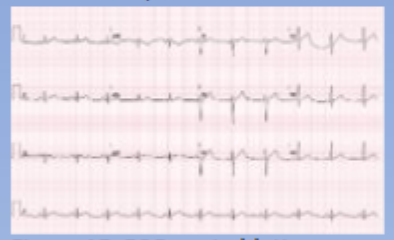


Figure 1E. ECG post ablation.

Case 2 Figures:

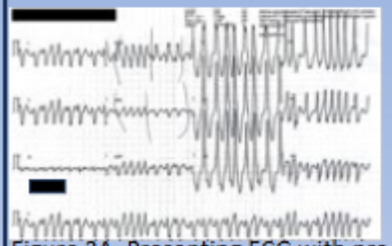


Figure 2A. Presenting ECG with pre-excited AF.

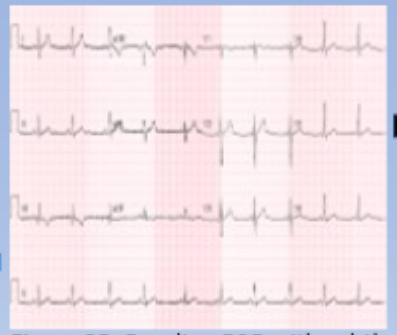


Figure 2B. Baseline ECG with subtle pre-excitation.

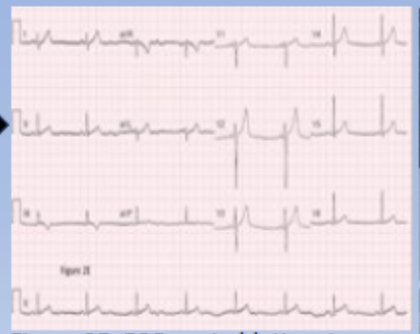


Figure 2E. ECG post ablation. Loss of Pre-excitation (Lead II).

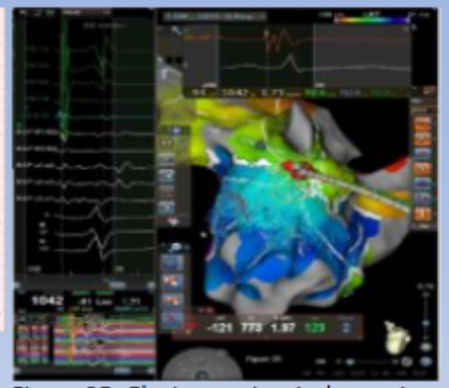


Figure 2D. Electro-anatomical mapping showing left sided accessory pathway.

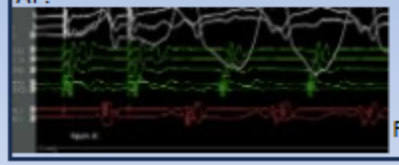


Figure 2C. EP traces showing initiation of antidromic AVRT.

Discussion:

These cases highlight important diagnostic and management considerations in young patients with accessory pathways. Subtle pre-excitation may be missed on surface ECG, particularly with left-sided pathways due to their distant location on the mitral annulus.

This highlights the importance of careful ECG analysis in patients with unexplained palpitations, even when initial investigations appear normal. Pre-excited AF carries a high risk of sudden cardiac death but is highly amenable to catheter ablation, with excellent long- term outcomes. [2]
EPS is therefore essential for both diagnosis and definitive management.

Adenosine challenge testing is an inexpensive and invaluable bedside test in evaluating suspected accessory pathways, as AV nodal blockade may unmask latent pre-excitation.

Following ablation, adenosine testing provides a simple bedside method to confirm pathway elimination by demonstrating AV block without pre-excitation.

Conclusion:

Pre-excited AF is a rare, life-threatening arrhythmia requiring urgent recognition. Catheter ablation offers a definitive cure with excellent outcomes.

References:

1. Richter S, Brugada P. Circulation. 2006; 114: e638-9.
2. Ibrahim Ali Sherdia AF et al. Indian Heart J. 2023; 75(2):98–107.

Pleomorphic Dermal Sarcoma of the Eyelid:

A Rare Case Report and Review of the Literature

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University Hospitals Dorset
NHS Foundation Trust

INTRODUCTION

Pleomorphic dermal sarcoma (PDS) is a rare, aggressive skin tumour, and periocular cases are uncommon. We report a lower eyelid PDS treated with local excision without complications.

CASE SUMMARY

A 72-year-old man with a background of renal cell carcinoma and Parkinson's disease (PD) presented for follow-up of a left eyelid basal cell carcinoma (BCC). A rapidly growing lesion on the right lower eyelid was noted. Biopsy confirmed **p53 and CD10 positivity** and **negative MNF116, EMA and p63**, consistent with PDS. The case was discussed in local and national MDT sarcoma meetings, and two-stage excision was recommended. Histologically clear margins were achieved. The patient **declined adjuvant radiotherapy** and reconstructive eyelid surgery; however, the site healed by secondary intention with excellent functional and cosmetic outcomes. Follow-up CT imaging showed **no recurrence or metastasis**.

TIMELINE

0 months	New right lower lid lesion noted on follow-up for left eyelid BCC; biopsy advised but patient chose to monitor.
5 months	Lesion enlarged with bleeding noted.
6 months	Incisional biopsy performed.
8 months	Histology suspicious for high-grade dermal sarcoma - referred to local and national MDTs.
9 months	Two-stage excision performed; clear margins achieved.
10 months	MDT confirmed grade 3 PDS. Reconstruction and radiotherapy both declined.
11 months	Wound healing well by secondary intention on follow-up.
13 months	Oncology review - CT-CAP clear. Eyelid healed well.
16 months	CXR clear, surveillance ongoing.

CLINICAL IMAGES

Figure 1: Appearance of right lower eyelid at the point of biopsy.

Figure 2: Appearance of right lower lid one month post-operatively.

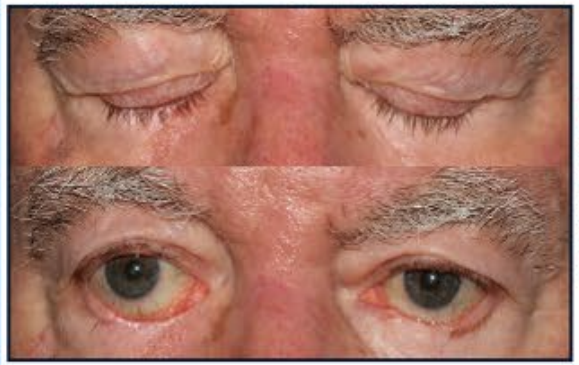


Figure 3: Appearance at 7 months post-op, with good cosmetic and functional outcomes achieved.

DISCUSSION

- Periocular PDS is rare, with **only two cases** in the literature to date.[1,2] Our case highlights a favourable outcome due to **early and incidental detection**.
- Atypical fibroxanthoma (AFX) and PDS exist on a spectrum. AFX is less aggressive, but PDS presents with **high-risk histological features**.[3,4] Early biopsy and immunohistochemistry are therefore essential in its investigation.
- Surgical management of PDS comprises excision with adequate **margin control**.[3] Preserving eyelid **function** and acceptable **cosmetic outcome** is challenging in periocular PDS. Tissue sparing techniques such as Moh's micrographic surgery have been described for eyelid malignancies.[1,5,6] **Radical excision may not be needed** if histologically clear margins obtained.
- Collaborative working between district general hospitals and specialist sarcoma centres facilitated effective and prompt treatment for this patient. Early MDT involvement has been shown to **improve morbidity and mortality** rates in rare cancers.[7]

LEARNING POINTS

1. **Early biopsy and early MDT involvement are crucial if suspecting a malignant eyelid lesion.**
2. **Tissue-sparing techniques for eyelid lesions can maintain both clear margins and excellent functional/cosmetic outcomes.**
3. **A patient-centred approach is key. Good outcomes were still achieved despite the patient declining radiotherapy/reconstructive surgery.**

REFERENCES

1. Wong S, Zhang Y, Li W, et al. Periocular pleomorphic dermal sarcoma: clinical features and management. 2016;17(4):375-82.
2. Lee J, Choi Y, Park J, et al. Diagnostic challenges in rare eyelid tumors. 2018;30(6):1259-65.
3. Kim E, Lee S, Choi H, et al. Management of rare ocular sarcomas: a comprehensive review. 2019;30(9):1325-33.
4. Chang J, Park K, Jang W, et al. Advances in the diagnosis and management of pleomorphic dermal sarcoma in ocular regions. 2020;35(2):231-6.
5. Smith R, Davis J, Jones B, et al. Histological markers for identifying pleomorphic dermal sarcoma. 2019;22(1):67-72.
6. Harris M, Lin X, Richards K, et al. Surgical outcomes in periocular pleomorphic dermal sarcoma: a multicenter review. 2023;10(5):456-65.
7. Yu Z, Wang X, Liu L, et al. Case report on eyelid pleomorphic dermal sarcoma: clinical features and surgical management. 2021;16(3):212-5.

Consent obtained for the use of clinical images.

Improving the Acute Medical On-call Handover through Implementation of a Standardized Check-list

Dr Marios Magriplis, Dr Mahmood Zabioullah Fokeerbux, Dr Ahmed Yusuf, Dr Mobolaji Olaniyan

Aim:

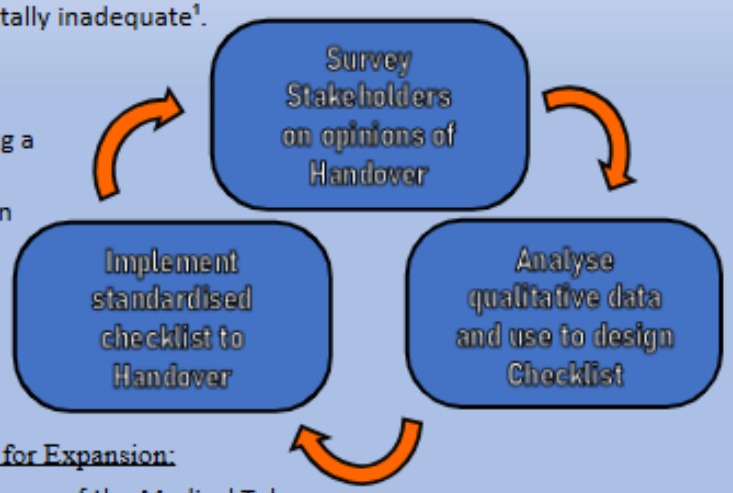
To improve the quality and consistency of morning handovers in the acute medicine department in a District General Hospital.

Background:

Continuity of care is vital to ensure safety for patients facing long waits for acute medical beds in the ED. The clinical handover process is integral to continuity and without a standardised format there is a risk that the transfer of care can be inefficient, incomplete and fundamentally inadequate[1].

Method:

This quality improvement project surveyed stakeholders anonymously to assess perceptions of the handover process using a Likert scale from 1 (very poor) to 5 (very good).
Qualitative feedback identified key issues and guided the creation of a standardised checklist.
A post-implementation survey evaluated improvements.



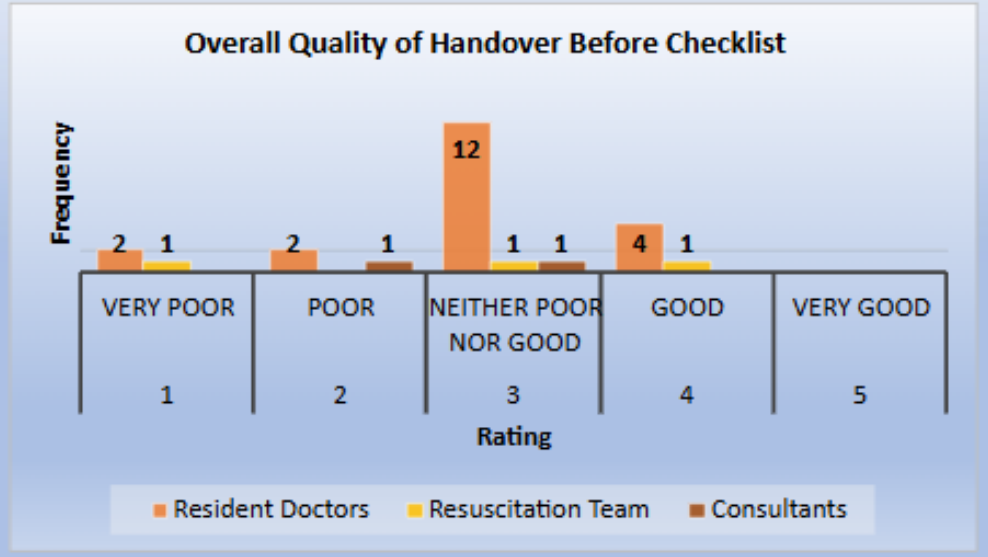
Results:

25 initial survey responses

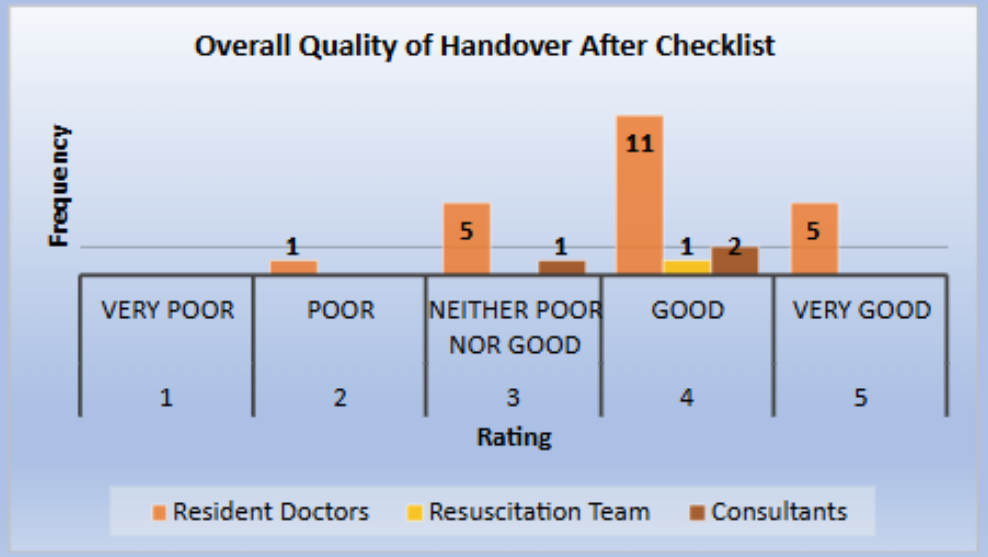
Areas for Improvement:	Areas of Strength:	Areas for Expansion:
- Lack of Structure	- Efficiency	- Summary of the Medical Take
- Lack of Handover Space	- Good Team Rapport	- Role Allocation for Emergency Response Team

26 survey responses following use of standardised checklist.

Improvement in the Mean Rating of:
- Structure of handover from **2.71 to 3.81 out of 5**
- Accountability to tasks from **2.84 to 3.92 out of 5**
- Overall quality of handover from **2.84 to 3.88 out of 5.**



★★★☆☆ 2.84 / 5



★★★★☆ 3.88 / 5

Conclusion:

Standardising the handover process with the use of a checklist improves the structure, Accountability to tasks and overall quality of the handover process. Handover practices vary between departments and hospitals however growing evidence suggests that implementing a standardised format that meets the departments needs can improve patient safety and outcome[2].

References: [1] Royal College of Physicians. Acute care toolkit 1: Handover. London: RCP, 2011 Available from: https://www.rcp.ac.uk/improving-care/resources/acute-care-toolkit-1-handover/
[2] National Guideline Centre (UK). (2018). Emergency and acute medical care in over 16s: service delivery and organisation (NICE Guideline, No. 94). London: National Institute for Health and Care Excellence (NICE). [Chapter 32, Structured patient handovers].

Diagnosis and Management of Haemophagocytic Lymphohistiocytosis (HLH) within Liverpool University Hospitals Foundation Trust (LUFHT): a Quality Improvement Project

Nicholson, Martha[1] , Dunnett-Kane, Victoria[1], Liuzzi, Francesca[1,2], McLaren, Zoe[1], Mewar, Devesh[1], Syratt, Tom[1], Williams, Stella[3], Harborow, Charlotte[1], Atkin, Mike[1], Lavery, Mark[1], Simpson, Phillip[1,2]

[1] University Hospitals of Liverpool Group, [2] School of Medicine, University of Liverpool, [3] Clatterbridge Cancer Centre

Background

- **HLH** is a **rare, life-threatening hyperinflammatory syndrome** with various triggers
- Mortality is ~50% at 1 year[1]
- Presentation is non-specific, marked by the **"3 Fs"**:
  1. **Fever**
  2. **hyperFerritinaemia**
  3. **Falling blood counts**
- Recent national **GIRFT guidance**[2] (2024)
  - Recommendations re: **H-score**, early specialty referral & immunosuppression

Scan for H-score calculator

Context

- Multiple HLH patients admitted under Infectious Diseases team, Royal Liverpool Hospital
- Delayed diagnoses leading to delayed treatment

SMART Aims

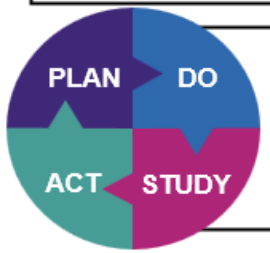
1. Reduce time to HLH diagnosis
2. Reduce time to steroid/Anakinra initiation
3. Improve identification of HLH triggers
4. Reduce HLH-related mortality

Planning stages

- Stakeholder analysis & engagement
- Process mapping
- Problem analysis & development of change ideas – Ishikawa & driver diagrams

Methods

- Initial retrospective baseline data collection (Feb 2022–Sep 2024)
- HLH patients identified - review of clinical records for all patients with **ferritin >2000** or relevant **ICD-10 coding**



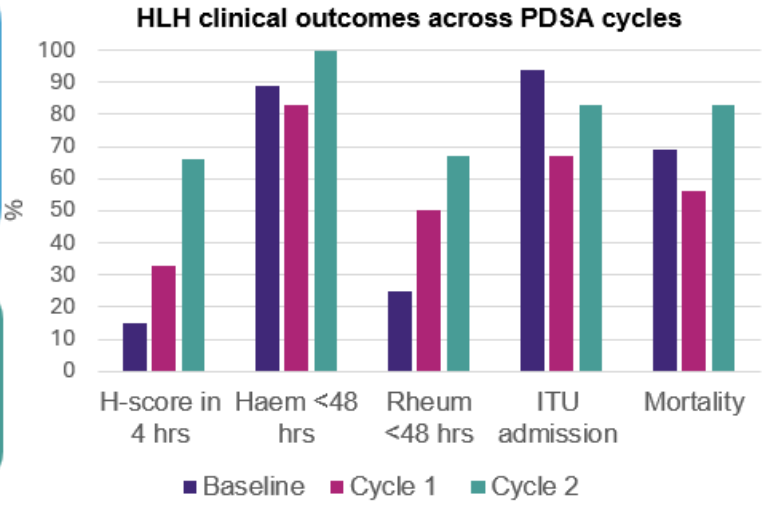
- **Cycle 1 (Dec 2024–Apr 2025):** Electronic **ferritin alert** (>2000 µg/L) with **H-score prompt**
- **Cycle 2 (Apr–Oct 2025):** **HLH order set** in clinical requesting system (ICE)
- **Cycle 3 (in progress):** Local **HLH guideline**
- **Cycle 4 (in progress):** Establishment of a **multidisciplinary HLH team** (MDT)
- **Cycle 5 (planned):** Local outreach/clinician education sessions on HLH

Results

Demographics:
- 15 patients identified at baseline, 9 in Cycle 1, and 6 in Cycle 2 (ongoing)
- Median age 48.5 years (range 18–78)
- 57% male

Mean time to treatment:
- *Baseline*: 0.91 ± 1.1 days
- *Cycle 1*: 2.6 ± 3.2 days
- *Cycle 2*: 0.16 ± 0.4 days

(p = 0.42)



Conclusions

- HLH associated with **high mortality** despite relatively **young patient cohort**
- Need for streamlined diagnostic and management pathways
- **Trust merger** presents both challenges and opportunities to embed and sustain **region-wide HLH care improvements**
- Increased mortality from baseline likely due to ascertainment bias from **improved HLH recognition,** supported by increased H-score calculation

Next steps

Patient Experience Team to develop "*patient stories*" from interviews to inform future QI cycles and enhance clinician education

Contact:
Martha.Nicholson@liverpoolft.nhs.uk

References

1. West J, Card TR, Bishton MJ, et al. Incidence and survival of haemophagocytic lymphohistiocytosis: A population-based cohort study from England. *J Intern Med.* 2022; 291:493–504.
2. Lanyon P, Manson J, Tattersall R, Kay L, Hyde P. Haemophagocytic Lymphohistiocytosis (HLH) Guidance on the diagnosis, treatment, management and governance. [Internet] 2024 Jul. Available from: https://gettingitrightfirsttime.co.uk/wp-content/uploads/2025/08/HLH-Guide-final-version-v1.3-June-2025.pdf

Acknowledgements
We would like to extend our thanks to Dr Naomi Walker, Dr Jennifer Christie, Dr Angela Redfern, Dr Devesh Mewar, Dr Jagadish Ramachandran Nair, Dr Nicky Goodson, Dr Roz Benson, Dr Arpad Toth, Dr Paul Hine, Dr Tim Astles, Dr Arvind Arumainathan and Mr Mike Atkin for their assistance with this project at various stages. Special thanks to Dr Rachel Tattersall at Sheffield NHSFT and Dr Jess Manson at UCLH NHSFT for their guidance.

East Sussex Healthcare

Headache to Haemorrhage: Are We Following the Subarachnoid Haemorrhage Pathway?

S.NAWAZ | M.ABOUHASAN | A.HASIB | L.DOTEL | M.SULTANA

BACKGROUND

- Subarachnoid haemorrhage (SAH) is a neurological emergency in which rapid diagnosis is critical to reduce morbidity and mortality.
- NICE guideline NG228 recommends non-contrast CT head within 6 hours of headache onset, with lumbar puncture (LP) if CT is negative and the patient presents later.
- Clinical experience suggested that unnecessary LPs were being performed in SDEC.
- This audit evaluated adherence to NICE standards, aiming to improve documentation and reduce unnecessary LPs.

METHODS

-A retrospective audit was conducted at Eastbourne DGH SDEC (July–Dec 2024) using electronic patient records (E-Searcher, Nerve Centre).
-Five resident doctors collected data under consultant supervision.
-Inclusion: patients with acute headache and suspected SAH.

Standards (NICE NG228):

- CT ⩽ 6 h with alternative diagnosis documented if negative.
- CT > 6 h followed by LP if negative.
- LP ⩾ 12 h after onset.
- SAH confirmed if bilirubin detected in LP sample.

RECOMMENDATIONS

- Improve documentation of headache onset and differential diagnoses.
- Reinforce guideline-based decision-making through departmental teaching and checklists on LP proformas.
- Collaborate with ED and Radiology to achieve CT within 6 hours where possible.
- Ensure LPs are performed ⩾12 hours after onset to avoid false negatives.
- Re-audit planned after interventions.

RESULT 1

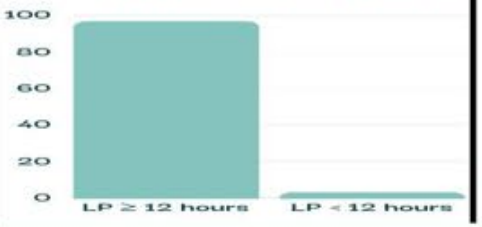
Timing of CT Head in Suspected SAH

RESULT 2

LP Performed Following Negative CT (>6h)

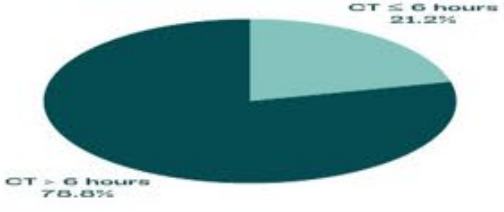
RESULT 3

Timing of LP Relative to Headache Onset



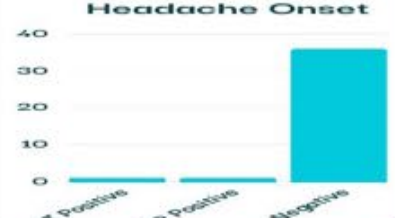
RESULT 4

Alternative Diagnosis Documented Before LP



RESULT 5

Timing of LP Relative to Headache Onset



KEY MESSAGE

Accurate documentation of symptom onset and timely CT scanning are essential to avoid unnecessary lumbar punctures and ensure safe, guideline-driven care.

REFERRENCES

1. NICE. Subarachnoid haemorrhage caused by a ruptured aneurysm: diagnosis and management (NG228). London: NICE; 2022.
2. Perry JJ, Alyahya B, Sivilotti ML, et al. Differentiation between traumatic tap and aneurysmal subarachnoid haemorrhage: prospective cohort study. BMJ. 2015;350:h568.

May-Thurner Syndrome in a Young Woman with Newly Diagnosed Ulcerative Colitis: A Contributing Factor in Extensive Deep Vein Thrombosis

Dr Meha Sanghi[1] , Dr Amr Youssef [1] , Dr Leah Ifeoluwa Ajayi[1] , Dr Qasim Muhammad[1]

[1] Manchester University NHS Foundation Trust, Manchester, United Kingdom

Introduction:

Venous thromboembolism (VTE) is a major cause of morbidity and mortality. Patients with inflammatory bowel disease (IBD) have a 2–3× higher risk of VTE due to systemic inflammation, platelet activation, and endothelial dysfunction.[1,2] May-Thurner Syndrome (MTS) is an underdiagnosed anatomical compression of the left common iliac vein by the right common iliac artery, predisposing to iliofemoral deep vein thrombosis (DVT).[3] Coexistence of MTS and active IBD creates a compounded thrombotic risk.

Case Summary:

A woman in her mid-20s presented with painful left leg swelling. Ultrasound confirmed extensive iliofemoral DVT. CT venography revealed features consistent with MTS (Figure 1). Flexible sigmoidoscopy demonstrated severe mucosal inflammation with histological confirmation of ulcerative colitis (UC) (Figure 2). The extensive DVT and identification of MTS prompted early vascular input. Thrombolysis was discussed to reduce swelling and preserve venous function, but given haemodynamic stability, absence of phlegmasia, and patient preference, she was commenced on rivaroxaban, systemic steroids & mesalazine.

Discussion:

This case highlights the synergistic interaction of systemic (IBD) and anatomical (MTS) risk factors in precipitating severe DVT. While IBD alone increases thromboembolic risk, concomitant MTS may accelerate propagation, explaining the left-sided distribution and extensive iliofemoral involvement, where clot burden and risk of post-thrombotic syndrome are greater. [4] Few reports describe concurrent UC and MTS, underscoring the rarity and clinical importance of this presentation. [5,6]

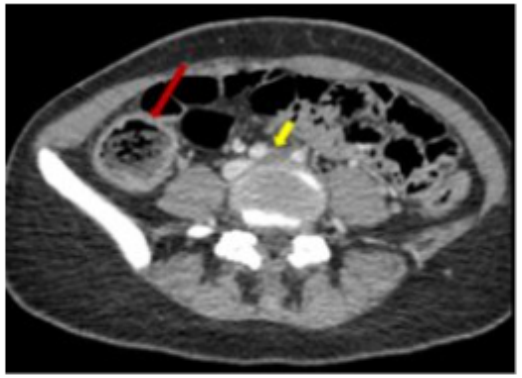


Figure 1: CT venogram showing compression of the left common iliac vein (yellow arrow – MTS) and bowel wall thickening (red arrow).

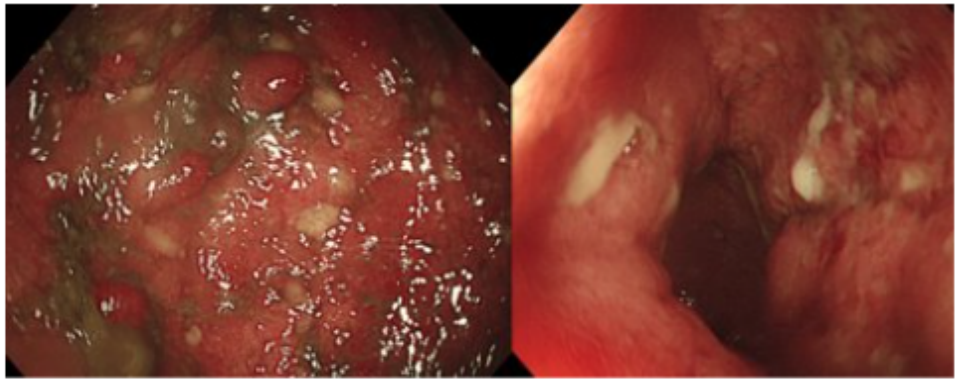


Figure 2: Endoscopy showing severe continuous ulceration and friability consistent with severe UC

Conclusion:

- Coexistence of UC and MTS compounded the risk for extensive iliofemoral DVT
- Consider potential synergy between systemic inflammatory conditions and venous anomalies in atypical or left-sided DVT
- Early multidisciplinary involvement & comprehensive workup are vital to optimise outcomes

1. Grainge MJ et al. Lancet. 2010;375:657–63. 2. Nguyen GC, Sam J. Am J Gastroenterol. 2008;103:2272–80. 3. O'Sullivan GJ et al. J Vasc Interv Radiol. 2000;11:823–36. 4. Cockett FB, Thomas ML. Br J Surg. 1965;52:816–21. 5. Hamada K et al. Clin J Gastroenterol. 2022;15:971–6. 6. Kalu SU et al. Vasc Endovasc Surg. 2013;47:301–7.

Evaluation of Acute Non-Invasive Ventilation Delivery in a UK Tertiary Hospital: A Local Audit against BTS Quality Standards

Dr Amr Youssef, Dr Meha Sanghi, Dr Suchithra Sunil, Dr Bashar Al-Sheklly
Manchester University NHS Foundation Trust, Manchester, United Kingdom

Manchester University NHS Foundation Trust

Introduction:

Non-invasive ventilation (NIV) is a cornerstone of acute hypercapnic respiratory failure management, reducing intubation rates and mortality when delivered promptly. British Thoracic Society (BTS) audits (2019,2023) and the 2017 NCEPOD enquiry have highlighted variation in NIV delivery prompting BTS Quality Standards that emphasize timely initiation, monitoring, and clear escalation planning. [1,2,3,4] This study evaluated NIV practice at Manchester Royal Infirmary against this data.

Materials and Methods:

A prospective audit was conducted over six weeks. Adult patients receiving acute NIV outside the ICU were included. Data were extracted from case notes, electronic health records, and blood gas results using a structured proforma.

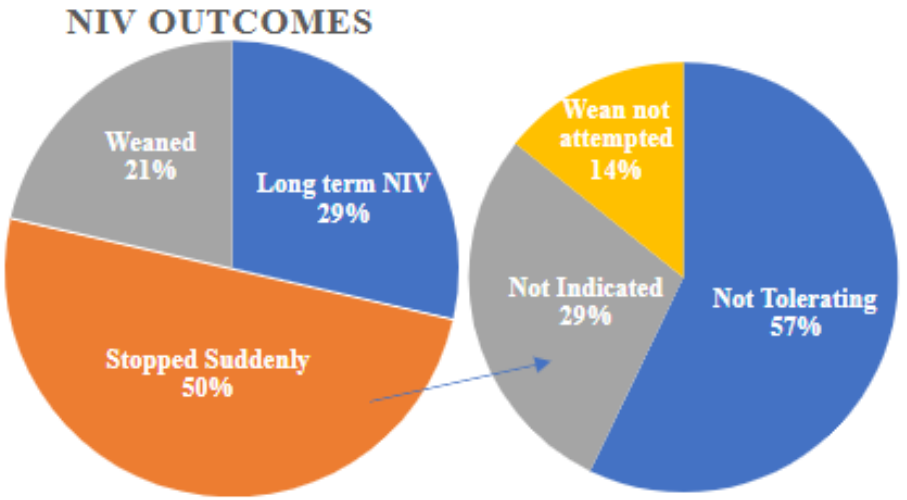


Figure 1. Outcomes of NIV and reasons for discontinuation in MRI audit 2024

Process measure	MRI audit 2024 (n=14)	National average
NIV initiated within 1 h of qualifying blood gas	64%	51% – BTS audit[3]
Documented clear escalation plan	86%	64% – NCEPOD[1] 83% – BTS audit[3]
Repeat blood gas within 2 h	86%	62% – BTS audit[3]
Formal NIV prescription completed	29%	69% – NCEPOD[1]

Table 1. Process measure outcomes in MRI NIV audit compared with national benchmarks

Results:

Fourteen patients received acute NIV. Indications included COPD (50%), obesity hypoventilation (29%), and heart failure (21%), a distribution differing from the 2019 BTS audit, which reported higher COPD prevalence.

Mortality was lower than the BTS 2019 audit (7% vs 26%), though numbers were small.[3]

More patients were discharged on home NIV (29% vs 14%), reflecting the higher prevalence of obesity hypoventilation. Median length of stay (11 days) exceeded national figures (9 days, BTS 2019; 5 days in RSU-level areas, BTS 2023).[3,4] Readmission rates were high (31% vs 18% in NCEPOD), particularly among those discharged without home NIV.[1]

Quality Improvement Priorities

- Mandatory electronic prescription templates,
- Enhanced patient support and staff training for tolerance,
- Structured discharge planning with post-discharge follow-up,
- Exploration of a dedicated Respiratory Support Unit (RSU).

1. NCEPOD. Inspiring Change. London: NCEPOD, 2017. 2. Davies M et al. BMJ Open Respir Res 2018;5:e000283. 3. BTS. Adult NIV Audit 2019. London: BTS, 2020. 4. BTS. Respiratory Support Audit 2023. London: BTS, 2024.

Improving warfarin management: Reducing sub-therapeutic INR in hospitalized patients on maintenance-dose warfarin

Authors: M Salma, M Tahir, I Moukas, A Ali, N Tabassum

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Warrington and Halton Teaching Hospitals
NHS Foundation Trust

Introduction

Warfarin remains a key anticoagulant, particularly when DOACs are contraindicated but it poses challenges due to its narrow therapeutic index and interactions.[1]

Hospitalised patients face additional difficulties with INR control due to polypharmacy, acute illness, kidney injury, infection, and nutritional variation.[2]

Aims & Objectives

This project was aimed to enhance INR control among hospitalised patients on maintenance dose of warfarin.

Materials and methods

A baseline audit (September 2023–March 2024) assessed Time in Therapeutic Range (TTR) for patients on warfarin. Mean TTR was 39.6% (NICE target of ≥65%.[3])

A Quality Improvement Project (QIP) was initiated with the aim to increase TTR to >60%

References

1. Lee LH. DOACs – advances and limitations in real world. Thromb J. 2016 Oct 4;14(S1):17.
2. Nutescu E, Chuatrisorn I, Hellenbart E. Drug and dietary interactions of warfarin and novel oral anticoagulants: an update. J Thromb Thrombolysis. 2011 Apr 27;31(3):326–43.
3. National Institute for Health and Care Excellence (NICE). Atrial fibrillation: diagnosis and management. London; 2021.
4. Dawson NL, Porter IE, Klipa D, Bamlet WR, Hedges MA, Maniaci MJ, et al. Inpatient warfarin management: pharmacist management using a detailed dosing protocol. J Thromb Thrombolysis. 2012 Feb 13;33(2):178–84.

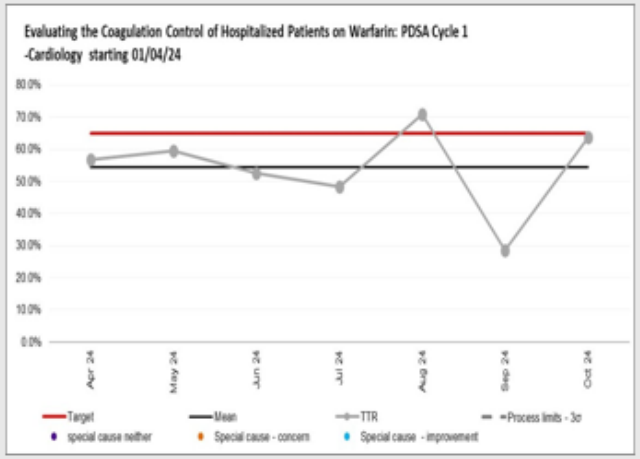
Results

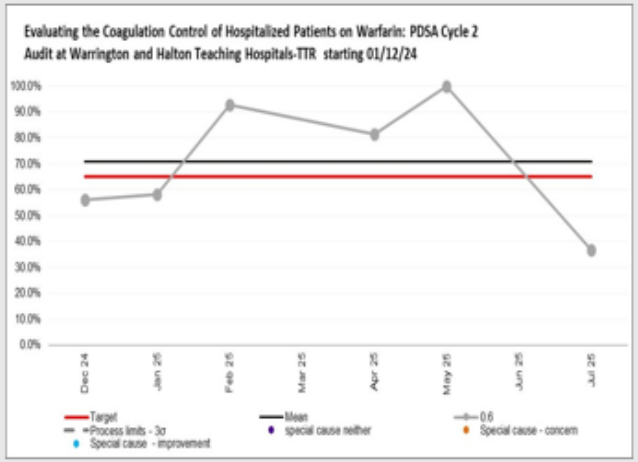
PDSA Cycle 1:

The administration time was changed trust-wide to 2 p.m. Data from April–October 2024 (n = 60) showed improvement in mean TTR to 56.2%, up from 39.6%.

PDSA Cycle 2:

In the ACCU Dawson algorithm[4] was introduced to enhance prescribing consistency. Data from December 2024–July 2025 (n = 13) demonstrated further improvement, with mean TTR reaching 61.9%.





Conclusion

- Small, practical changes improved INR control.
- Standardized dosing algorithm enhanced consistency.

Next step: develop Trust-wide maintenance dosing policy

Pulmonary Actinomycosis, The Great Masquerade: Two Distinct Presentations

Author: Dr Mohammed Akif Bin Halim[1], Dr Nilakanta Sumanam[2], Dr Poe Phyu[3], Dr Hein Zaw[4], Dr Vadsala Baskaran[5]

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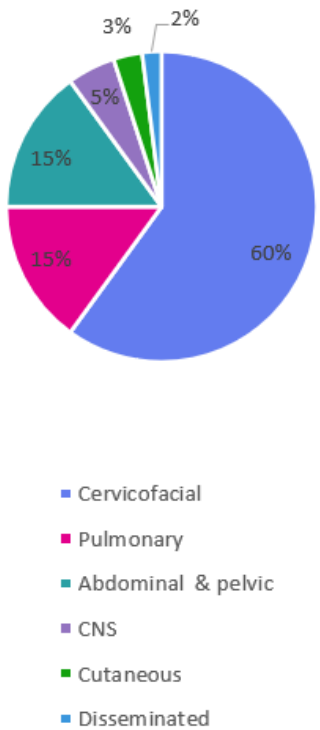
Nottingham University Hospitals
NHS Trust

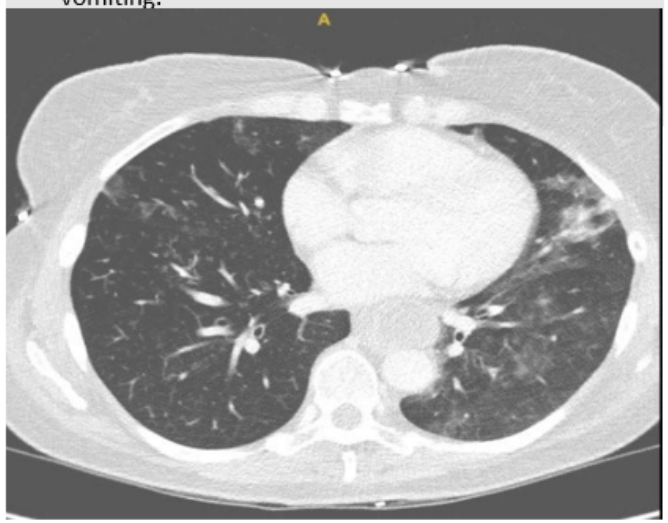
Background:
Actinomycosis is a rare, chronic bacterial infection known to be associated with suppurative swellings and formation of sinus tracts. **Only 15% is pulmonary but has the highest chance of becoming disseminated. Commonly mistaken for malignancy or M. TB**



Case 1

A 52-year-old Caucasian woman with a history of gastric band slippage and esophageal dysmotility presented with.

- **Symptoms**: 6months history of nocturnal cough, weight loss (3 kg), fever, abdominal pain, nausea, and vomiting.



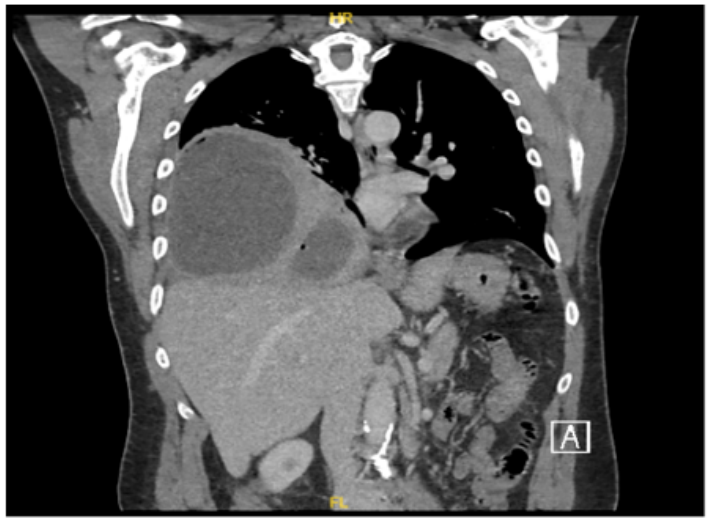
CT thorax: *showing a dilated esophagus and bilateral ground-glass opacities with tree-in-bud appearance.*

- **Lab results**: Mildly elevated CRP and normocytic anemia.
- **Microbiology**: Bronchoalveolar lavage isolated *Actinomyces graevenitzii.*
- **Treatment**: 8 weeks of Amoxicillin and Metronidazole for the first 2 weeks.
- **Follow-up** imaging showed resolution of the infection but persistent esophageal dilation; surgical removal of the gastric band was planned to lessen aspiration risk.

Case 2

A 53-year-old man with hyperlipidaemia, cannabis use, impacted molar and lead poisoning presented with.

- **Symptoms**: 3 weeks of fever, night sweats, cough, and significant weight loss (13 kg). No response to a course of Doxycycline.



CT thorax: *showing a right lower zone effusion, encysted empyema, and lung abscess.*

- **Lab results**: marked leukocytosis (WBC 34 x10^9/L) and elevated CRP (393 mg/L).
- **Microbiology**: Pleural fluid culture- *Actinomyces Schaalii, Fusobacterium nucleatum.*
- **Treatment**: 4 weeks of intravenous Co-amoxiclav + 6 weeks of oral Metronidazole, then switched to Doxycycline due to a rash, completing 6 months of therapy.
- **Follow-up** imaging confirmed resolution. Dental assessment identified an infected impacted molar requiring removal.

Risk factors: Poor dentation, Gastric outlet Obstruction, Malnutrition, Chronic lung disease, immunosuppression, Vomiting, Aspiration

Conclusion: These two cases highlight a high index of suspicion is required, especially in patients with the relevant risk factors.
Case 1 demonstrated an insidious onset of presentation, whilst **Case 2** demonstrated an acute presentation with pleural empyema, a complication of pulmonary actinomycosis.
Early diagnosis + microbiological confirmation and appropriate prolonged duration of antibiotic therapy leads to successful outcomes.

References:

- Alsamawi M, Al-Mashdali AF, Eldeeb Y. Pulmonary actinomycosis as a cause of chronic productive cough in a heavy smoker male with poor dental hygiene: A case report. BMJ Case Rep. 2022;2022: e256320. doi:10.1136/bcr-2023-256320.
- Sims D, Kerry A, Billingham K Actinomycosis mimicking metastatic lung malignancy *Thorax* 2024;**79:**694-695.
- Allan L, Said H, Shanks A Pulmonary actinomycosis presenting with empyema *BMJ Case Reports CP* 2023;**16:** e256320.

Audit of Ultrasonography Findings in Cases of Abnormal MRCP

Evaluating Extrahepatic Biliary Dilatation Detection

Dr Mustabshira Tahir , Dr Sadaf shaikh ,Dr Sara Amro , Dr Aishwarya Kapoor
,Dr Humayun Nasir ,Dr Danish Neeloth ,Dr M Naufal

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George Eliot Hospital
NHS Trust

Background

Abdominal ultrasound (US) is the first-line imaging investigation for evaluating the biliary tree, but it is highly operator and patient dependent.

US Sensitivity: 25-60% for visualizing causes of biliary duct dilatation
MRCP: Very high sensitivity and specificity for determining causes of biliary obstruction

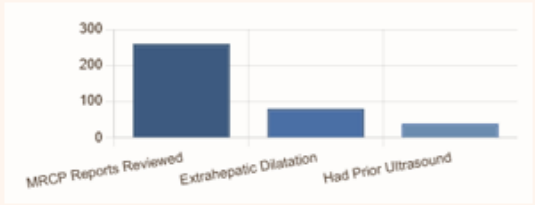
Standards & Targets

- **90%** accurate identification of MRCP-detected biliary dilatation on preceding ultrasound
- **100%** of US reports should comment on presence/absence of extrahepatic biliary dilatation
- **100%** appropriate recommendations for further imaging when cause not shown

Methods

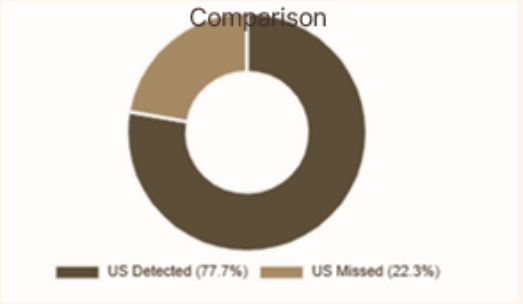
- Retrospective audit using PACS data over 3 months
- 259 MRCP reports reviewed
- Identified cases with extrahepatic biliary dilatation
- Reviewed prior US reports for detection and recommendations
- Assessed time interval between US and MRCP

Study Flow



Results - Visual Analysis

Detection Accuracy Comparison



US vs MRCP Detection Results

Factors Affecting US Sensitivity

- Poor patient habitus - reduces image quality
- Mild dilatation - better visualized on MRCP
- Patient positioning issues - affects visualization
- Gas reflection - from bowel/duodenum
- Operator dependency - skill variation

Key Findings

Detection Rate
77.7%
Of true extrahepatic dilatation cases (21/27) were successfully detected by ultrasound

- 100% of US reports included comments on dilatation status
- 61.9% mentioned potential cause
- 33.3% provided recommendations

Action Plan

1. Timely Imaging
Conduct follow-up MRCP within 4 weeks after initial ultrasound, especially with high clinical suspicion.

2. Patient Factors
Consider habitus and other patient factors; prioritize MRCP when limitations are known.

3. Training & Protocols
Enhance sonographer training and establish clear escalation protocols based on findings and patient factors.

4. Sensitivity Awareness
Acknowledge US limitations in mild dilatation; use MRCP when results are inconclusive.

Conclusion

The audit underlines how important physicians are in ensuring accurate and timely diagnosis. Since ultrasound detected extrahepatic dilatation in only 77.7% of cases falling short of the 90% target clinicians should use their judgment to decide when MRCP would be a better first option, especially for patients with obesity, difficult body habitus, or complex conditions. By interpreting ultrasound findings carefully, recommending MRCP when appropriate, and ensuring prompt follow-up, physicians can help achieve quicker diagnoses, better patient outcomes, and more efficient use of healthcare resources.

Safe Minimum Staffing Levels On A Medical Ward

Noor-e-Maham Shakeel (IMT-1), Arash Fattahi (IMT-2), Sourjya Kar (Consultant Nephrologist)

Minimum staffing per ward is 1-2 resident doctors (lower than IMT3). This was irrespective of patient number, patient acuity or discharge numbers.

Introduction

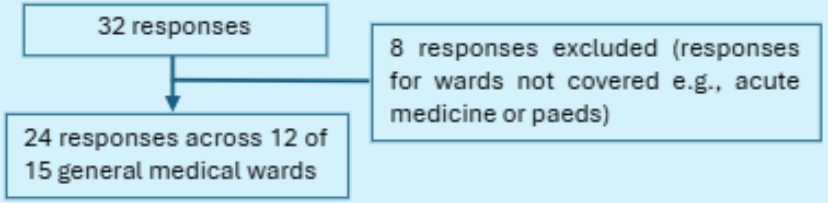
The Royal College of Physicians' (RCP) report[1] on safe medical staffing provides estimates on the number of resident doctors required for different shift schedules and clinical settings. They estimate for a 30-bed medical ward, 2.2 tier 1 doctors (clinicians below registrar level) and 1 tier 2 doctor (clinicians at registrar level) are needed. These recommended staffing numbers should be validated or adjusted according to appropriate internal audits. We as Associate College Tutors (ACT) have audited this in Northampton General Hospital (NGH) by utilising a variety of data points to determine the minimum staffing level per medical ward.

Background and Methodology

Current medical rotas at NGH allocate a minimum of 1-2 doctors per ward, disregarding workload variations. We defined ward-specific minimum safe staffing by integrating objective exception reports, junior doctor feedback, and ward-level workload modelling. This was achieved by collecting information on crash call frequency from the resus team and the number of discharges/admissions per ward. Data was collected monthly from April 2023 to March 2024 across 15 general medicine wards as our department of interest. The RCP benchmarks on tier 1 and tier 2 doctors were applied to each ward. Uplifts in minimum ward staffing were done if either the crash call frequency or admission/discharges were more than average (calculated over all wards). A survey was sent to resident doctors to get feedback on their views on minimum staffing levels. Additionally, we also looked at exception reporting to see if understaffing effects were manifesting as exception reports and thus highlighting the importance for change.

Results

Feedback from resident doctors supported this change (uplift in minimum staffing number) and reasoning was similar to comments raised in exception reporting . Moreover, reported ward acuity in feedback reporting correlated to higher numbers of crash calls experienced on the ward.



22 responses (91.7%) did not think a minimum staffing level of 1-2 was appropriate for their ward which supports the data shown.

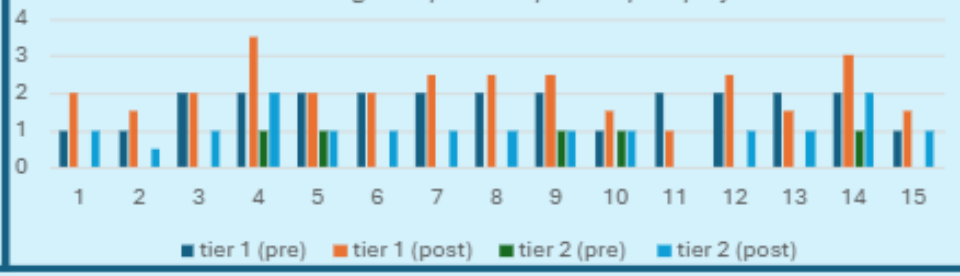
2 responses from 2 separate wards felt minimum staffing of 2 was appropriate. Following this, uplift of minimum staffing level was done in both wards from 1 to 1.5. An uplift to 1.5 means 2 doctors are needed in the morning and 1 in the afternoon.

Ward workload modelling was based on:

1. Number of beds per ward
2. Average monthly crash calls
3. Average monthly admissions/discharges

Crash calls and admissions/discharges were averaged across all wards; a ward whose data were above the average was identified as needing increase in staff numbers. If this was for the crash call domain, then registrar minimum number was increased, as this was used to reflect acuity on a ward and thus the need for senior support.

Minimum safe staffing level per ward pre and post project results



Exception reporting showed that whilst ward size correlated with staffing requirements, acuity (crash call frequency), length of stay (inverse relationship), and whether on-ward senior support was available throughout the day also played a significant role. There were 556 exception reports from 7 Aug 2024 to 23rd of June 2025. 479 (86%) were from general medicine. Within these, main reasons for exception reporting included: understaffing and lots of patients, poor rota organisation, working increased hours on OOH shifts, missing teaching and SDT, and dealing with complex or unwell patients.

Conclusion

A data-driven, multifaceted approach combining quantitative exception reports, qualitative feedback, and workload modelling enables precise determination of minimum safe staffing per ward. Our analysis showed that it is important to contextualise RCP benchmarks using real world data and to set tailored minimum staffing for each ward accordingly. Sharing these evidence-based techniques can help ACTs optimise rotas, enhance patient safety, improve educational support for trainees, and promote junior wellbeing.

The changes to staffing level has been communicated to the junior doctor admin team and should be the new requirement that NGH will operate at.

[1]Royal College of Physicians. Guidance on safe medical staffing: executive summary. Report of a working party. London: RCP, 2018. https://www.rcp.ac.uk/media/4pkd321y/safe-medical-staffing_summary_web.pdf [Accessed 24th August 2025]

Virtual on-call Simulation; Does Higher Fidelity Simulation Enhance The Preparedness At The cost of Confidence for Final year Medical Students Transitioning to Foundation Doctors

By Dr Nada Bassiony [1], Dr Hakam Jabouri [1], Dr Collin Weeks[1]

[1]*Darent Valley Hospital, Kent, United Klngdom*

INTRODUCTION

- The GMC National Trainee Survey 2024 found only 57% of foundation doctors in 2023 and 61.9% in 2024 felt adequately prepared for their first post
- Key areas of concern included low confidence in emergency management, clinical reasoning and teamwork
- To address these gaps we developed the Virtual On-Call (VOC) simulation program—a high fidelity, immersive experience designed for final-year medical students.

OBJECTIVE

- Strengthen core competencies such as clinical decision-making, prioritisation and communication under pressure
- Integrate theoretical knowledge to realistic high pressure on-call scenarios
- Improve student percieved preparedness, and in turn contribute to improved patient care

METHODOLOGY

01

Pilot study 2023 - 18 medical students

- 18 medical students
- 6 weekly, 2 hour evening sessions to provide a safe learning environment
- Pre and post evaluation of self perceived confidence and preparedness of medical students across 7 domains, providing rich **qualitative** and **qualitative data**

January 2024 - 13 students

- **Digital feedback forms with QR codes** - able to read all feedback with ease, and track each student's pre and post surveys across 7 different domains
- **Anonymous feedback** - encourage open and honest feedback
- **Refreshments** - recognising the role of well-being during learning, especially after a long placement day (Maslow's Hierarchy of Needs)
- **Distractor cases** - to increase cognitive load and encourage task prioritisation and effective communication under pressure

02

03

May 2024 - 15 medical students

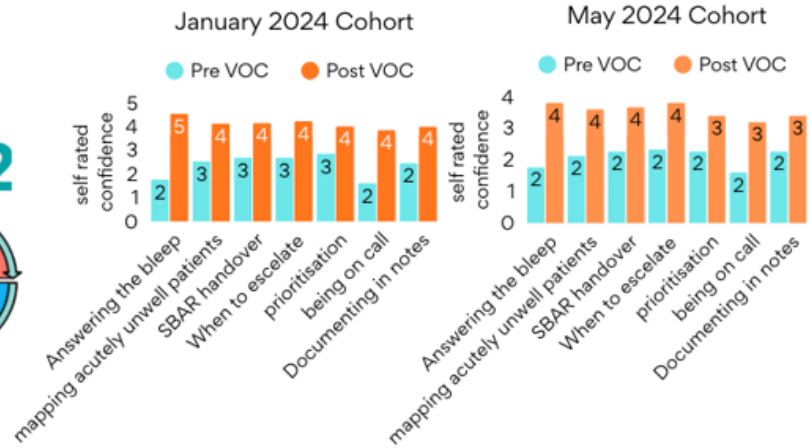
- **Mirroring clinical environments:** By developing high fidelity simulation- such as prescribing on physical drug charts, incorporating A-E assessments , death verification using manikins, realistic patient notes and additional functional landline phones to simulate real on-calls
- **Pre and post Brief** - provided for all faculty members, and students to make expectations clear, and provide dedicated time for dialogues of feedback
- **Increased faculty:** to improve the student-to-facilitator ratio and ensure more effective supervision and feedback.

RESULTS

- 100% of students felt this course increased preparedness for foundation training, across all 7 domains
- 100% of all students of both the January and May groups would recommend the session to a friend
- 100% of all students of both the January and May group would like the opportunity to repeat this simulation
- 36% and 30% improvement in performance in January and May cohort respectively
- Overall, participants' post-simulation confidence rating was higher among the January cohort with the greatest interval differences found in their confidence using the bleep (55%) and being on-call (45%)
- Qualitatively, most students described the programme as 'useful' and 'realistic'

Figure 1: Word Cloud With Concerns Students Expressed Regarding Medical On-Calls, prior to the Virtual On-Call Simulation

SELF REPORTED SELF CONFIDENCE SCORES IN 7 DOMAINS, BEFORE AND AFTER VOC



Graph 1 and 2: Comparing Pre and post sef-evaluated confidence across 7 domains in January and May Cohorts

CONCLUSIONS

- VOC simulation emphasised the importance of interprofessional faculty involvement and high-fidelity simulation to enrich the training experience
- Multi-task and prioritisation simulation should be integrated across medical schools.
- The course is generalisable and can be adapted to meet the needs of different institutions
- The high-fidelity environment enhanced engagement and realism but may have contributed to reduced perceived confidence in the May cohort, potentially reflecting the Dunning–Kruger effect.
- An objective assessment of performance and student perceived confidence should be considered to further assess this simulation model

REFERENCES

1. GENERAL MEDICAL COUNCIL (2023). NATIONAL TRAINEE SURVEY.
2. PRESCRIBING SAFETY ASSESSMENT (2023). BE PREPARED: ARE NEW DOCTORS SAFE TO PRACTICE?

HOLDING BACK THE FLOOD

Should we Embrace Restrictive Resuscitation in Sepsis? - A Systematic Review

Dr Neoma Lemos

NHS
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BACKGROUND

- Sepsis is a life-threatening organ dysfunction caused by a dysregulated response to infection.
- IV fluids remain the cornerstone of initial resuscitation — yet 30–60% of septic patients develop fluid overload, contributing to increased ventilator time, ICU stay, and mortality.

Clinical Dilemma

Are we over-resuscitating? Could a restrictive fluid strategy be equally safe — or even superior — to the liberal approach?

CLINICAL INSIGHTS

"Fluids are a drug. Like any drug, they require the right dose, timing, and indication."
— Malbrain et al., Intensive Care Med 2018

- Restrictive fluid resuscitation appears non-inferior in early sepsis
- Reductions as small as ~3.5L are associated with lower ventilator use, shorter ICU stay, and less organ dysfunction
- Emphasises individualised care over protocolised volume thresholds

FUTURE DIRECTIONS

- What is the optimal volume per individual patient?
- Can bedside tools (e.g. CRT, IVC collapse) guide fluid decisions?
- How do we adjust for frailty, comorbidities, or renal reserve?

SYSTEMATIC REVIEW & STUDY SUMMARY

- Databases: PubMed (2019–2024)
- Inclusion: RCTs & meta-analyses, adult patients with sepsis/septic shock
- Studies: 7
- Total patients: 4,246
- Primary outcome: Mortality
- Secondary: Ventilator days, fluid balance, AKI, ICU/hospital LOS

Outcome	Effect (Restrictive vs Liberal)
Mortality	No significant difference
Ventilator Use	Reduced
Total Fluid Volume	Lower volumes in restrictive
AKI / Adverse Events	No increase in harm
Ventilator Use	Trend towards reduction

Key Studies

CLOVERS (2023), Reynolds (2023), Linden (2024), Boulet (2024), Semler (2021), Corl (2019), Jessen (2022)

TAKEAWAY & CONCLUSION

- Restrictive fluid strategies appear safe in early sepsis.
- No increase in mortality or risk of acute kidney injury (AKI).
- Potential benefits include:
  - Reduced need for invasive support (e.g., ventilation).
  - Shorter ICU stays.
  - Improved outcomes in select patient groups (e.g., frail, elderly, or with comorbidities).

It's time to move from "How much fluid?"
To "Does this patient need more fluid — or something else?"

Previously presented at the Society for Acute Medicine (SAM) Annual Conference, Manchester – September 2025

Assessing HIV Testing Rates in Respiratory Inpatients with Community-Acquired Pneumonia (CAP) at RVH Belfast: *A Quality Improvement Project*

Dr N. Toland, Dr S. McGinley, Dr L. Coyle
Royal Victoria Hospital, Belfast - Departments of Respiratory and Genito-Urinary Medicine

BACKGROUND

- Late HIV diagnosis remains a public health concern, leading to poorer outcomes and increased transmission.
- Community Acquired Pneumonia is recognised as an HIV indicator condition with BHIVA guidelines recommending testing in all patients who present with indicator conditions.
- Local data suggests this is inconsistently implemented, representing missed opportunities for earlier detection.
- This QIP assesses the frequency of HIV testing amongst Respiratory inpatients admitted with CAP to Royal Victoria Hospital (RVH) and evaluates the impact of interventions implemented to improve testing rates.

METHODS

- A retrospective audit of adult Respiratory inpatients admitted to RVH with CAP over a period of 6 months was conducted using EPIC software.
- Patients with CAP as primary admission diagnosis were identified and electronic records assessed if HIV testing was offered during their current admission.
- Using Plan-Do-Study-Act cycles, comparisons were made pre- and post-intervention
    - **Cycle 1** interventions included staff education to promote awareness of HIV testing and encourage uptake
    - **Cycle 2** introduced visual poster prompts placed in Respiratory wards and medical clerking areas.
    - **Cycle 3** intervention was direct re-education of medical staff, wider digital poster sharing, and HIV awareness integrated into Consultant and Resident daily ward rounds.

RESULTS

- Trends were analysed using Fischer's exact test given small sample sizes.
- HIV testing increased from 5.3% (1/19) in cycle 1 to 25.9% (7/27) in cycle 2 and 42.1% (8/19) in cycle 3.
- Cycle 1 vs Cycle 3: P value was statistically significant at **0.008**.
- A total of 65 patients were identified to have CAP as their primary diagnosis and included in this audit. No new HIV diagnoses were identified during this audit period.

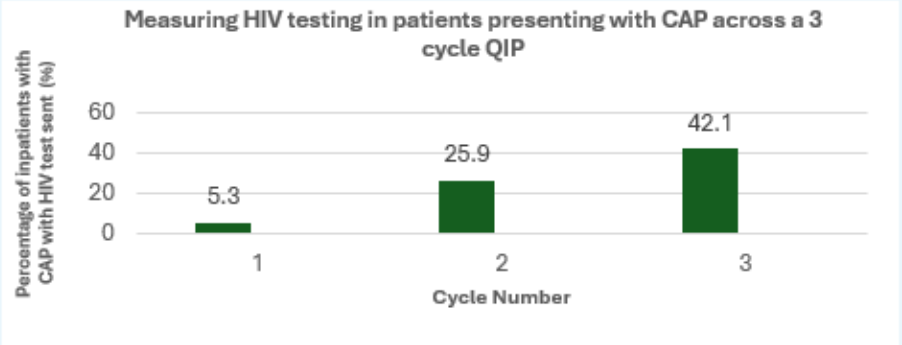


Figure 1. A graph outlining the percentage improvement in uptake of HIV testing following interventions per PDSA cycle of this QIP. Confidence intervals for cycle 1; 0.9% – 24.6%, cycle 2; 13.2% – 44.0%, cycle 3; 23.1% – 63.7%.

Cycle Comparison	P-Value (Fischer's Exact)	Interpretation
Cycle 1 vs Cycle 2	0.115	Not statistically significant at 0.05 level
Cycle 2 vs Cycle 3	0.218	Not statistically significant at 0.05 level
Cycle 1 vs Cycle 3	0.008	Statically significant at 0.05 level with global improvement

Figure 2. Comparison of cycles, P values obtained using Fischer's Exact Testing and statistical significance

Figure 3. Visual poster used during cycle 2 of PDSA QIP placed in medical clerking and clinical areas

DISCUSSION

- Data suggests interventions were effective and meaningful when broadly assessed across all cycles.
- Small sample sizes limited statistical power and increases between individual cycles were not significant, the overall trend change from cycle 1 to cycle 3 was positive.

CONCLUSIONS

- This QIP highlights a gap between current HIV testing and current BHIVA recommended clinical practice.
- HIV testing in CAP admissions was initially low but improved following targeted interventions.
- Strategies such as embedding routine testing into CAP management and repeated education are valuable for increasing testing uptake.
- Further interventions may be identified to progress this improvement and may reduce late diagnoses of HIV in this patient cohort.
- We recommend further auditing in 6-12 months of this cohort to monitor progress in this area.

REFERENCES

- *BHIVA/BASHH/BIA Adult HIV Testing guidelines 2020 – BHIVA* (Oct 25). https://www.bhiva.org/HIV-testing-guidelines.
- Kandasamy, V., Elphick, M. and Glascodine, J. (Oct 25) *Improving testing for HIV in patients with community acquired pneumonia in Bradford teaching hospitals*. https://bhiva.org/wp-content/uploads/2024/10/P070.pdf

Full Abstract

Urinary Tract Infection Outcomes in Older Adults: Hospital-at-Home versus Acute Hospital Admission

Niazi Khairi[1]; Ruqaiyah Behranwala[2]; Michelle Carr[1]
[1]Frimley Park Hospital; [2]Buckinghamshire Healthcare NHS Trust

Frimley Health NHS Foundation Trust

INTRODUCTION

Hospital admission exposes older adults to harms, including delirium, acute kidney injury (AKI), and mortality. Hospital-at-Home (HAH) services allow treatment of acute illnesses, such as infection with IV antibiotics in the home setting.

OBJECTIVE

To evaluate whether Hospital-at-Home care for older adults with UTI reduces complications and admission duration compared to inpatient management.

METHODS

A 12-month retrospective comparison was conducted between older adults with urinary tract infection (UTI) managed under Hospital-at-Home (HAH) and those admitted to an acute frailty ward.

HAH patients received daily IV ceftriaxone at home, while inpatients were treated per hospital protocols.

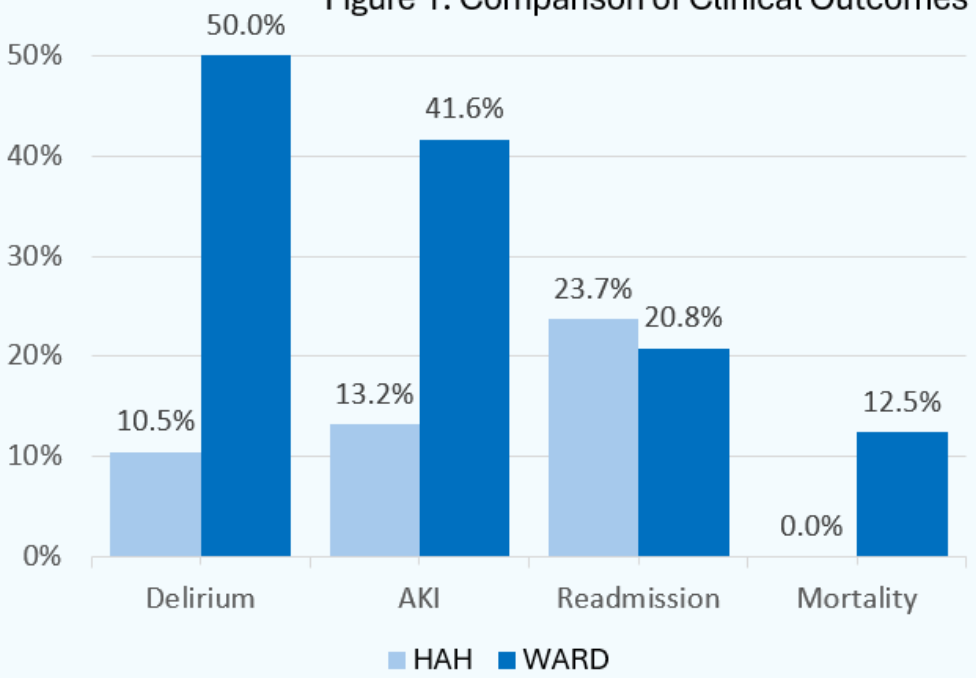
Outcomes assessed included **length of stay**, **delirium**, **AKI**, **mortality**, and **readmission** rates.

RESULTS

Table 1: Patient's Demographics

	HAH	WARD
Number of patients	38	24
Male: female ratio	13:25	6:18
Mean age (years)	84	84
CFS	6	5
Length of stay (days)	3.3	21.3

Figure 1: Comparison of Clinical Outcomes



CONCLUSION

- HAH care shortened length of stay by 18 days and was associated with lower rates of delirium, AKI, and mortality, with comparable readmission rates (within 2 months after discharge).
- HAH therefore represents a safe and effective alternative, offering better outcomes than acute hospital admission for appropriately selected older adults.

Beneath the surface: Splenomegaly as the first presentation of type II Cryoglobulinaemic Vasculitis (a rare case)

Dr. Nosheen Pervaiz (Internal medicine trainee year 3 registrar)
East Kent university hospitals NHS foundation trust

NHS East Kent Hospitals University NHS Foundation Trust

Introduction

Cryoglobulins are immune complexes that precipitate in reduced temperatures & re-dissolve when temperature rises. Splenomegaly is very unusual presentation of Cryoglobulinemia as in our case. In one review, Systemic manifestations included skin lesions, peripheral neuropathy and joint involvement in 71.3%, 42.5%, and 28.7% of cases, respectively. Gut involvement was observed in 11.3% of patients who presented abdominal pain related to mesenteric infarction, intestinal perforation, or intestinal bleeding. Intra-alveolar haemorrhage defining lung involvement and intracerebral haemorrhage were also present in 5% and 1.3% of cases in the setting of the vasculitis flare.J Am Soc Nephrol. 2015 Aug 10;27(4):1213–1224. No cases in literature has been described of Splenomegaly as initial presentation of Cryoglobulinemia. Splenomegaly is well described in association with Cryoglobulinemia -. J Clin Med. 2025 Jan 16;14(2):556.

Case presentation

64 year old lady presented with persistent nausea, abdominal discomfort, and significant weight loss of 32kg over a 3-month period.

Initial labs revealed only microcytic hypochromic anaemia. A contrast-enhanced CT of the thorax, abdomen, and pelvis excluded any overt malignancy but incidentally revealed moderate splenomegaly, with the spleen measuring 187 mm in the craniocaudal dimension. PET-CT revealed interval splenic enlargement (193 mm) and diffusely homogeneous splenic parenchyma without evidence of focal hypermetabolism on FDG uptake. Bone marrow biopsy revealed normal trilineage hematopoietic maturation and no morphologic evidence of dysplasia or infiltrative disease.

Amidst continued diagnostic uncertainty, an elective splenectomy was planned to further evaluate splenomegaly of indeterminate origin and to obtain tissue for definitive histopathological evaluation.

Fig 1. Splenomegaly CT and PET

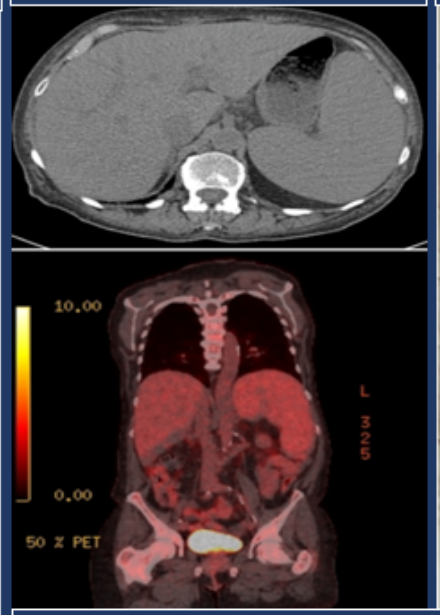


Fig 2. Vasculitis rash on legs

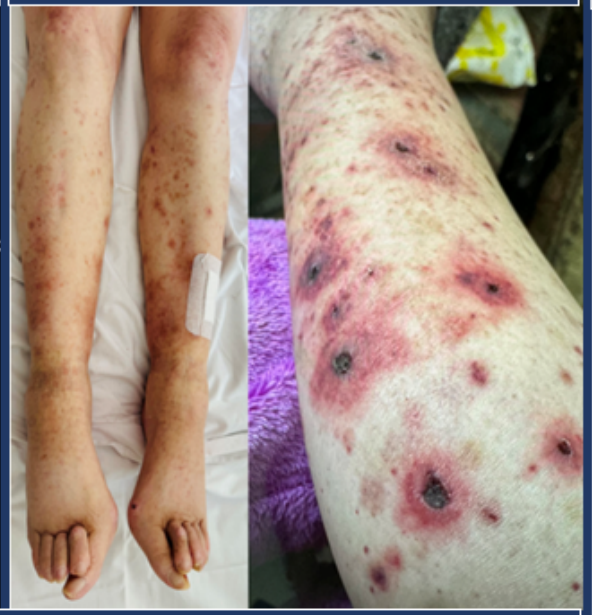


Fig 3. Bilateral patchy ground glass opacities (alveolar haemorrhage)

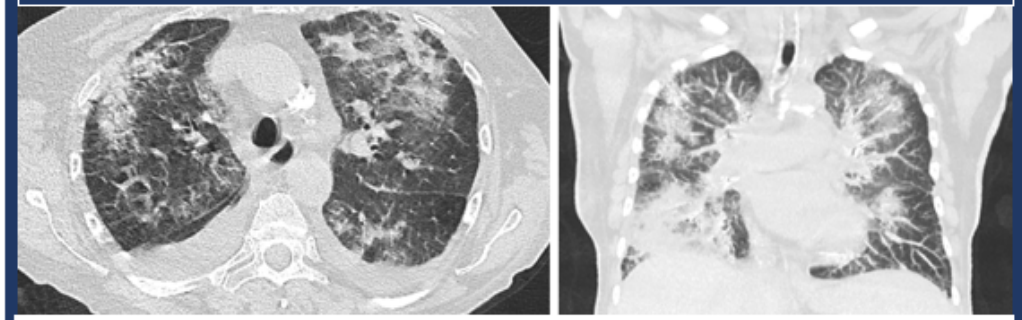


Fig 4. Renal Biopsy report

Supplementary

Immunoperoxidase shows some high background staining, but nevertheless it shows granular mesangial and capillary wall IgM+++, and IgM is taken up by the granular luminal material in the affected glomerular segment. There is also granular mesangial C1q+++. Kappa and lambda are negative.

The appearances are in keeping with focal cryoglobulins in a glomerulus given the clinical scenario, in the setting of some chronic damage, with 4/31 obsolete glomeruli, and a further 6 glomeruli with segmental sclerosing lesions.
The extent of tubulointerstitial fibrosis is adjusted to approximately 20% based on the Masson's Trichrome stained sections.
Electron microscopy has been requested.

Clinical course

While awaiting elective splenectomy, she had an acute presentation with ongoing weight loss, the emergence of a new erythematous, non-blanching ulcerative rash over the lower extremities and peripheral neuropathy. She now disclosed a two-year history of intermittent rash affecting the lower limbs, previously managed in the community as possible psoriasis, awaiting formal assessment by a dermatologist.

Renal function declined markedly (eGFR) to 6 mL/min/1.73 m². Anaemia also worsened necessitating transfusion, and she developed haemoptysis with prominent bilateral ground glass opacities on CT thorax, and her spleen was now progressively enlarged to 200mm. She was started on renal replacement therapy followed by Kidney biopsy.

Investigations reported cryoprecipitating IgM kappa, IgG Kappa and IgG Lambda paraprotein with positive rheumatoid factor, low C3 & C4 with some polyclonal IgG also present in the cryoprecipitate, consistent with a TYPE 2 MIXED CRYOGLOBULINAEMIA.

Kidney biopsy confirmed membranoproliferative glomerulonephritis exhibiting prominent immune complex deposition.

She was treated with PLEX, Rituximab and Cyclophosphamide, but unfortunately succumbed to her disease due to multisystem involvement.

With regards to aetiology, the only positive findings included EBV IgG and CMV IgG positivity indicating a possible past infection.

Conclusion

- Cryoglobulinaemic vasculitis can present with heterogenous clinical picture, underscoring the need for high index of suspicion, as early recognition and targeted interventions are key to improving outcomes.
- Clinical research including pathogenesis, investigating novel biomarkers to aid diagnosis and monitoring, and therapeutic advancements is crucial for this rare disease.
- Reporting rare presentations may reveal previously unidentified associations between conditions not well documented in literature contributing to evidence based medicine.

Carbamazepine-Induced Agranulocytosis in a Trigeminal Neuralgia Patient

1. Nusrat Fatima 2. Rabindra Katwal

BACKGROUND

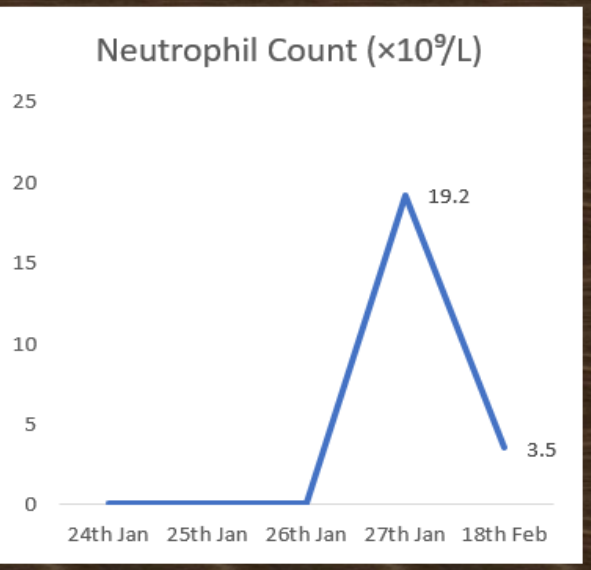
Carbamazepine is commonly used for the treatment of trigeminal neuralgia. It is associated with rare but potentially fatal adverse effects, including agranulocytosis and cutaneous eruptions.
This case report aims to highlight the **clinical features**, **early diagnosis**, and **management** of carbamazepine-induced agranulocytosis and cutaneous drug eruption.

CASE PRESENTATION

A 69-year-old male with a history of trigeminal neuralgia was prescribed **carbamazepine** on **December 24, 2024**, for symptom management.
Initially, he experienced **generalized malaise** by *January 9, 2025*, followed by **fever** on *January 13* and the onset of a **morbilliform rash** on *January 24*. The rash was accompanied by recurrent fevers reaching **39°C**, **desquamation**, **progression of erythema**, **oral soreness**, and **hand edema**.

- Blanching erythematous rash covering ~80% of the body
- No mucosal involvement or purpura
- Except FBC all other investigations were unremarkable

Day	Date	Clinical Event	Total WBC ($\times 10^9$/L)	Neutrophil Count $\times 10^9$/L	Remarks / Management
Day 1	Dec 24, 2024	Started Carbamazepine	normal	normal	Normal baseline counts
Day 31	Jan 24, 2025	Rash appears, high fever (39° C)	1.7	0.0	Severe neutropenia. Carbamezapine discontinued
Day 32	Jan 25, 2025	Further workup started	5.2	0.0	Clobetasol Mometasone furoate Cetraben lotion Fexofenadine
Day 33	Jan 26, 2025	started GM-CSF	3.4	0.0	Counts started improving
Day 34	Jan 27, 2025	Clinical improvement, rash resolving	26.3	19.2	Significant recovery
Day 35	Jan 28, 2025	Discharged	6.5	3.5	Neutrophil count normalized



DIFFERENTIAL DIAGONOSIS

- Carbamazepine-induced agranulocytosis
- Carbamazepine-induced cutaneous drug eruption
- The clinical presentation, along with hematologic findings, supported a diagnosis of carbamazepine-induced agranulocytosis with cutaneous drug eruption.

MANAGEMENT

Carbamazepine was immediately discontinued.
Treatment included:
Granulocyte-monocyte colony-stimulating factor (GM-CSF)
Clobetasol
Mometasone furoate
Cetraben lotion
Fexofenadine
The patient showed marked improvement and was discharged on the **5th day of admission**.

CONCLUSION

This case highlights the **importance of early recognition** and **immediate discontinuation** of carbamazepine in the event of hematologic and dermatologic adverse reactions. **Timely intervention** and **supportive care**, including GM-CSF and topical corticosteroids, can prevent further complications and **reduce morbidity** in such cases.

REFERENCES

1. Gupta, D., Bhardwaj, A., Prakash, R., et al.. Pancytopenia in Carbamazepine Therapy: A Rare and Serious Entity with Simple Prevention. *International Journal of Applied Basic Medical Research*.
2. Ran, D., Wang, N., Bao, F., et al.. Carbamazepine-induced follicular mucinosis-like drug eruption. *Clinical and Experimental Dermatology*.
3. Wu, S., Huang, L., Chen, J., et al.. Non-chemotherapy drugs inducing agranulocytosis: a disproportionality analysis based on the FAERS database. *Computational and Structural Biotechnology Journal*.

Hypercalcaemia as the initial manifestation of Addison's Disease

Authors: Dr Orlaith Fogarty, Dr Nyein Nge Nge, Dr. Taofeek Ojewuyi, Dr Ali Rathore, Dr Ayanbola Adepoju
Southend University Hospital, Mid and South Essex NHS Foundation Trust, Southend-On-Sea, United Kingdom

Background:

- Hypercalcaemia is a common biochemical finding, which is often asymptomatic, with causes broadly classified into PTH-dependent and PTH-independent.
- This case report describes a patient with undiagnosed primary adrenal insufficiency presenting with PTH independent hypercalcaemia, hyponatremia and acute kidney injury.

Case:

- A 39-year-old man presented with dizziness, low mood, anorexia, nausea, vomiting, and weight loss.
- He was found to be hypotensive and had generalised skin hyperpigmentation.
- The biochemistry results on admission are seen in Table 1.
- The initial working diagnosis was that of PTH-independent hypercalcaemia-induced dehydration with AKI.
- Malignancy was ruled out with a CT chest, abdomen and pelvis scan.

	Value	Reference
Sodium (mmol/L)	126	133-146
Potassium (mmol/L)	5	3.5 - 5.3
Urea (mmol/L)	13.7	2.5 - 7.8
Creatinine(µmol/L)	148	59 - 124
Adjusted calcium (mmol/L)	3.05	2.2 - 2.6
Parathyroid hormone (pmol/L)	0.3	1.3 - 9.3

Table 1: Urea and electrolytes

	Value	Reference
ACTH (ng/L)	1301	<50
Cortisol (nmol/L)	<11	185-624
TSH (mU/L)	11.36	0.3 - 5.0
Free T4 (pmol/L)	8.9	7.9 - 16.0
Renin (nmol/L/hr)	1.4	0.3-3.5
Aldosterone (pmol/L)	<60	90-700
Adrenal autoantibodies	Positive	

Table 2: Subsequent endocrine testing

- Adrenal insufficiency was confirmed (Table 2). The patient was commenced on hydrocortisone replacement and subsequently levothyroxine.
- Following steroid replacement, the patient and their electrolytes improved, with the hypercalcaemia and hyponatremia resolving.
- Whilst aldosterone was suppressed, **uncommonly in Addison's disease, renin was normal.**
- The patient was initially managed without fludrocortisone; however, this was introduced at three months when renin levels began to rise (Table 3).

	On admission	Follow-up	Reference
Renin (nmol/L/hr)	1.4	13.8	0.3-3.5
Aldosterone (pmol/L)	<60	<60	90-700

Table 3: Renin and Aldosterone

Conclusion:

- Addison's disease can present atypically with PTH-independent hypercalcaemia, hyponatremia, hypotension and acute kidney injury.
- A high index of suspicion of adrenal insufficiency will enable swift diagnosis in patients with unexplained electrolyte disturbance.

Disclaimer: This case is due to be presented at the Society for Endocrinology Clinical Update 2025 (3-5 November 2025)

Proposal of a modified NIVO score as a simpler clinical decision aid for patients with acute hypercapnic respiratory failure

Paula Rocktaschel[1,2], Deepak Jose[2], Yacoob Hamuth[2], Abubakar Khan[2], Thomas Buttle[2], Lynette Linkson[2], Chia Ling Tey[2]

Background and aims.

- Non-invasive ventilation (NIV) improves survival in acute hypercapnic failure, an effect also seen in increasingly frail patients.
- Despite this, there is prognostic pessimism and NIV underusage, especially in frail patients.
- To tackle poor NIV use, the NIVO score was introduced by the BTS RSU pilot audit in 2021 as a clinical prediction tool to aid treatment decisions and minimise undertreating suitable patients
- The NIVO score can be challenging to apply in the emergency setting due to its reliance on the eMRCD scale.
- Inspired by an internal audit on acute NIV over two months in our DGH, we propose a modified NIVO score (mNIVO) excluding the eMRCD scale to increase usage amongst acute physicians and help reduce NIV underusage in the acute setting.

NIVO score

- Consolidation on CXR
- GCS < 15
- PMH of AF
- pH < 7.25
- Time to acidaemia

eMRCD scale *scoring the functional impact of dyspnoea on a good day, within the last 3 months*

→ Predict in-patient & 1-year mortality
→ Aid patient discussions
→ Inform treatment decision

Patient cohort included 24 patients receiving acute NIV over two months in one DGH.

Patient indicators		Patient indicators during admission		Outcome	
Age	73.7 ± 11.1	Initial pH	7.23 ± 0.08	Time on acute NIV [days]	2.4 ± 2.2
F / M	12 / 12	Initial pCO2	10.5 ± 1.7	pH corrected / not corrected	15 / 9
NIVO	***3 ± 2.1***	Consolidation (yes / no)	15 / 9	Discharged / deceased	15 / 9
mNIVO	***1.75 ± 1.2***	GCS (15 / < 14)	14 / 10	pH after NIV	7.35 ± 0.10
		Atrial fibrillation (Yes / No)	8 / 16	PCO2 after NIV	8.4 ± 2.2
		Time to acidaemia (< 12 / > 12)	17 / 7	Length of hospital stay [day]	14.5 ± 15.2

The mNIVO score correlates with clinical outcome.

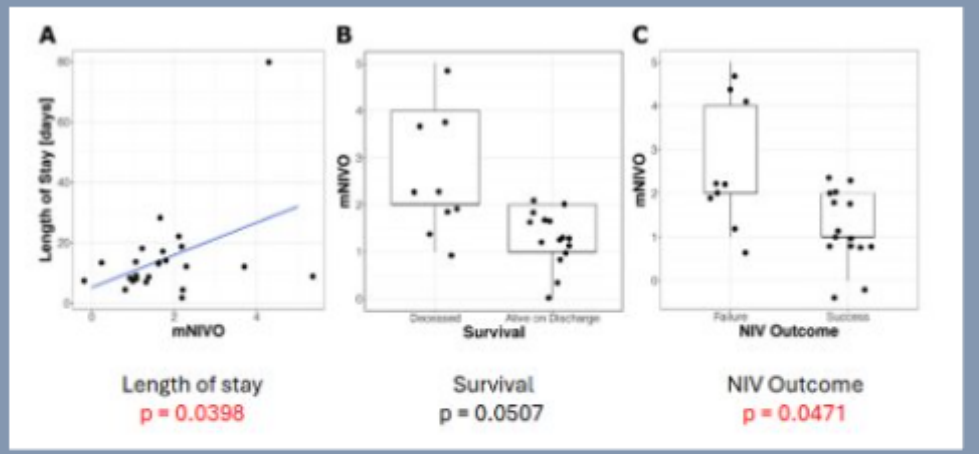


Fig 1: The mNIVO significantly correlated with NIV outcome and LOS, and showed a strong trend towards significant correlation with survival. A significant correlation was observed between the original NIVO score and survival only (p = 0.043, not shown).

24 patients received NIV over the study period of two months

NIVO was not documented in any case & could be calculated for < 50 % from the initial clerking

Retrospectively, mNIVO score could be calculated for all patients

Discussion.

The mNIVO score might be an alternative to the NIVO score if proven to show similar prognostic accuracy in future studies.

Simplified clinical usability -> more accurate treatment decisions, especially in frail patients

Retrospective study in a small cohort in a single center

Information captured in the eMRCD scale is important to obtain from patients to guide treatment escalation planning

1 Ghosh, D & Elliott, MW (2019), *Clinical Medicine*, *19*(3), 237–242.
2 British Thoracic Society Respiratory Support Pilot Audit Report 2021
3 Hartley, T et al. (2021). *European Respiratory Journal*, *58*(2).

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Adherence to Gentamicin Prescribing and Monitoring Guidelines: Factors affecting Patient Outcomes in a Single Centre

Authors: Dr. Ikenna Ibeanusi, Dr. Fazna Rahman, Mr. Deepak Singh-Rangher

1. Background

Gentamicin is an antibiotic used to treat intra-abdominal infections (1-3). Due to its' nephrotoxic profile, Gentamicin is associated with increased AKI and mortality rates (4-5). Hence, there are detailed guidelines to ensure safe gentamicin prescribing and monitoring (6-8).

2. Aims

1. Assess adherence of Gentamicin prescribing and monitoring to local guidelines
2. Compare outcomes (AKI recurrence, length of hospital stay (LOS)) patients with good vs poor adherence to guidelines

3. Methods

This was a single-centre retrospective cohort study.
Patient selection: Patients who received Gentamicin in the General Surgery department between February - May 2025 were identified using EPMA prescribing software. Patients admitted electively or received only prophylactic course of gentamicin were excluded. 63 patients were included.
Data collection: Demographics; gentamicin dose (prescribed vs correct dose); level monitoring details; Serum data: Full Blood Counts, and Albumin; LOS.
Analysis: Patients were grouped as correct/over-dose vs under-dose. Statistical analysis was performed on Microsoft Excel and Rstudio™.

4. Results

Adherence to local guidelines: 34% of patients were prescribed correct doses. 22% had levels checked timely.
Patient outcomes: 1. A single patient acquired an AKI.
2. The median LOS for patients in the "Underdosed" group was significantly higher than patients with "correct/ Overdosed" doses (Wilcoxon-rank sum test = W=627.5, p = 0.036) (**Figure 1**).
Univariate analysis (Event = discharge) showed that: Dose groups were not significantly associated with LOS. Age >=50, Albumin <= 33 and NLR >=11 were all associated with patient LOS. (**Figure 2A**).
Multivariate analysis: Age >=50 and Albumin <= 33 were associated with patient LOS (**Figure 2B**)

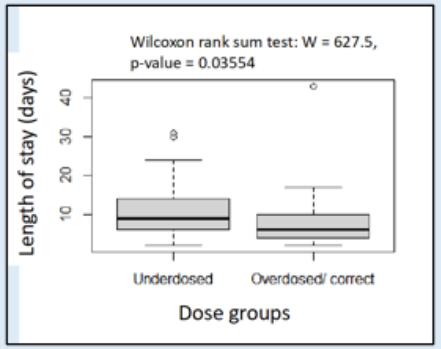

Figure 1: A: – Box plot showing length of stay by Dosing group.

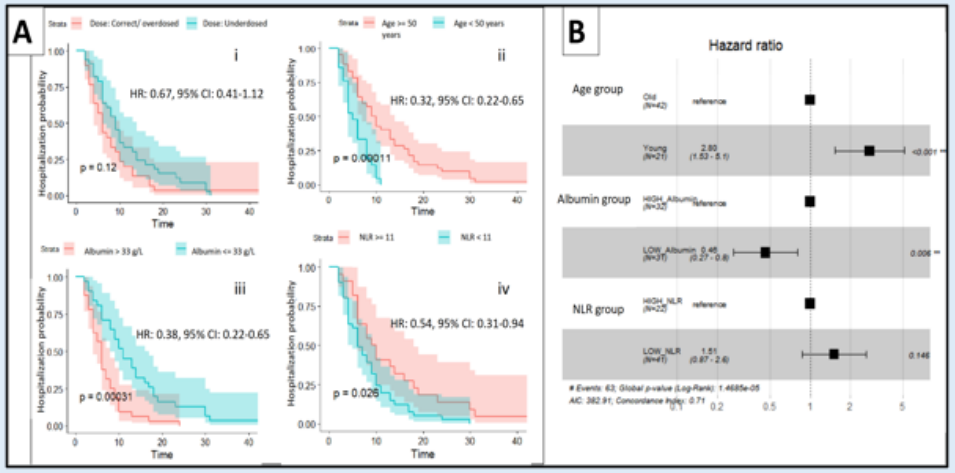

Figure 2: A: (i) Kaplan Meier (KM) curve of correct/overdosed group vs Underdosed; (ii): KM curve of patients Age >=50 years vs Age <50 years; (iii): KM of patients with initial serum Albumin > 33 g/L vs Albumin <= 33g/L; (iv) KM of patients NLR >= 11 vs NLR <11. B: Forrest plot for cox proportional Hazards Model: Age_group, Albumin_group, and NLR.

5. Conclusions & Recommendations

Conclusions: Overall adherence to Trust guidelines is suboptimal. The impact this has on clinical outcomes is ambiguous. Patient Age, and Albumin were significant determinants of patient LOS. However, initial gentamicin dose was not.
Recommendations:
Factors affecting clinican decision making will need to be explored and addressed. Further interrogation stratified by patient age, albumin levels, dose amendments and clinical indication will need to be performed.

References

1.Chen C, Chen Y, Wu P, Chen B. Update on new medicinal applications of gentamicin: evidence-based review. J Formos Med Assoc. 2014 Feb;113(2):72–82.https://pubmed.ncbi.nlm.nih.gov/24216440/
2.Phillips I, Eykyn S, King BA, Jenkins C, Warren CA, Shannon KP. The in vitro antibacterial activity of nine aminoglycosides and spectinomycin on clinical isolates of common Gram-negative bacteria. Journal of Antimicrobial Chemotherapy. 1977 Sep 1;3(5):403–10. https://academic.oup.com/jac/article-abstract/3/5/403/781535
3.The Royal Wolverhampton Trust. Gentamicin Guideline (2023)
4. Selimoglu E. Aminoglycoside-induced ototoxicity. Curr Pharm Des. 2007;13(1):119–26.
5.Wargo KA, Edwards JD. Aminoglycoside-induced nephrotoxicity. J Pharm Pract. 2014 Dec;27(6):573–7.
6.Selby NM, Shaw S, Woodier N, Fluck RJ, Kolhe NV. Gentamicin-associated acute kidney injury. QJM. 2009 Dec;102(12):873–80. https://academic.oup.com/qjmed/article-abstract/102/12/873/1563758
7.Oliveira JFP, Silva CA, Barbieri CD, Oliveira GM, Zanetta DMT, Burdmann EA. Prevalence and Risk Factors for Aminoglycoside Nephrotoxicity in Intensive Care Units. Antimicrob Agents Chemother. 2009 Jul;53(7):2887–91.
8.Ong LZ, Tambyah PA, Lum LH, Low ZJ, Cheng I, Murali TM, et al. Aminoglycoside-associated acute kidney injury in elderly patients with and without shock. J Antimicrob Chemother. 2016 Nov;71(11):3250–7.

True Anaphylaxis or Mislabelling?
A Quality Improvement Project on Penicillin Allergy Documentation

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[1]The Shrewsbury and Telford Hospital NHS Trust

Background

- Penicillin allergy is the **most commonly recorded drug allergy**, yet **<10%** of labels are true allergies.
- Mislabelling leads to **avoidance of first-line antibiotics**, **broader-spectrum use**, **higher costs**, and **longer admissions**.
- Accurate documentation supports **antimicrobial stewardship** and **patient safety**.

Aim

- To assess penicillin allergy documentation, distinguish **true anaphylaxis** from **mislabelling**, and evaluate the impact on **prescribing, complications, and length of stay**.

Methods

We reviewed **50 inpatients** with a penicillin allergy label on their drug chart
Data collected included:
- Demographics
- Reported reaction
- Condition being treated and whether penicillin would normally be first-line.
- Alternative antibiotics prescribed.
- Antibiotic-related complications
- Length of stay (LOS) and any delays attributed to the allergy label.

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Results

- **Cohort**: 50 patients reviewed; 52% female.
- **True anaphylaxis**: 9 (18%); **non-anaphylactic**: 28 (56%); **unclear**: 13 (26%)
- First-line therapy (**penicillin) was appropriate** in 40% but often avoided.
- **Alternatives used**: mainly doxycycline, meropenem, and macrolides.
- **Complications**:2 adverse events linked to mislabelling gentamicin-associated hyperkalaemia and doxycycline–warfarin INR rise.66% had no antibiotic-related complications
- The **mean hospital stay** was **9 days** (median 7). One prolonged admission was directly attributed to the allergy label.

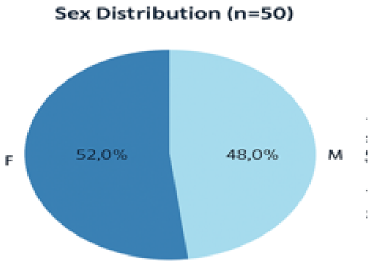


Fig 1: Demographics

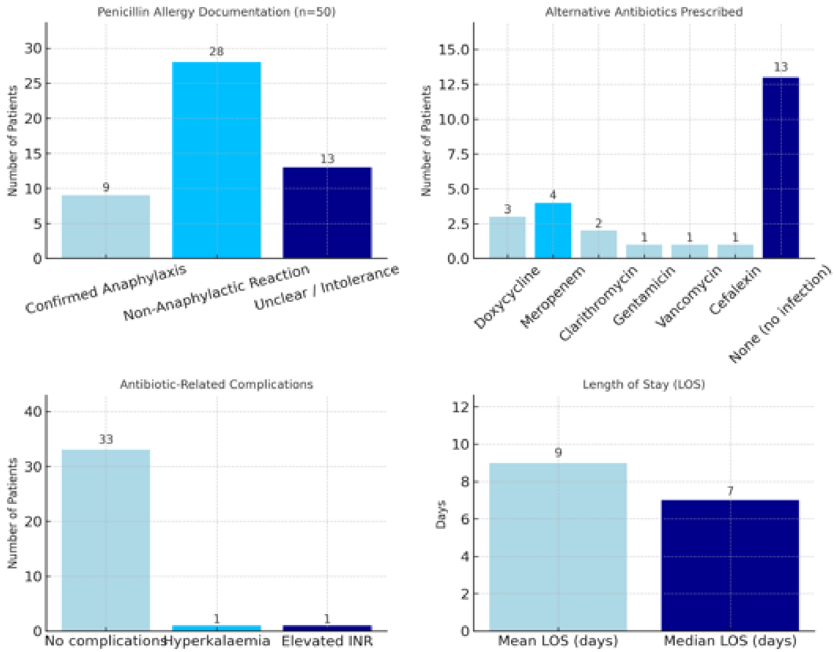


Figure 2: Findings from the penicillin allergy documentation QI project

References : Trubiano JA, et al. JAMA Intern Med. 2020;180(5):745–752

Conclusion

- ✓ **Only 1 in 5** allergy labels reflected true anaphylaxis.
- ✓ Most were **mislabelled or unclear**, causing **avoidance of first-line antibiotics** and **longer hospital stays**.
- ✓ **True anaphylaxis** was rare and **not linked to worse outcomes**.
- ✓ A slight **female predominance** was noted.

Next Steps

- Implement structured allergy history-taking at admission
- Establish a penicillin de-labelling pathway using the PENFAST tool to identify low-risk patients for safe re-challenge
- Embed de-labelling within the hospital's Antimicrobial Stewardship Programme to optimise prescribing and improve outcomes

KEY MESSAGE

Accurate allergy documentataion and structured delabelling pathways are essential for safe, evidence-based antibiotic prescribing.

Quality Improvement Audit of GRACE Score' Documentation and Clinical Justification for Withholding Angiography in NSTEMI Patients: Implications for Patient Safety

By
Dr. Queenett Brinemugha

Background

Early invasive management improves outcomes in non-ST elevation myocardial infarction (NSTEMI). Risk stratification with the Global Registry of Acute Coronary Events (GRACE) score is recommended by NICE (GRACE >88) and ESC (GRACE >109) guidelines for angiography within 72 hours. Variation persists in its use and the management of high-risk patients.

Objectives

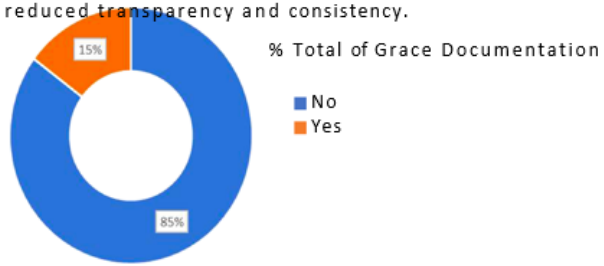
To evaluate GRACE documentation and the justification for withholding coronary angiography in NSTEMI patients in a UK district general hospital.

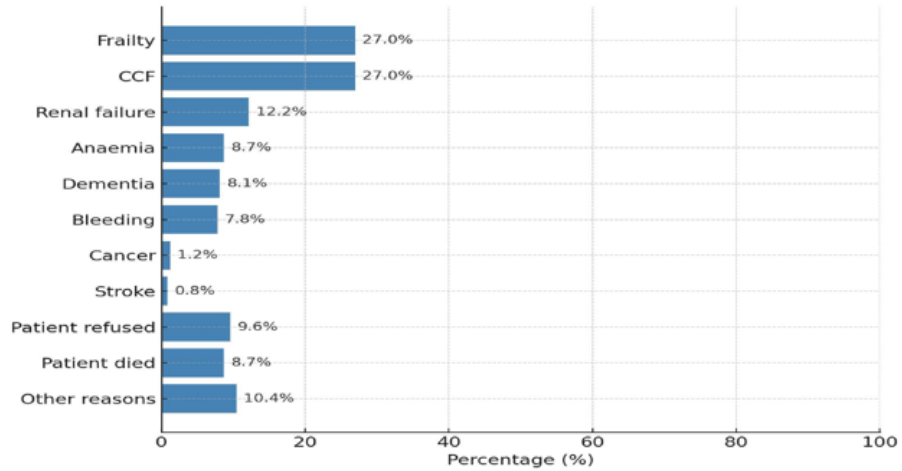
Method

A retrospective audit over 6 months included patients ≥18 years with NSTEMI/unstable angina who did not undergo angiography. STEMI and those undergoing angiography were excluded. Data included GRACE documentation, comorbidities, and reasons for conservative management. Standards: 100% GRACE documentation and ≥90% justification in GRACE >88.

Results

A total of 121 eligible cases were identified. GRACE scoring was documented in only 15% of cases. Among patients with GRACE >88, 98.3% did not undergo angiography; in those with GRACE >109, 83.5% were managed conservatively. The leading reason was comorbidity burden (71.3%), notably frailty (27%),congestive cardiac failure (27%), renal failure (12%), anaemia (9%), dementia (8%),bleeding risk (8%), cancer (1%), and stroke (1%). Other reasons included refusal (9.6%),death before angiography (8.7%), and recent elective or negative CT coronary angiography (10.4%). Clinical judgement often considered frailty and multimorbidity appropriately, but limited GRACE documentation reduced transparency and consistency.





Conclusion

- The audit found that GRACE scoring is routinely underutilised and high-risk NSTEMI patients are often managed too conservatively, with clinical decisions heavily influenced by comorbidities such as frailty and multimorbidity.
- This inconsistent application of guideline-based risk stratification poses real patient safety risks and contributes to unwarranted variation in care.
- To close these gaps, the study recommends system-level changes — such as structured GRACE templates, decision-support prompts, and integration of comorbidity assessment into care pathways—with a follow-up re-audit planned to assess their impact.

Reference

National Institute for Health and Care Excellence (NICE). CG94: Unstable angina and NSTEMI: Early management. London: NICE; 2020.

Collet JP, Thiele H, Barbato E, et al. 2023 ESC Guidelines for the management of acute coronary syndromes. Eur Heart J. 2023;44(38):3720–26.

Fox KA, Clayton TC, Damman P, et al. Long-term outcome of a routine versus selective invasive strategy in patients with non-ST-segment elevation acute coronary syndrome: a meta-analysis.Lancet. 2010;375(9719):1904–15.

Bridging the Gap: Communication Skills Training for International Medical Graduate (IMG) Junior Clinical Fellows (JCFs)

R.Lai[1], V.Namala[2], S.Sadaf[3], P.Pradhan[4]

ST4 Geriatrics Northampton General Hospital[1], Acute Medicine Teaching Fellow Royal Derby Hospital[2], Senior Clinical Fellow Royal Derby Hospital[3], Acute Medicine Consultant Royal Derby Hospital[4]

11 Nov – 12 Nov
Med+ 2025

Introduction

IMG JCFs are integral to the NHS workforce but often report communication challenges.

IMG JCFs often report low confidence in high stake communication scenarios like breaking bad news, specialty referrals and handovers.

OSCE-based simulations were chosen to emulate real-life clinical situations in a safe environment.

Objectives

To improve IMG JCFs confidence in high-stakes communication scenarios using OSCEs-based simulations.

Methodology

Pre-training Survey
- Completed by 8/14 JCFs in Acute Medicine

OSCE design
- Learning objectives and checklist finalised
- Trainers trained in feedback identified

OSCE
- 2-day OSCEs with 4 stations attended by 8 JCFs

Instant Feedback
- Performance feedback and reflections encouraged

6-months Post-survey
- To guide further learning needs

Results

+37.5%	+50%	+62.5%	+62.5%
Breaking Bad News	SBAR Handover	Updating Families	Task Handover

"This approach allowed me to reflect on real-life situations in advance and improve my confidence which I now apply daily in my clinical practice"

"I appreciate the feedback I received during the sessions and used them now in my day to day practice"

Discussion & Conclusion

OSCE-based simulations demonstrated improved confidence across all domains

Practising culturally challenging conversations with feedback was valued.

Long-term impact: strategies applied in real clinical practice.

Further regular sessions required to encourage peer learning and improve communication skills.

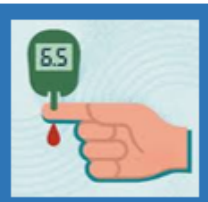
A quality improvement project to increase awareness and utilisation of weight loss services among patients with chronic liver disease and the metabolic syndrome

Dr Rachel Perry[1], Dr Ghulam Dahri[1]. 1. United Lincolnshire Teaching Hospitals NHS Trust

Background

For patients with a diagnosis of metabolic dysfunction-associated steatotic liver disease (MASLD) or metabolic and alcohol-associated liver disease (MetALD), and who are obese, weight loss is an essential part of their management[1]. Weight loss can also prevent the development of MASLD and MetALD[1]. In Lincolnshire, where obesity rates are among the highest in the country[2], several free weight loss services exist. A two-cycle quality improvement project was undertaken to increase awareness and utilisation of these services among patients who have either been diagnosed with, or are at risk of developing, MASLD or MetALD.





Methods

1. Twenty inpatients with a body mass index (BMI) greater than 30, admitted to Pilgrim Hospital, Boston, were asked three questions about their interest in weight loss services.
2. A five-question quantitative questionnaire was sent to all hepatology consultants at Pilgrim Hospital, to define current practice regarding counselling patients on weight loss and knowledge of weight loss services.
3. Information about weight loss services was displayed in poster form around inpatient and outpatient areas, consultants were made aware of services that patients can be referred to and 'Z' leaflets were posted to outpatients who would benefit from these services.

Results

CHARACTERISTICS OF PATIENTS SURVEYED:

Male patients	Mean average age	Mean average BMI
55%	67.7 years	38.3

KEY FINDINGS FROM PATIENT SURVEY:

45% of patients surveyed were not aware of any free local weight loss services	**50%** of patients surveyed would consider enrolling in a weight loss service if they had further information.

I'm interested in finding out about services, especially if I can refer myself.

When my health has improved, (weight loss services) are something I'd like to think about.

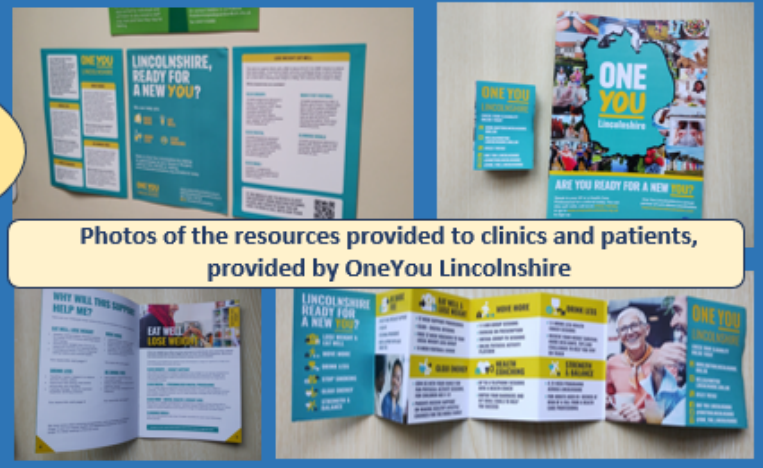
Results

KEY FINDINGS FROM CONSULTANT SURVEY:

Qualitative feedback and self-reported uptake regarding leaflet distribution was good, with 60% on consultants having started distributing leaflets prior to the follow-up survey.

Discussion

1. The patient survey results suggest that patients with obesity are often interested in attending weight loss services. but infrequently have the required information. Further work could include following up with patients in six months to monitor enrolment in such services.
2. Ensuring that consultants managing patients with obesity have information about weight loss services is important in ensuring that patients can access these services.
3. This project could be extended to patients with other conditions for which obesity is a risk factor.



Photos of the resources provided to clinics and patients, provided by OneYou Lincolnshire

References

1) European Association for the Study of the Liver. EASL-EASD-EASO Clinical Practice Guidelines on the management of metabolic dysfunction-associated steatotic liver disease (MASLD). *Journal of Hepatology* 2024. 81 (3), 492-542.
2) Office for Health Improvement and Disparities (OHID) 2024. Public Health Profiles. https://fingertips.phe.org.uk/search/obesity#page/1/gid/1/ati/502/iid/20601/age/200/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1 [Accessed 02/09/2025].

Revealing the Intersection: Scleroderma Renal Crisis Complicating Membranous Nephropathy

Turna Zaman, Monowara Rahman Shipi, Rafid Mustafa, Saifuddin Mohammad Kibria, Ashar Uddin Kazi

Introduction

Systemic sclerosis (SSc) is a chronic connective tissue disease that can cause progressive skin and organ fibrosis. A severe renal complication, scleroderma renal crisis (SRC), presents with abrupt hypertension and acute kidney injury, carrying high mortality [1]. Recent reports note increasing cases without skin involvement, making diagnosis difficult in the absence of classic features or autoantibodies [2]. This case highlights the diagnostic and management challenges of atypical SRC and emphasizes the importance of early recognition and intervention.

Case Presentation

An 82-year-old woman with a history of systemic sclerosis (anti-Scl-70 positive) and remote membranous nephropathy presented with a prolonged feeling of unwellness, progressive lower-limb swelling extending to her abdomen, and reduced urine output over several months. She denied urinary or respiratory symptoms. On admission, her blood pressure was 205/111 mmHg, and examination revealed 3+ pitting oedema, sclerodactyly, and dilated nailfold capillaries.

Investigations showed acute kidney injury (creatinine 144 µmol/L, eGFR 29 mL/min), hypoalbuminaemia (22 g/L), and nephrotic-range proteinuria. Imaging demonstrated widespread oedema, pleural and pericardial effusions, and ascites. She was treated with IV diuretics, fluid restriction, and antihypertensives (amlodipine and captopril).

Despite these interventions, her renal function deteriorated, and she developed flash pulmonary oedema, requiring emergency haemodialysis.

A renal biopsy revealed primary membranous nephropathy (PLA2R-positive) with acute vascular injury showing endothelial swelling, fibrinoid necrosis, and "onion-skin" arteriolar changes, consistent with scleroderma renal crisis (SRC). She was continued on dialysis and discharged on enalapril and darbepoetin alfa, though she later missed follow-up.

This case highlights the diagnostic challenge of SRC without new skin changes and the coexistence of dual renal pathology in systemic sclerosis. Early recognition, prompt ACE inhibitor therapy, and a multidisciplinary approach are crucial to improving outcomes and preventing irreversible renal failure.

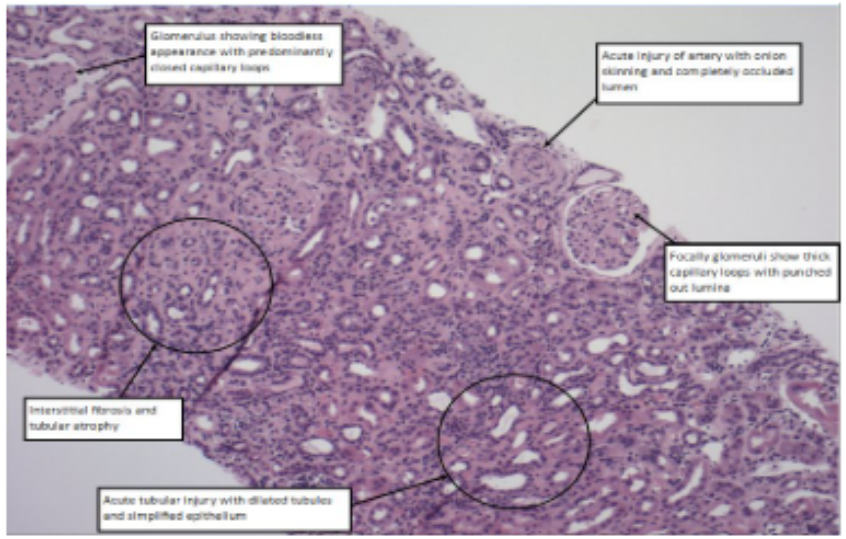


Figure 1: Hematoxylin and eosin-stained section of the renal biopsy

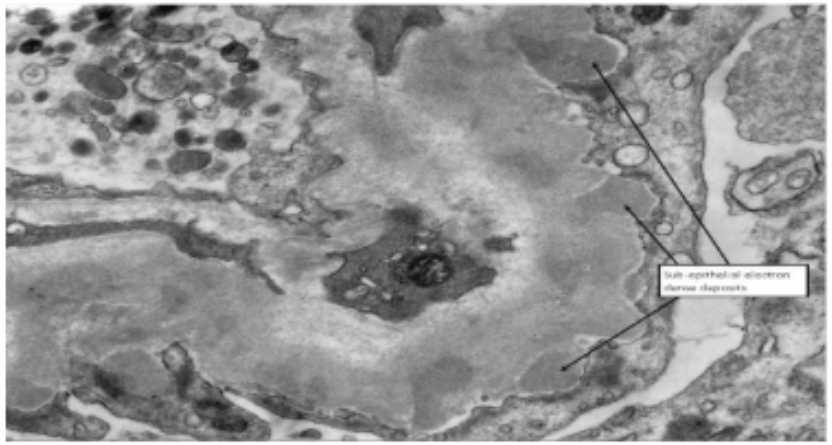


Figure 2: Electron microscopy image of the renal biopsy

Conclusion

This case highlights the challenges of diagnosing scleroderma renal crisis (SRC) in systemic sclerosis (SSc) without typical skin changes. The coexistence of membranous nephropathy complicates management. Early recognition and prompt ACE inhibitor therapy are essential, as delayed intervention can lead to irreversible renal failure and dialysis dependence.

References

1. Shimizu T, Iwamoto N, Okamoto M, et al.: Scleroderma renal crisis complicated with thrombotic microangiopathy triggered by influenza B virus infection. Intern Med. 2019, 58:441-5. 10.2169/internalmedicine.1441-18

2. Hansrivijit P, Omeonu KF, Lawal HO, Gangireddy M, Gadhiya KP, Dhatt RS: A 45-year-old man with scleroderma renal crisis associated with a history of systemic sclerosis sine scleroderma. Am J Case Rep. 2020, 21:e927030. 10.12659/AJCR.927030

Improving Smoking Cessation Referrals for Hospital Inpatients in the Peri-Operative Setting: A Quality Improvement Initiative

Authors- Dr Rahil Omar Tai Valappil, Dr Muhammad Hussein Alhafez . Supervised by – Dr Stephanie Wells (University Hospital of Wales)

Introduction

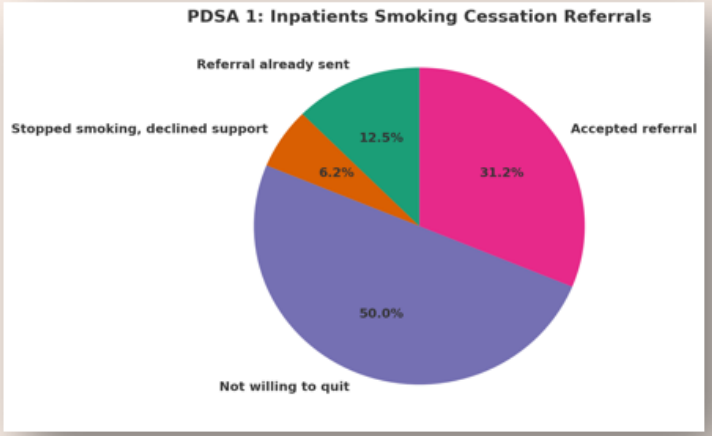
Smoking remains as the most significant modifiable risk factor of vascular disease despite a gradual decline in its use and plays a major role in the development and progression of multiple vascular diseases. [1] Physicians very often encounter patients in their perioperative period, highlighting the importance of a holistic & comprehensive perioperative care. The inpatient stay and perioperative period represent a "teachable moment," during which patients may be more motivated to improve their health.[2] Medical events that have been highlighted as teachable moments include ICU admission, ACS , stroke, surgery, cancer diagnosis, and lung cancer screening.[3] We conducted service evaluation at the University Hospital of Wales, reviewing current practices, quantifying the numbers of referrals and identifying barriers to referral to smoking cessation services.

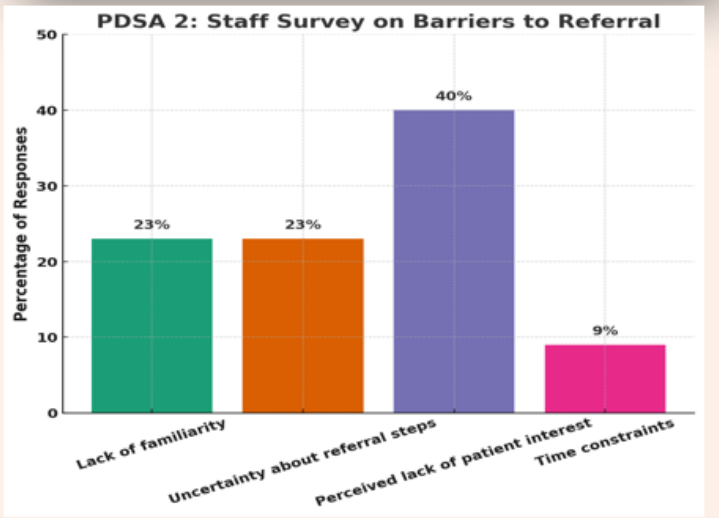
Methods:

We used PDSA (Plan do study act) methodology across two cycles.

PDSA 1: A snapshot data collection of smokers was undertaken to identify the number of smokers and the proportion being referred to the smoking cessation services. Findings were suggestive of low referral rates prompting the need to find out why the referrals were low.

PDSA 2: To identify barriers to referral, we used staff questionnaire. Based on the responses, interventions including PowerPoint presentation & a video demonstrating the referral process were created and presented at the local meeting. Posters of NRT prescription & 'Ask, Advice & Act' have been put for display on the ward to remind & also increase staff awareness. A re-audit is planned to assess the impact.





Results-

PDSA 1- 16 inpatients in their perioperative period were identified as smokers; of these, 2 referrals had already been sent, 1 patient stopped smoking on admission and declined support, and 8 were not willing to quit. We successfully encouraged 5 of these patients to attempt quitting and accept a referral to smoking cessation services.

PDSA 2- A survey of 36 staff found that over half of respondents (53%) were unsure how to refer to the smoking sedation services. The most cited reasons for not referring included lack of familiarity with the service (23%), uncertainty about referral steps (23%), perceived lack of patient interest (40%) & time constraints during consultations (9%).

Conclusion-

This project demonstrated that the perioperative setting provides an effective teachable moment to encourage smoking cessation, with structured conversations resulting in successful referrals. Low referral rates were due to a combination of factors such as staff uncertainty about referral processes and perceived patient disinterest. Interventions including education & visual prompts have been used to increase awareness and confidence among staff. Combination of factors led to low referrals. Future PDSA cycles is planned to focus on how to sustain the change (Eg; Challenges of junior doctor changeover).

References

1. Kim T, Brahmandam A, Alameddine D, et al. Pilot study of a comprehensive multidisciplinary inpatient-based approach to smoking cessation in patients with vascular disease. JVS-Vascular Insights 2025;3:100174. doi: 10.1016/j.jvsvi.2024.100174.
2. Centre for Perioperative Care. Smoking cessation. Available from: https://www.cpoc.org.uk/guidelines-and-resources/perioperativeoptimisation-Top-seven-interventions/smoking-cessation [Accessed 31/08/25].
3. Lang AE. Patients who present with tobacco use: more than a teachable moment–a treatable one. Chest. 2023;164(2):292-293.doi:10.1016/j.chest.2023.04.024

Creatinine Kinase Negative PM/Scl-Autoimmune Myositis With Pleural Involvement

Rahul Choudhary, Nain Kamal Aulakh, Ceris Owen
Medway NHS Foundation Trust

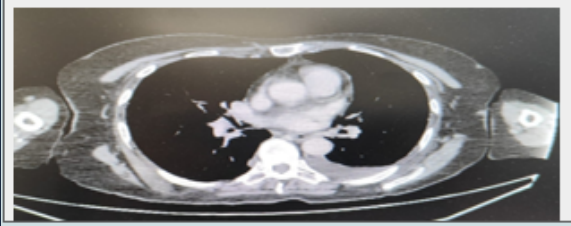
INTRODUCTION

Autoimmune myositis is an uncommon inflammatory muscle disease with potential multisystem involvement. This case highlights diagnostic and therapeutic challenges of creatine kinase–negative myositis with pleural involvement, emphasizing immunosuppression and management in patient declining steroid therapy.

CASE

Female in late 70s came with 4-week history of cough, fatigue, small joint pain, exertional dyspnoea, weight loss (~5 kg), reduced appetite, difficulty rising from chair and unable to lift arms above head.

- Exam: marked proximal muscle weakness with mild tenderness (shoulder abduction & hip flexion 4/5), distal power intact; tone, reflexes,sensation normal.
- Resp: dullness at left base, CVS normal.
- Initial bloods- CRP 165 mg/L, CK 21 IU/L BNP 39
- Extended AI screen- PM/Scl-100 positive, NXP2 positive , other AI antibodies including anti HMG CoA Red – Negative
- Pleural fluid consistent with exudative serositis (raised protein and LDH, negative M-C/S).



HRCT:
Small left pleural effusion

DISCUSSION

- Lung MDT - pleural fluid cytology, microbiology, and CT CAP were discussed; no features of malignancy or infection were identified, supporting a systemic autoimmune aetiology.
- **Management and Outcome** A working diagnosis of PM/Scl-associated autoimmune polymyositis overlap syndrome with systemic features was made. Treatment with IV methylprednisolone followed by oral steroids (prednisolone 60mg daily) was recommended after rheumatology review. Despite initial improvement on IV steroids, the patient declined further oral use due to side-effect concerns. After counselling, she signed a treatment refusal form; mycophenolate is planned to be initiated with ongoing rheumatology follow-up.
- PM/Scl positivity is associated with mixed connective tissue disease and may involve serosal surfaces. The patient's low CK highlights that myositis activity may not correlate with muscle enzyme elevation.
- Steroid hesitancy, while uncommon, can delay critical interventions. This case highlights the importance of clear communication, shared decision-making, and offering alternative steroid-sparing strategies.

LEARNING POINTS

- AI myositis may present with low CK and systemic features requiring MDT review . It may have fluctuating course and can be asymptomatic in initial episodes but still requires testing and regular follow up.
- Single dose of steroids can mask symptoms completely and hamper the clinical diagnosis.
- PM/Scl-100 positivity is associated with overlap syndromes and requires careful systemic assessment. Steroid hesitancy requires early engagement, education, and alternative planning.

REFERENCES

1. Jean-Luc Senécal, Isabelle C, Fritzler MJ, Targoff IN, Goldstein R, Gagné M, et al. An Autoimmune Myositis Overlap Syndrome Associated With Autoantibodies to Nuclear Pore Complexes. Medicine. 2014 Nov 1;93(24):383–94.
2. Satoh M, Tanaka S, Ceribelli A, Calise SJ, Chan EKL. A Comprehensive Overview on Myositis-Specific Antibodies: New and Old Biomarkers in Idiopathic Inflammatory Myopathy. Clinical Reviews in Allergy & Immunology. 2015 Sep 30;52(1):1–19.

Optimising Prognostic Therapies in Hospitalised Patients with Heart Failure with Reduced Ejection Fraction (HFrEF): A Quality Improvement Project

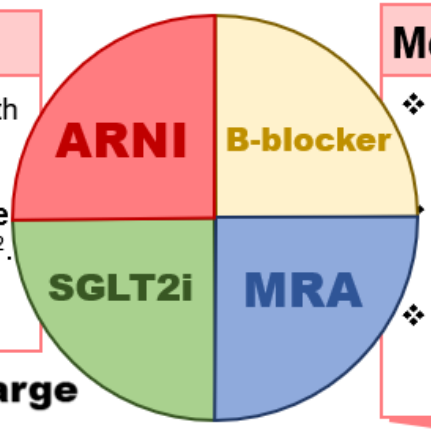
Rahul Sethi, Zak Jefferson-Pillai, Faizah Lubna, Usman Ahmed, Georgios Karagiannis, Omur Choudhury.

The Hillingdon Hospitals NHS Foundation Trust

ESC

Background:

- Four medication groups **reduce mortality** in patients with HFrEF[1,2].
- Updated **2023 ESC Guidelines** recommend the rapid **initiation** of prognostic therapies, **up-titration** and **close follow-up within 6 weeks** following HF hospitalisations[2].
- These actions reduce both the risk of HF readmission and death[1,2].



Methods:

- **Retrospective data collection** from patients with **LVEF < 50%** (n=47) admitted over one month at a district general hospital.
- Data collected included basic demographics, LV ejection fraction, discharge medications and evidence of onward referrals in discharge summaries.
- **Infographic poster** (*Figure 1*) created to promote ESC guideline adherence was subsequently displayed in doctors' offices and data was recollected.

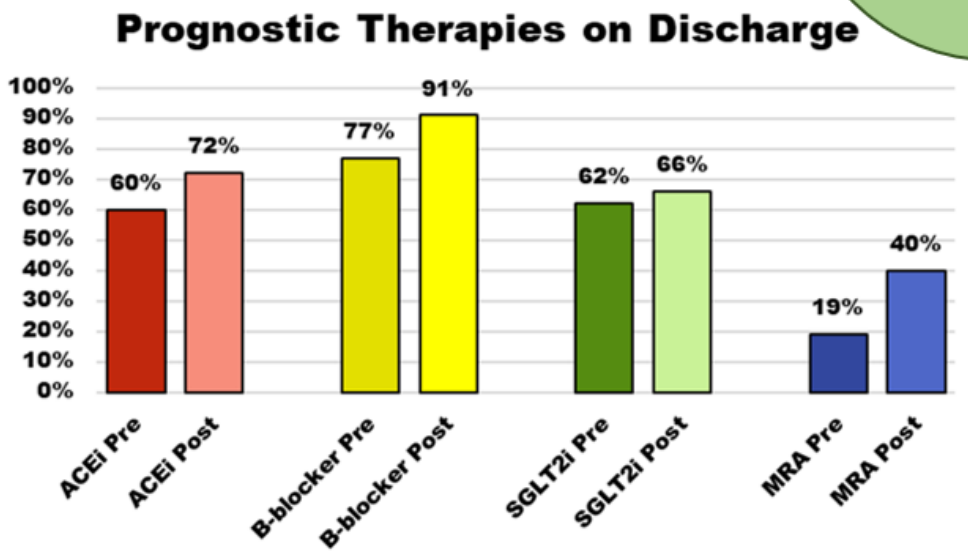


***Figure 2**: Bar chart illustrating the rates of prescribing on discharge of each of the four pillars of prognostic therapies in HFrEF, pre- and post-intervention.*
(ACEi = Angiotensin-converting enzyme inhibitors/angiotensin receptor blockers/angiotensin receptor and neprilysin inhibitors, B-blockers = beta-blockers, SGLT2i = sodium/glucose co-transporter 2 inhibitors, MRA = mineralocorticoid-receptor antagonists).

Results:

- **Improved Prescribing:** significant post-intervention improvements *(Figure 2)*, most notably the MRA prescribing rates rose from **19%** → **40%**
- **Medication rationale documentation:** improved documentation for holding ACEi, from **32%** → **54%,** post-intervention.
- **Onward referrals:** close follow-up via HF nurse specialists on discharge improved from **47%** → **64%.**

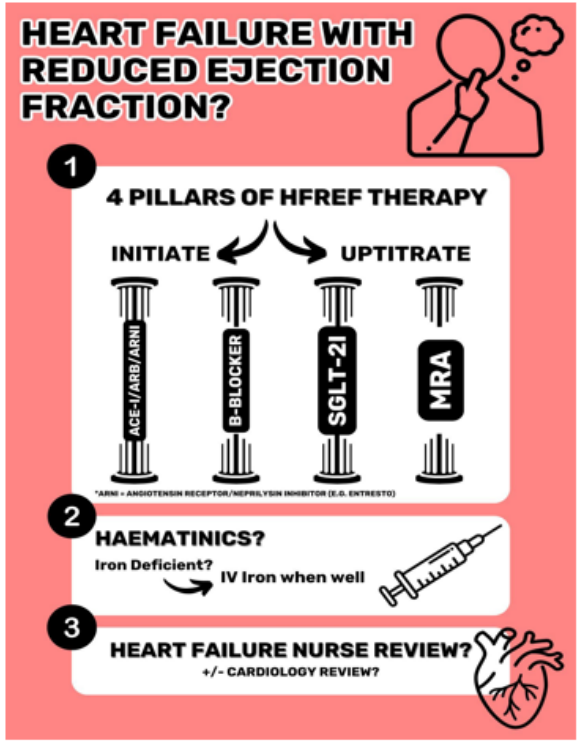


***Figure 1:** Infographic poster, the primary intervention for our QIP.*

Discussion:

- Our QIP led to a **significant improvement in adherence to the ESC guidelines** and ultimately more patients received guideline directed medical therapy.
- **Opportunities for optimization:** every clinical encounter offers a chance to optimize HFrEF therapy.
- **Replicable method:** our educational poster illustrates a simple, feasible tool for improving guideline compliance.
- **Future plans:** further cycles and education efforts planned to expand these improvements across the hospital, focussing on improving documentation on discharge summaries.

References:

1) Medazaa A, et al. (2022). Safety, tolerability and efficacy of up-titration of guideline-directed medical therapies for acute heart failure (STRONG-HF): a multinational, open-label, randomised, trial. *Lancet,* 406.
2) McDonagh TA, et al. (2023). 2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: Developed by the task force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) With the special contribution of the Heart Failure Association (HFA) of the ESC. *European Heart Journal*, 44.

Hoarseness due to recurrent laryngeal nerve palsy secondary to functional mitral regurgitation in ischemic cardiomyopathy: a variant of Ortner's syndrome

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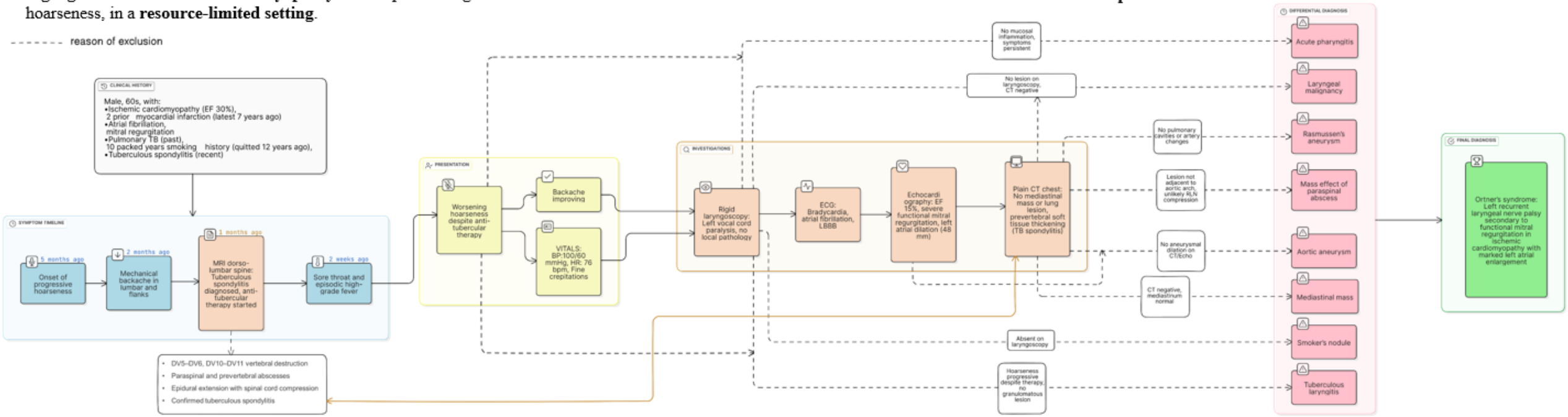
Mohi ud Din Islamic Medical college – AJK, Pakistan

Background

- **Ortner's syndrome** is a rare cause of unilateral **recurrent laryngeal nerve (RLN) palsy** due to **cardiovascular pathology**.
- Traditionally linked to **mitral stenosis**, novel research has implicated that it arises from **RLN compression** between the **aorta or ligamentum arteriosum** and **dilated pulmonary artery** within the **aortopulmonary window**.
- In this report, we describe what we believe is one of the few reported cases of **Ortner's Syndrome due to RLN palsy secondary to functional mitral regurgitation** in **ischemic cardiomyopathy** as a suspected diagnosis of hoarseness, in a **resource-limited setting**.

Case Presentation / Differential Diagnosis / Investigations

Figure 1: Diagnostic and investigative pathway
(Our own figure)



Outcome and Follow-Up

- **Further evaluation** with **contrast-enhanced CT (contrast was avoided due to renal impairment)**, **transoesophageal echocardiography**, and **biopsy** of the soft tissue lesion was recommended, along with consideration of **surgical mitral valve intervention** or **vocal cord medialization**.
- However, due to **financial constraints**, **comorbidities**, and **resource limitations**, the patient **declined further interventions** and was **lost to follow-up**.

Discussion

- Several **cardiovascular causes of RLN palsy** have been reported; its association with **mitral regurgitation** remains rare, with only a few cases described in the literature.
- In our patient, **functional mitral regurgitation due to ischemic cardiomyopathy** resulted in **marked left atrial dilatation**, leading to **RLN compression and hoarseness**.

Learning Points

- This case underscores the importance of considering **Ortner's syndrome** in patients with **unexplained hoarseness** and **significant cardiac disease**.
- **Echocardiography** plays a pivotal role in diagnosing **underlying cardiac causes**, while **chest imaging** assists in excluding **noncardiac aetiologies**.
- In **resource-limited settings**, awareness of this **rare entity** is crucial, as **diagnostic and therapeutic options** may be constrained.
- **Early detection** and **optimisation of cardiac status** may help prevent **progression of cardiac remodelling** and **secondary complications** such as **neuropathic hoarseness**.

Keywords: Ortner's syndrome, Functional ischemic mitral regurgitation, hoarseness .

Improving Infection Prevention in Haemodialysis A Quality Control Project Korle Bu Teaching Hospital, Ghana.

Richard E. Baidoo, Leroy Dotse, Ellen Okyere-Dankwa, Akua N. Williams, Isaac B. Dwamena and Edward Kwakye

INTRODUCTION

Patients on dialysis rely on healthcare providers to adhere to best practices to prevent infection-related complications, which constitute a major cause of dialysis-related morbidity and mortality[1].

To minimise these infections, the Centers for Disease Control and Prevention (CDC) has developed a list of nine core interventions to prevent bloodstream infections (BSIs).

One of the core interventions is the quarterly performance of vascular access care observations, including catheter connections, disconnections, and exit-site care[2]. Adherence to these core interventions has demonstrated a reduction in BSIs, according to studies[3,4].

MATERIALS AND METHODS

The audit aimed to enhance adherence to CDC-recommended protocols for catheter and AV fistula care during hemodialysis to reduce infection risks. Conducted at the Haemodialysis Unit of Korle Bu Teaching Hospital in Ghana, the study used an observational cross-sectional design with data collected through a CDC-based Google Forms checklist.

Nursing staff were observed across two cycles before and after an intervention period, and performance was assessed by comparing the percentage of correctly performed procedures between the two cycles.

RESULTS AND DISCUSSION

A total of 174 observations were recorded in the first cycle and 214 in the second, covering AV fistula and central venous catheter procedures. Adherence improved markedly across most areas, with the greatest gains in AV fistula site cleaning (+70.5%) and hand hygiene (+25.7% to +51.2%).

Only glove use for site compression showed a slight decline (–1.2%), while steps that already had high compliance remained stable.

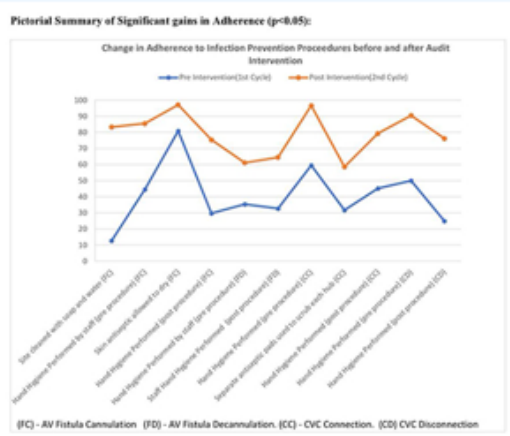


Figure one

CONCLUSION

The audit successfully resulted in significant positive changes in the percentage of adherence to the CDC protocol for infection prevention across all the sections tested, except for one section.

This emphasises the need to implement frequent clinical audits, especially in low resource settings, to improve adherence to infection prevention protocols.

	Before Intervention (%)	After Intervention (%)	Change in Percentage	p-value
AV Fistula /Graft Cannulation				
Site cleaned with soap and water	12.8	83.3 (n=60)	+70.5	<0.00001 **
Hand Hygiene Performed by staff (pre procedure)	44.7	85.5	+40.8	<0.00001**
New clean gloves worn	100	100	0	0.7794
Skin antiseptic applied appropriately	97.9	98.6	+0.7	0.7718
Skin antiseptic allowed to dry	80.9	97.1	+16.2	0.0034**
No contact with Fistula/Graft site after asepsis	91.3 (n=46)	98.6	+7.3	0.0588
Cannulation performed aseptically	95.7 (n=46)	98.5 (n=68)	+2.8	0.3576
Connect to Blood Lines Aseptically	95.7	98.6	+2.9	0.3320
Gloves Removed	95.7	98.6	+2.9	0.3320
Hand Hygiene Performed (post procedure)	29.8	75.4	+45.6	<0.00001**
AV Fistula / Graft Decannulation				
Hand Hygiene Performed by staff (pre procedure)	35.4	61.1	+25.7	0.0014**
New clean gloves worn	100 (n=64)	100	0	0.7795
Disconnect from bloodline aseptically	95.3 (n=64)	96.8	+1.5	0.6312
Needle Removed Aseptically	90.6 (n=64)	97.9	+7.3	0.0394
Clean Gloves worn (by staff/patient) to compress site	67.2 (n=64)	66	-1.2	0.8729
Clean Gauze applied to site	98.4 (n=63)	100	+1.6	0.2150
If other activities performed between needle removal, asepsis maintained	56.7 (n=60)	60.8 (n=74)	+4.1	0.6312
Gloves Removed	83.1	86.3	+3.2	0.5755
Staff Hand Hygiene Performed (post procedure)	32.8 (n=64)	64.5 (n=93)	+31.7	0.0001*

Table 1

AV Fistula cannulation , AV Fistula Decannulation

	Before Intervention (%)	After Intervention (%)	Change in Percentage	p-value
Central Venous Catheter Connection				
Mask Worn Properly	66.7	79.3	+12.6	0.2460
Hand Hygiene Performed (pre procedure)	59.5	96.6	+37.1	0.0004*
New clean gloves worn	100	100	0	0.7872
Catheter Hub Scrubbed	97.6	100	+2.4	0.4009
Separate antiseptic pads used to scrub each hub	31.7	58.6	+26.9	0.0244*
Hub Antiseptic allowed to dry	95.2	96.6	+1.4	0.7263
Catheter attached to bloodlines aseptically	81	93.1	+12.1	0.1499
Gloves Removed	90.5	100	+9.5	0.0873
Hand Hygiene Performed (post procedure)	45.2	79.3	+34.1	0.0041*
Central Venous Catheter Disconnection				
Mask Worn Properly	55	81	+26	0.0735
Hand Hygiene Performed (pre procedure)	50	90.5	+40.5	0.0044*
New clean gloves worn	100	100	0	0.9681
Catheter disconnected from bloodline aseptically	95	100	+5	0.2983
Catheter Hub Scrubbed	95	100	+5	0.2983
Separate antiseptic pads used to scrub each hub	20	42.9	+22.9	0.1164
Hub Antiseptic allowed to dry	80	95.2	+15.2	0.1362
New caps attached aseptically	90	95.2	+5.2	0.5222
Gloves Removed	80	90.5	+10.5	0.3421
Hand Hygiene Performed (post procedure)	25	76.2	+51.2	0.0010*

Table 2

Central venous catheter connection and central venous catheter disconnection

REFERENCES

1. Opoku-Asare B, Boima V, Ganu VJ, Aboagye E, Asafu-Adjaye O, Asare AA, et al. Catheter-Related Bloodstream Infections among patients on maintenance haemodialysis: a cross-sectional study at a tertiary hospital in Ghana. BMC Infect Dis. 2023 Oct 7;23(1):664.

2. CDC. Dialysis Safety. 2024 [cited 2025 Sept 2]. Resources & Tools. Available from: https://www.cdc.gov/dialysis safety/hcp/tools/index.html

3. Patel PR, Kallen AJ. Bloodstream Infection Prevention in ESRD: Forging a Pathway for Success. Am J Kidney Dis. 2014 Feb;63(2):180–2.

4. Lee KG, Ng LC, Yeon W, Silva Thore S, Rahman MA, Rofi SNM, et al. Reducing tunneled catheter-related infection in hemodialysis patients with nationwide standardization of catheter care protocol. J Vasc Access. 2018 Jan;19(1):110–1.

The Heart of the Matter : MELAS Syndrome-induced Cardiomyopathy

Dr Rita Omweri, Dr Edna Mensah, Dr Chitsa Seyani, Dr Catherine Mercer, Dr Andrew Flett

University Hospital Southampton NHS Foundation Trust

Royal College of Physicians

CASE PRESENTATION

- PC: **39yr old** Caucasian male presented to ED with sudden onset central chest pain lasting 5hrs.
- PMH: Childhood Asthma, Type 1 Diabetes complicated with retinopathy.
- Medications: Insulin. NKDA
- FH: Strong family history of cardiovascular death and T1DM was noted.
- Mother passed away from myocardial infarction aged 50, and her identical twin sister from heart failure aged 54. Both were diagnosed with T1DM.
- Patient's sister was diagnosed with Epilepsy and T1DM.
- SH: Accountant. No ETOH. Social smoker & no illicit drug use
- Stable observations. Bibasal crepitations noted on auscultation, otherwise unremarkable examination.

INVESTIGATIONS

- Initial troponin was elevated at **1439ng/l** (local range <12ng/L) and **5369ng/l** at 3hrs.
- ECG: no changes indicating an acute coronary syndrome.
- Lactate was elevated at **4.4mmol/L**, other blood tests were unremarkable.
- CXR: venous congestion, increased cardiothoracic ratio and no pleural effusions.
- TTE: **severely impaired biventricular systolic function**. Left ventricular ejection fraction of **20-25%** (normal range 55-65%).
- Coronary angiogram: unobstructed coronary arteries.
- Cardiac MRI: overall appearances suggestive of a potential inherited cardiomyopathy. Apical transmural scar and microvascular obstruction (MVO) representing previous event.
- **Management**: He was commenced on ACS management and Furosemide 40 mg OD for venous congestion. He was started on heart failure treatment and a CRT-D device was eventually implanted.

CARDIAC MRI AND PEDIGREE

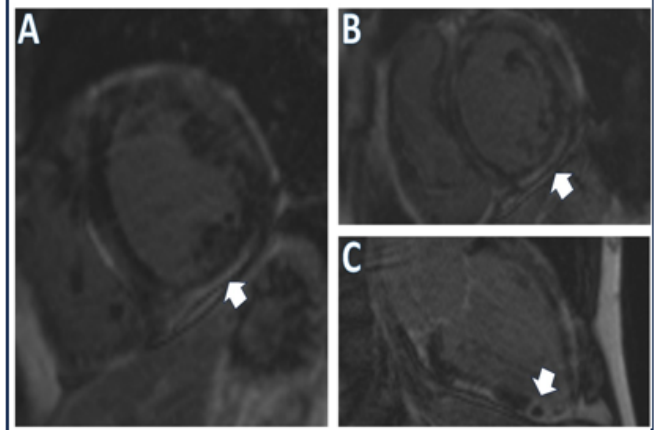


Figure 1: Short & Long Axis Late Gadolinium Enhancement (LGE) Images: Short axis (A&B) and long axis (C) with white arrows indicating areas of LGE. Image C highlights transmural enhancement of the apical inferior wall with a central area of MVO.

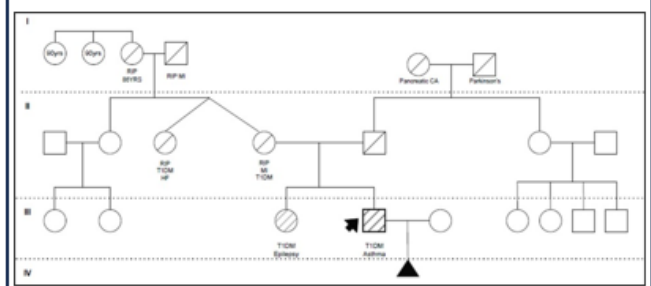


Figure 2: Family tree: Genetic screening which revealed pathogenic mitochondrial DNA variant m.3243A>G in the MT-TL1 gene, confirming the molecular diagnosis of mitochondrial DNA disease.

DISCUSSION

- **Mitochondrial, Encephalomyopathy with Lactic Acidosis and Stroke-like episodes (MELAS) syndrome** is a rare, progressive, neurodegenerative, mitochondrial disorder originally described by Pavlakis in 1984.
- Most common mutation is the A-G substitution at nucleotide 3243 (m.3243A>G).
- MELAS has a highly variable presentation, and it affects tissues with high energy demand.
- Commonly presents with neurological symptoms, a few cases have reported cardiac pathologies such as HCM, DCM and conduction defects.
- Our case highlights a rare case of MELAS with cardiac symptoms, elevated cardiac biomarkers and high serum lactate. Cardiac MRI and family history alluded to an underlying inherited cause.
- **Learning point:** Young patients with heart failure, and a significant family history should be evaluated for an inherited cardiomyopathy. Genetic screening is invaluable in these patients and their first-degree relatives.

“Let’s talk about bowels and document them”

Ensuring Reliable Electronic Bowel Documentation: A Quality Improvement Project

The Shrewsbury and Telford Hospital NHS Trust

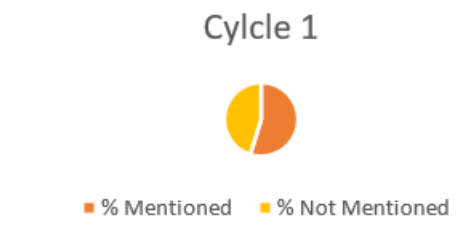
Sabha Nadeem[1] (Presenting Author) · Mohamed Asma[2] · Doaa Khafagy[2] · Khalid Abozaid[2] · Chinarisam Chuku[2] · Dr Oosama Choudhry[2] [1] Lead author; [2] Co-authors – The Shrewsbury and Telford Hospital NHS Trust*

Introduction:
Documentation of bowel movement is a fundamental yet understated aspect of inpatient care, given additional importance in older adults and patients with prolonged admissions.
Delays in identifying or acting on constipation, diarrhoea or obstruction can lead to complications and extended hospitalisation or avoidable morbidity and mortality.
Reliable documentation also underpins communication across the multidisciplinary team and allows for timely escalation and consistent monitoring.
Electronic documentation systems have been introduced to our hospital system, such as Vital PAC; however, there continues to be inconsistency in this recording.[1,2] Our aim was to address this and improve documentation.

Materials and methods:
This was a 2-cycle quality improvement audit of a general medical ward, with each cycle including a 15-day admission period.

Cycle 1 reviewed bowel documentation rates retrospectively on the electronic platform VitalPAC, followed by targeted interventions:
(1) Posters displayed around ward highlighting clinical importance of bowel documentation;
(2) Daily board round reminders and
(3) Reinforcement of these interventions at regular ward meetings over a 6-week period.

Cycle 2 repeated the same data collection process to assess for impact of the interventions. We also conducted subgroup analysis for patients with admission >3 days and those aged ≥65 years.[3,4]



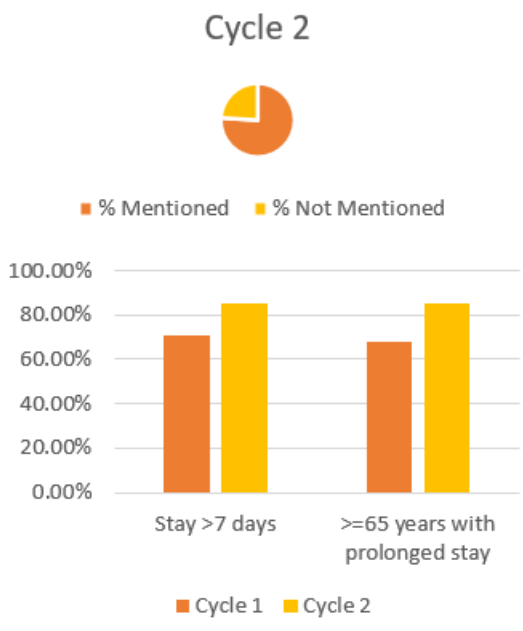


Table 1. Bowel documentation rates before and after interventions

Category	Cycle 1	Cycle 2
Overall compliance	40/73 (54.8%)	60/79 (76.0%)
Stay >7 days	17/24 (70.8%)	40/47 (85.1%)
≥65 years with prolonged stay	23/34 (67.6%)	34/40 (85.0%)

Conclusion:
This project demonstrated that simple, low-cost interventions such as posters, reminders during board rounds, and reinforcement in ward meetings can significantly improve compliance with electronic bowel documentation.

Reliable documentation enhances early recognition of bowel dysfunction, facilitates escalation, and strengthens communication among healthcare staff. Sustaining these measures and embedding prompts into electronic systems could further improve practice and reduce avoidable complications.

Future work should explore links between improved documentation and patient outcomes such as reduced length of stay and complication rates.

Not just a tick box.

References: 1) RCP. NEWS2 (2017). 2) NICE. Constipation in adults (NG12, 2021). 3) BGS. Improving bowel chart documentation (2023). 4) Lee A et al. BMJ Open 2022;12:e059545. 5) O’Connor S et al. BMC Med Inform Decis Mak 2016;16:120. 6) Wachter RM. Making IT Work (DoH, 2016). Contact: sabha.nadeem@nhs.net

NT-proBNP Clinic Audit

Safiyyah Burhani and Pavandeep Toor

Barking, Havering and Redbridge University Hospitals NHS Trust

Introduction

NICE Guideline CG106 (1) makes recommendations for the timely assessment of patients with raised NT-Pro BNP levels as follows:

- NT-pro-BNP > 2000 ng/L, refer for specialist assessment and echocardiography within 2 weeks.
- NT-pro-BNP level between 400–2000 ng/L , refer for specialist assessment and echocardiography within 6 weeks.

The heart failure diagnostic clinic (HFDC) at Barking, Havering and Redbridge University Hospitals NHS trust is designed as a service providing investigation and clinical review of patients referred with raised NT-pro-BNP and suspected heart failure. We audited the HFDC at BHRUT to assess compliance with NICE guidelines and to identify areas for service improvement. The aims of the audit were:

- To analyse current referral and triage processes that lead to review in clinic.
- To assess whether patients with elevated BNP were reviewed in accordance with timeframes published in the NICE guidelines
- To evaluate the proportion of patients not identified as having heart failure who subsequently went on to be diagnosed with HF later.

Materials and Methods

We audited all _patients seen in the HF diagnostic clinic in 2023.

The data was collected from GP referrals, clinic letters, HF team database, echocardiogram reports and blood tests.

Analysis of the data was performed in excel.

Results

Out of 481 patients included in the audit. a total of 116 (24%) were diagnosed with HF. Of these :

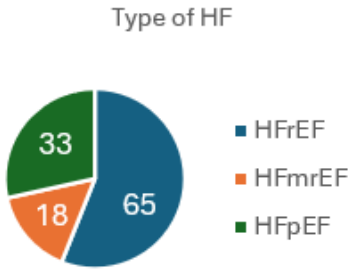
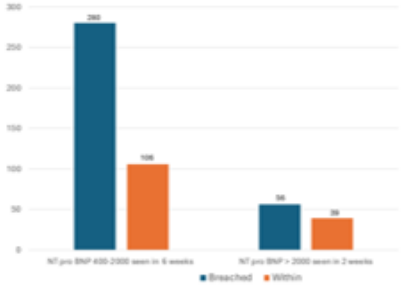


Figure 1

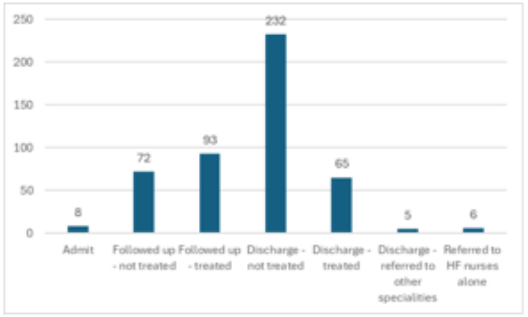
- 65 (56%) had Heart Failure with reduced ejection fraction (HFrEF),
-18 (16%) HF with mildly reduced ejection fraction (HFmrEF)
-33 (28%) HF with preserved ejection fraction (HFpEF).

Did we meet the timeframes published by NICE guidelines ?

In the low-risk group 106 of 386 (27%) patients were seen within 6 weeks. In the high risk group 39 of 95 (41%) patients were seen within 2 weeks (Figure 2).



Outcomes of NT pro BNP clinic



232 patients (48%) were discharged with no treatment given (Figure 3)

Of the 365 patients who were not initially diagnosed with HF, 27 (7%) had the diagnosis of HF made at a later stage.

Discussion

Based on these results, the current pathway results in a high proportion of patients without heart failure being seen in the clinic and discharged with no treatment. With alternative reasons for the elevated NT pro-BNP levels eg age and atrial fibrillation. In a resource limited system this can have a negative impact on the delivery of a high quality, effective and efficient clinical service. Potential ways to improve the pathway include:

- Improved education/ training of referrers.
- Stricter referral/triage processes
- The use of alternative NT-pro BNP ranges based on alternative adjusted cut-offs eg age
- Strategic expansion of the workforce delivering the HF diagnostic clinic to include HF specialist nurses or registrars

Conclusion

The low proportion of patients diagnosed with heart failure, combined with the lack of timely review resulting from high demand suggest that the current pathway for HF diagnosis has room for improvement. Changes to the pathway may result in a higher proportion of HF identified, and improvements in timeliness of review in clinic to meet the guidelines recommended.

References

1. https://www.nice.org.uk/guidance/ng106
2. Bayes-Genis A, Docherty KF and Petrie MC et al. Practical algorithms for early diagnosis of heart failure and heart stress using NT-proBNP: A clinical consensus statement from the Heart Failure Association of the ESC. Eur J Heart Fail. 2023 Nov;25(11):1891-1898. doi:10.1002/ejhf.3036. Epub 2023 Sep 26. PMID: 37712339

Why, as Clinicians, we need to get 'Good' at Prescribing Varenicline for Hospitalised Patients with Tobacco Dependence: Effectiveness of Varenicline in Combination with Nicotine Replacement Therapy and Specialist Support in Treating Inpatients with Tobacco Dependency

S. Patel, E. Doran, L. Restrick

Background

- Tobacco dependence remains a leading cause of preventable illness and death, and remains prevalent in patients admitted to hospital
- The 2016 Ottowa study showed that diagnosing and treating inpatients with tobacco dependence, combined with post-discharge support, significantly reduced 30-day readmission and 1 year mortality rates
- This has led to its adoption & increasing use as the NHS model
- Varenicline, one of the key medications to treat tobacco dependence, was unavailable between 2021 and late 2024
- This study aimed to evaluate the impact of reintroducing varenicline for adult inpatients, prescribed alongside nicotine replacement therapy (NRT) and specialist tobacco dependence treatment (TDT) team support, in an inner-city hospital with 19% inpatient tobacco dependence prevalence

Methods

- Retrospective review of inpatients prescribed newly-available varenicline between December 2024 and March 2025
- Outcomes assessed were 4-week and 3-month contact rates, self-reported quit rates and varenicline prescription use

Results

- 73 inpatients prescribed varenicline (mean age 58 years)
- **High Tobacco Dependency:** 42% had raised Carboxyhaemoglobin on admission and 19% also smoked cannabis
- **High risk of harm from smoking** with average 53 pack years exposure to tobacco
- 1 in 4 were also alcohol dependent
- In those with previous CT chest, 77% showed emphysema
- 48% of patients had diagnosed COPD
- > 1 in 5 had cardiovascular disease or hypertension
- Varenicline was prescribed by all medical teams (Figure 1)

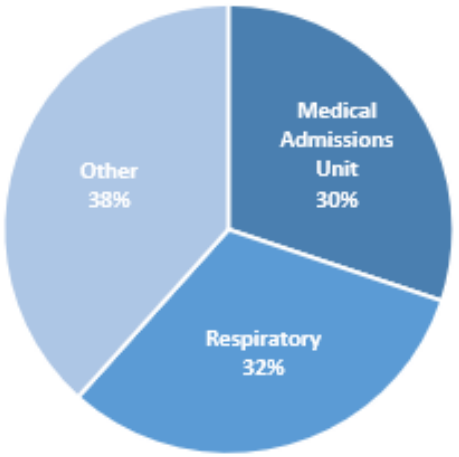


Figure 1: Wards where inpatients were prescribed varenicline (n = 73)

- 65/73 (89%) were prescribed varenicline with combination NRT
- All were seen as inpatients by the TDT team and follow-up offered
- 46/73 (63%) had a 3-month TDT team follow-up review
- **Self-reported 3-month quit rate was 52%**
- 13/24 ex-smokers (54%) had previously tried to quit without success
- Overall **'intention-to-treat' 3-month quit rate was 33%**
- Figure 2 shows 4-week and 3-month outcomes in both groups

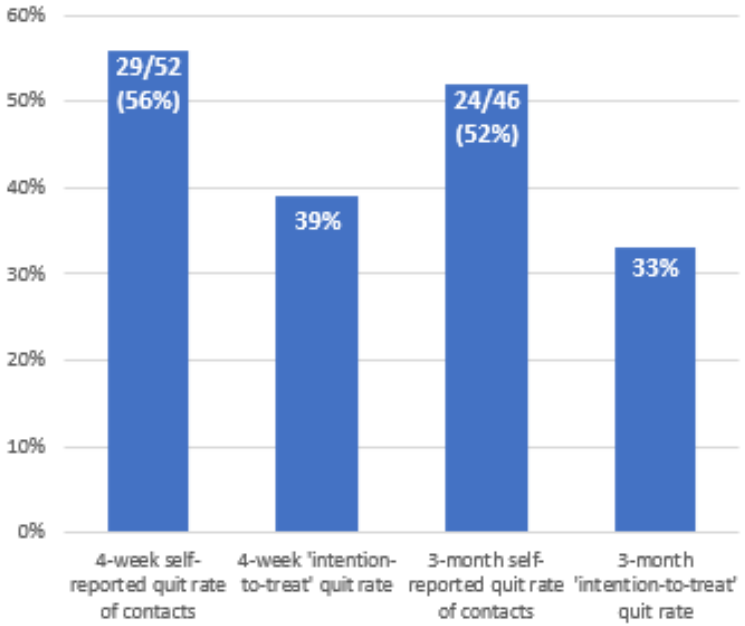


Figure 2: 4-week and 3-month outcomes for inpatients with tobacco dependency prescribed varenicline

Discussion

- Patients admitted to hospital with tobacco dependence have a high prevalence of respiratory and cardiac disease as a result of tobacco smoke exposure over years
- Patients with tobacco dependence also have an increased prevalence of alcohol and smoked drug dependence
- Varenicline, used in combination with NRT and TDT team support, is easy to prescribe, safe, well-tolerated and an effective treatment in this group of multi-morbid highly tobacco dependent patients, many of whom have previously tried to quit unsuccessfully, with a 33% 'intention to treat' 3-month quit rate
- This is higher than previously reported outcomes from Manchester and South London when varenicline was not routinely available

Conclusions

- Diagnosing tobacco dependence should be something we do for all inpatients
- Treating tobacco dependence improves patient outcomes and reduces readmission
- We have effective medications to treat tobacco dependence - now including varenicline
- Given how easy it is to prescribe, and this evaluation demonstrating effectiveness in inpatients, we recommend becoming 'confident' and 'good' at prescribing varenicline
- Inpatient varenicline prescribing should be with combination NRT and TDT support and follow-up
- Hospitals increasingly have funded TDT teams who work with ward teams and make this easier

Transverse Myelitis Revealing Relapsing-Remitting Multiple Sclerosis in a Patient with Crohn's Disease on Anti-TNF Therapy: A Rare but High-Impact Clinical Intersection

Dr. Sara Gawargeous

NHS Gloucestershire Hospitals NHS Foundation Trust

INTRODUCTION

Multiple sclerosis (MS) and Crohn's disease (CD) are both immune-mediated but rarely occur together (1). Anti-tumour necrosis factor (anti-TNF) drugs are widely used for CD but have been linked to demyelinating events (2-4), with an estimated incidence of less than 1 in 1,000 patients (5). These neurological complications can develop at any stage during therapy and may mimic other acute neurological conditions, delaying recognition. We present a case of transverse myelitis as the first presentation of relapsing-remitting MS in a patient on adalimumab for CD, highlighting the importance of vigilance for neurological symptoms in IBD patients.

MATERIALS AND METHODS

Clinical examination, neuroimaging, cerebrospinal fluid (CSF) analysis, and multidisciplinary review were performed. MRI was conducted using T2-weighted and FLAIR sequences, with both brain and full spinal imaging obtained to assess dissemination in space. Laboratory testing included CSF oligoclonal band analysis. Drug history, including timing of anti-TNF therapy initiation, was reviewed in detail to explore temporal relationships with symptom onset.

RESULTS AND DISCUSSION

A 40-year-old woman with a 7-year history of CD on azathioprine and adalimumab presented with acute right leg weakness and difficulty walking. Examination revealed pyramidal weakness, hyperreflexia, and extensor plantar response, raising suspicion for an upper motor neuron lesion. MRI revealed multiple cervical cord T2 hyperintense lesions and a new supratentorial periventricular white matter lesion, both typical of demyelinating disease. CSF analysis showed oligoclonal bands, confirming relapsing-remitting MS. Adalimumab was stopped and high-dose intravenous methylprednisolone given, resulting in partial recovery and improvement in gait.

This case highlights the diagnostic challenge of isolated spinal cord relapses, especially in patients with complex autoimmune backgrounds. The temporal association between anti-TNF use and demyelination supports a possible drug-triggered MS onset (3,6-8). Similar cases in the literature emphasise the need for early MRI in any IBD patient with new focal neurological deficits. Clinicians should be alert to neurological symptoms in IBD patients on anti-TNF therapy, as early diagnosis may prevent irreversible disability (9).

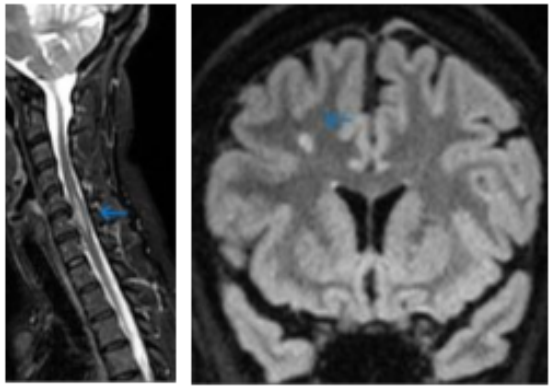


Figure 1. MRI demonstrating dissemination in space. (A) Sagittal T2-weighted cervical spine MRI showing hyperintense lesion at C2–C4 (arrow). (B) Coronal FLAIR brain MRI showing periventricular white matter lesion (arrow).

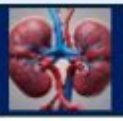
CONCLUSION

Prompt recognition of demyelination in IBD patients on anti-TNFs can guide treatment changes, avoid further neurological injury, and reduce long-term morbidity. This case adds to evidence linking anti-TNF therapy with demyelinating disease (2-4,6-9) and reinforces the need for multidisciplinary collaboration between gastroenterologists and neurologists in such scenarios.

REFERENCES& ACKNOWLEDGEMENTS

I would like to sincerely thank Dr. Taha Elsahy, Consultant in Acute Medicine at Peterborough Hospital, and the Neurology Department for their guidance, support, and valuable insights in the management of this case.

"Scan to access full references"

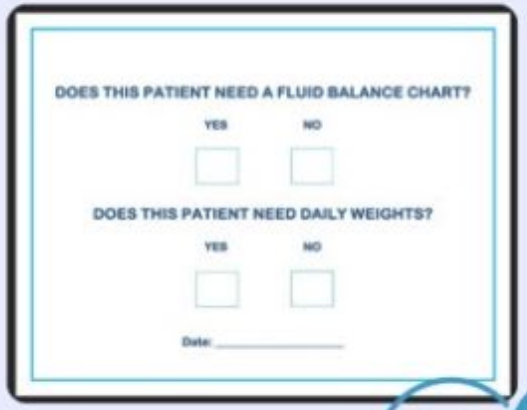


IMPROVING FLUID BALANCE CHARTING IN A RENAL WARD

BY DR SEHER MIRZA

Background

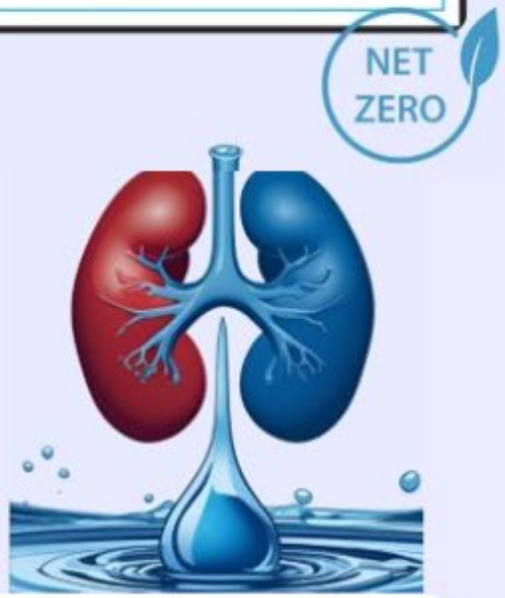
On a renal ward, fluid balance plays a critical role in the management of all admitted patients, with accurate monitoring directly influencing clinical outcomes. Despite this importance, fluid balance chart documentation is frequently incomplete or inaccurate. This quality improvement project as undertaken to identify the underlying reasons for poor completion of fluid balance charts and to develop an intervention aimed at improving documentation. In addition, the project considered the wider implications of the intervention, including cost effectiveness and potential environmental benefits.



Methodology - PDSA

Plan	Do	Study	Act
Audit fluid balance charts on the renal ward to establish completion rates and identify barriers to proper documentation.	Conduct the audit, then give the nurses and healthcare assistants a quiz to understand barriers to completing the chart. Based on the findings, introduce a bedside sign to clearly identify who requires fluid balance monitoring.	Re-audit the charts after implementing the intervention.	Present the results in the renal MD, adopt the bedside sign widely across the ward and consider further education to sustain improvements

The project used the Plan–Do–Study–Act (PDSA) methodology. A baseline audit of fluid balance charts identified poor completion rates. A quiz for nurses and healthcare assistants explored barriers, revealing uncertainty about which patients needed monitoring and workload pressures. To address this, a laminated bedside sign was introduced to clearly indicate patients requiring fluid balance charts. This aimed to reduce ambiguity, prioritise workload, and support individualised care. A re-audit compared post-intervention completion rates with baseline data, and findings informed plans for sustaining improvement.



Results

Audit Criterion	Pre intervention	Post intervention
Input recorded (4hrs)	94%	98%
Output recorded (4hrs)	28%	82%
24 hr balance calculated & documents	72%	94%
Reason for fluid chart documented	56%	98%
Patient weight recorded	44%	92%
Missing output with reason documented	11%	42%

The baseline audit revealed inconsistent completion of fluid balance charts. Following introduction of the bedside sign, completion rates improved markedly, with a 193% increase in the “Output recorded every 4 hours” domain. Baseline data included 27 charts, while the re-audit reviewed 16, reflecting fewer charts needed as advised by renal consultants. Staff reported clearer identification of patients requiring monitoring, improving compliance, reducing unnecessary documentation, and saving effort. Fewer charts also reduced paper waste, supporting sustainability and NHS net zero goals.

Conclusion

This project showed that introducing a clear bedside sign to identify which patients needed fluid balance monitoring improved chart completion on the renal ward. The intervention helped staff focus on the right patients, reducing unnecessary documentation and wasted time. By cutting down the number of charts used, the project also reduced paper use, making it more cost-effective and environmentally friendly. If used more widely, this approach could support the NHS Net Zero goals by reducing waste linked to unnecessary paperwork. Next steps will include making the intervention part of routine ward practice and supporting it with staff education and feedback.

'BREATHE – QI'

Breathlessness Evaluation with CPET-SE: Assessing Clinical Effectiveness. A Quality Improvement Project

Selda Ahmet, William Ricketts & Guy Lloyd - St Bartholomew's Hospital, Barts Health NHS Trust

NHS Barts Health NHS Trust

1. Introduction

Chronic breathlessness is associated with increased morbidity, mortality and healthcare utilisation. Obtaining a diagnosis is challenging when the cause is unclear (i.e., 'undifferentiated breathlessness'). There is a need for early and accurate diagnosis for prompt initiation of treatment. Cardiopulmonary exercise test (CPET) combined with stress echocardiogram (SE)– 'CPET-SE'- provides a comprehensive evaluation of cardiopulmonary and metabolic mechanisms of breathlessness with direct visualisation of the heart.

2. Materials & Methods

A Quality Improvement Project (QIP) using PDSA methodology introduced (i)upfront CPET-SE for all referrals and (ii)a joint cardiorespiratory multi-disciplinary team (MDT) to agree diagnoses and streamline care (Figure 1). Twelve-month outcomes included diagnostic distribution, RTT, cost savings, and patient feedback. QIP designed with Patient and Public involvement.

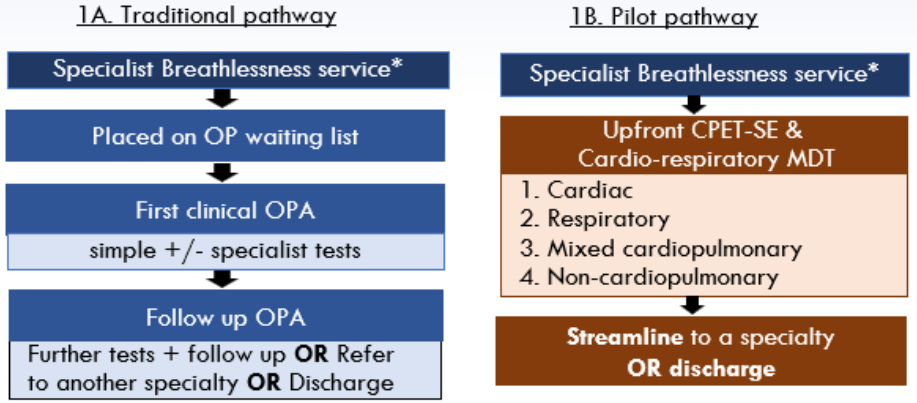


Figure 1: Comparison of tradition vs pilot pathway. Referral by primary & secondary care providers. **1A Traditional Pathway.** lengthy series of appointments and tests before reaching a diagnosis +/- referral to other service specialty. (*OP= Outpatient; OPA = Outpatient appointment*). **1B Pilot pathway.** Upfront CPET-SE with joint cardiorespiratory MDT review assigns a diagnostic domain (cardiac/respiratory/ mixed cardiopulmonary/non-cardiopulmonary) and enables onward referral or discharge.

3. Results & Discussion

- **72 patients** in the pilot study. Age-range 18-88 years (mean 54.6 years).
- **Female-to-male ratio 5:3.**
- **Diagnosis made in 93%.** Significant **cardiopulmonary disease ruled out** in the remaining 7% (*Figure 2A*).
- **CPET-SE guided MDT outcomes:** Non-cardiopulmonary, Respiratory, Mixed cardiopulmonary, and Cardiac (*Figure 2B*).
- **Most non-cardiopulmonary causes were breathing pattern disorders (BPD)** (*Figure 2C*).
- **25% discharged from pathway;** remainder had **targeted tests** and **fast-track of lung physiotherapy for BPD.**
- **Referral-to treatment time (RTT) expedited in 63%.**
- Estimated savings of **£1,077[1] / patient.** [1]*Calculation based on costs incurred in traditional vs new pathway*
- **100% positive** feedback from service users.

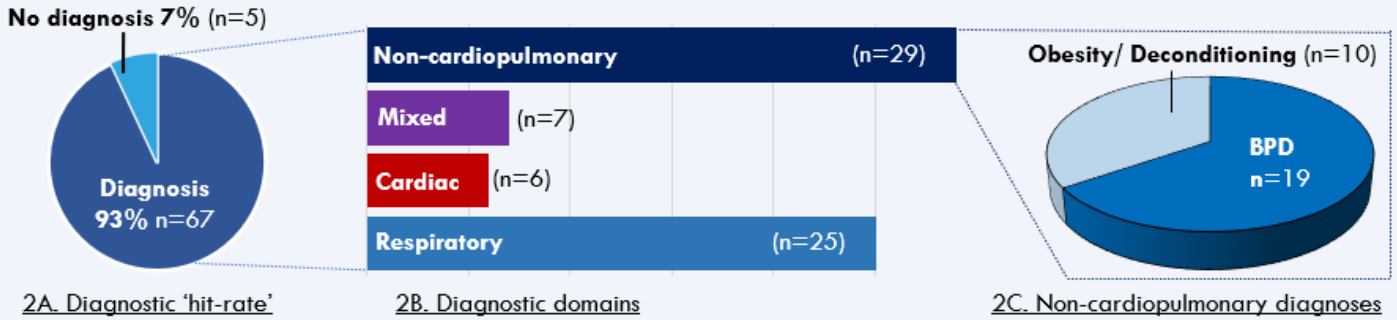


Figure 2. Proportion of diagnoses obtained and the spread of diagnoses within each diagnostic domain. 2A Diagnostic 'hit-rate'. CPET-SE was abnormal in 93% (n=67) and a diagnosis was obtained. CPET-SE was normal in 7% (n=5). **2B Proportion of diagnoses.** Respiratory 37% (n=25); Cardiac 9% (n=6); mixed-cardiopulmonary 10.4% (n=7); non-cardiopulmonary diseases 43% (n=29). **2C Non-cardiopulmonary diagnoses.** Breathing Pattern Disorder (BPD) 40% (n=29); obesity/deconditioning 35% (n=10).

A higher proportion of females entered the pathway, likely reflecting differences in health-seeking behaviors. Most diagnoses were respiratory in origin, consistent with referral bias. The combination of CPET-SE's high diagnostic yield and a joint cardio-respiratory MDT enabled streamlined triage to the appropriate service and reduced RTT with possible significant cost-savings.

4. Conclusion

Upfront CPET-SE provides a comprehensive assessment for undifferentiated breathlessness, unmasking underlying mechanisms that may not be detected with traditional diagnostic tests. This work highlights the value of an early, collaborative cardio-respiratory approach to complex breathlessness. Streamlining care pathways enables timely treatment and reduces healthcare utilisation.

The Hot Gallbladder: A Rare Cause Of Acalculous Cholecystitis In A Returning Traveller

Sorby, Serisha; Stoddart, Miranda; Daes, Gavin; Maddox, Nicola

Southmead Hospital, Southmead Road, Bristol, BS10 5NB

Background

Fever and diarrhoea in returning travellers is a common presentation with many differentials. It requires a thorough travel history alongside appropriate and targeted microbiological testing to ensure correct diagnosis and antimicrobial management.

Case Presentation

A man in his twenties presents with a 1-month history of fevers, diarrhoea, vomiting, upper abdominal pain and a headache.

- Returned 1 week before presentation after a month of travelling to Bangkok and Chiang Mai (*Thailand*), Bali (*Indonesia*) and Barcelona (*Spain*)
- Engaged in a range of activities whilst travelling including fresh water swimming, jungle tours and eating food in local restaurants and from food trucks
- Multiple mosquito bites whilst in South East Asia
- Symptoms first started after eating street food in Indonesia

- No past medical history
- No malarial prophylaxis taken.
- Typhoid vaccination 3 years prior to travel.

- On presentation, he was tachycardic and febrile (38.9°C). Observations were otherwise normal.
- Examination findings were notable for tenderness in the right upper quadrant.

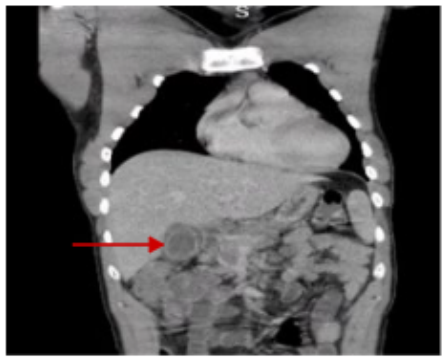
References

Investigations and Results

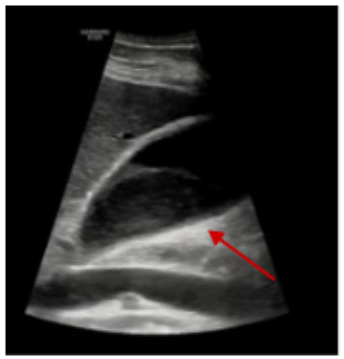
Blood Test Results

WCC	↑ **20.00** (4.0 - 11.0)
Neutrophils	↑ **17.66** (1.5 - 8.0)
CRP	↑ **124** (< 5.0)
ALT	↑ **64** (10-60)
LFTs otherwise normal. Renal function normal	
HIV, hepatitis B and hepatitis C negative	

Imaging Results



CT Chest-Abdomen-Pelvis: gallbladder oedema in the absence of biliary stones, dilatation or collection.



US Upper Abdomen: biliary sludge and a thickened gallbladder, in keeping with an acalculous cholecystitis.

Microbiology

Blood cultures: *Fusobacterium peridonticum* positive (negative on subsequent repeat)
Stool PCR: *Salmonella Newport* positive

Diagnosis and Management

This patient was diagnosed with **non-typhoidal salmonella (NTS) acalculous cholecystitis**.

The *F peridonticum* was felt to be a contaminant as it was out of keeping with the clinical syndrome.

Treatment comprised of supportive management and three days of IV ceftriaxone, followed by a single dose of IV co-amoxiclav. He was discharged with a 7 day course of oral co-amoxiclav and azithromycin. He made a full recovery.

Discussion

Salmonella enterica can be classified as typhoidal and non-typhoidal salmonella (NTS) serovars, both of which are a major source of foodborne illness worldwide. NTS typically causes an acute self-limiting gastroenteritis and in around 5% of cases extra-intestinal disease. (1)

S. enterica serotype Newport was isolated in this patient with acalculous cholecystitis. Whilst NTS rarely causes acute cholecystitis (2, 3), this is, as far as we are aware the first reported case of acute cholecystitis caused by the Newport serovar.

Salmonella Newport has previously been shown to have a lower mortality and less association with invasive disease compared to other common serotypes. (4) Invasive NTS is more common with certain serotypes, as well as immunocompromised patients and those at extremes of age, suggesting bacterial genetics may also play a role in disease manifestation.(1)

Clinicians should be vigilant for NTS in returning travellers with fever and diarrhoea and should be aware of extra-intestinal manifestations.

A thorough travel history in patients with acute cholecystitis is crucial for appropriate microbiological testing and selecting effective antimicrobial treatment, especially given rising antibiotic resistance in NTS. (5)

Boosting Respiratory Education: A Quality Improvement Project Using Weekly Bitesize Emails for Resident Doctors and Advanced Clinical Practitioners

Dr Shaheen Shahid, Respiratory Registrar, Royal Derby Hospital, University Hospitals Derby and Burton
Dr Aklak Choudhury, Consultant in respiratory Medicine, Royal Derby Hospital, University Hospitals Derby and Burton

Background

Rotational resident doctors (RD) and advanced clinical practitioners (ACPs) are valued members of the respiratory multi-disciplinary ward team. However, opportunities to learn are limited due to increasing service demands and their short lengths of rotation. This QI project explored whether weekly bitesize email teaching could improve their confidence and knowledge in managing common respiratory conditions.

Aim

To improve knowledge and confidence amongst resident doctors and ACPs for common respiratory presentations using weekly bitesize emails over a 4-month period.

Methods

March 2025 (Cycle 1): Stakeholder survey (n=10) sent to Resident Doctors on three respiratory wards
Emails to RDs and ACPs covering key respiratory topics (e.g., CAP, COPD, Asthma) were sent for 10 weeks. One topic was covered each week. The content comprised of concise teaching points, possible audit ideas, portfolio links and educational podcasts and videos

May 2025 (Cycle 2): RCD and ACP Feedback collected and emails adapted with study cards added

July 2025 (Cycle 3): Final feedback collected

Results

Cycle 1 (n=10):
78% lacked weekly teaching
89% wanted more education
90% opted for email learning
Cycle 2 (n=4):
100% found weekly emails helpful
50% wanted improvements in offer
100% supported adding study cards
Cycle 3 (n=10):
100% improved knowledge & patient care
90% found study cards helpful
70% felt no further improvements in offer needed
Positive qualitative feedback on clarity, interactivity, and accessibility
(See Figure 1,and 2)

Graphs and Charts

Figure 1

Figure 2

Example email

Conclusion

Weekly bitesize email teaching is an effective, well-received method to deliver respiratory education for rotational RDs and ACPs. Participants self-reported that they had perceived improvement in knowledge, confidence, and respiratory patient care.

Discussion

Whilst our QI had self-reported measurements and was small in scale, the project did show good initial feedback from RDs and ACPs. This framework for bite-size educational learning is well suited for busy ward environments and/or rotational staff. Further work should focus on objective outcome measures and sustainable delivery— there is potential to scale this framework via our regional respiratory education networks.

University Hospitals Birmingham NHS Foundation Trust

Audit of Peritoneal Dialysis Peritonitis: Incidence, Organisms, and TDM Efficacy in Relation to ISPD 2022 Standards at Birmingham Heartlands Hospital (2024)

S. Mahajan[1] , R. Karkar[1]

Building healthier lives

Introduction:

Peritoneal Dialysis Peritonitis - at least two out of the below :

- Clinical features consistent with peritonitis – cloudy fluid and/or abdominal pain.
- Dialysis effluent WCC >100 UL (after a dwell time of at least 2 h) with >50% PMN
- Positive dialysis effluent culture

Aim:

To study the rates, causative organisms and outcomes of Peritoneal Dialysis Peritonitis in patients seen in the PD unit at Birmingham Heartlands Hospital in 2024 and to compare results to the clinical standards outlined by the ISPD 2022 Guidelines.

Also, to study the efficiency of therapeutic drug monitoring in these patients.

Methods:

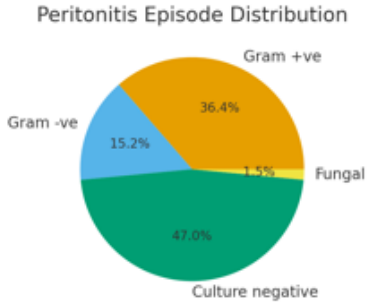
Retrospective data collection from PICs online systems.

Inclusion: All PD-related peritonitis episodes.

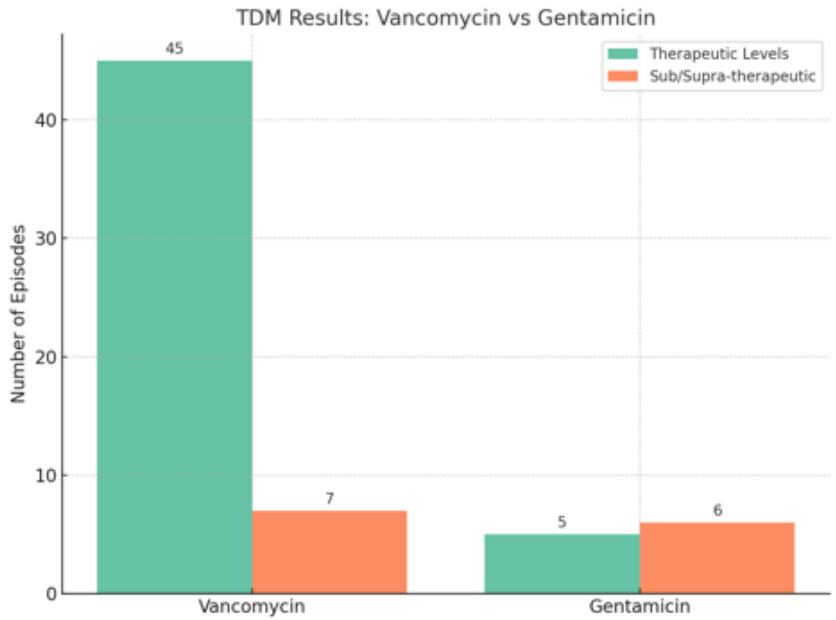
Parameters: Organism, antibiotics, drug levels, outcomes.

ISPD 2022 Guidelines Overview

- Cause-specific peritonitis: culture-defined, catheter-related, enteric.
- Time-specific: pre-PD, PD-related, insertion-related.
- ISPD targets:
  - Peritonitis rate ≤ 0.4
  - Culture-negative < 15%
  - ≥ 80% patients, peritonitis-free per year.



Outcome	Episodes
Medical cure	42 (65.6%)
Repeat peritonitis	4 (6.2%)
Relapsing Peritonitis	3 (4.7%)
Catheter Removal due to peritonitis and eventual switch to HD	14 (21.9%)
PD peritonitis associated death	1



Results Summary

- Total peritonitis episodes: 63 (49 patients)
- peritonitis Rate per year : 0.54–0.63 per year (target ≤0.4)
- •Culture-negative: 48% (target <15%)
- Proportion of patients free from peritonitis per year - 54.5% (target 80%)
- Gram-positive most common: Staphylococcus spp.
- 86.5% had therapeutic vancomycin levels.
- 45.5% had appropriate TDM for gentamicin levels.

Pioneer Measures:

-Recommend PD technique and knowledge to be regularly re-assessed and updated with emphasis on direct inspection of technique.

-Accurate initiation and therapeutic drug monitoring for antibiotics in all episodes of PD Peritonitis.

-Secondary Prevention: Recommend anti-fungal prophylaxis to be prescribed regardless of indication of antibiotics use in PD patients(Nystatin/ Fluconazole)

-Suggest pets not be allowed in the room where PD exchange takes place, and where dialysis tubing, equipment and machine are stored

-Suggest drainage of PD fluid prior to invasive gynaecological procedures and colonoscopy.

RECURRENT IECOPD WITH T2RF

Nottingham University Hospitals NHS Trust

Background IECOPD with decompensated T2RF is associated with high mortality rate (≈20% within 30 days). Medical treatment & NIV are established therapy, yet post-discharge management remains critical in determining outcomes.

Case report A 69-year-old woman, with a background of COPD, mild obesity, limited mobility and smoking, had 3 hospital admissions of IECOPD with decompensated T2RF within 1 month.

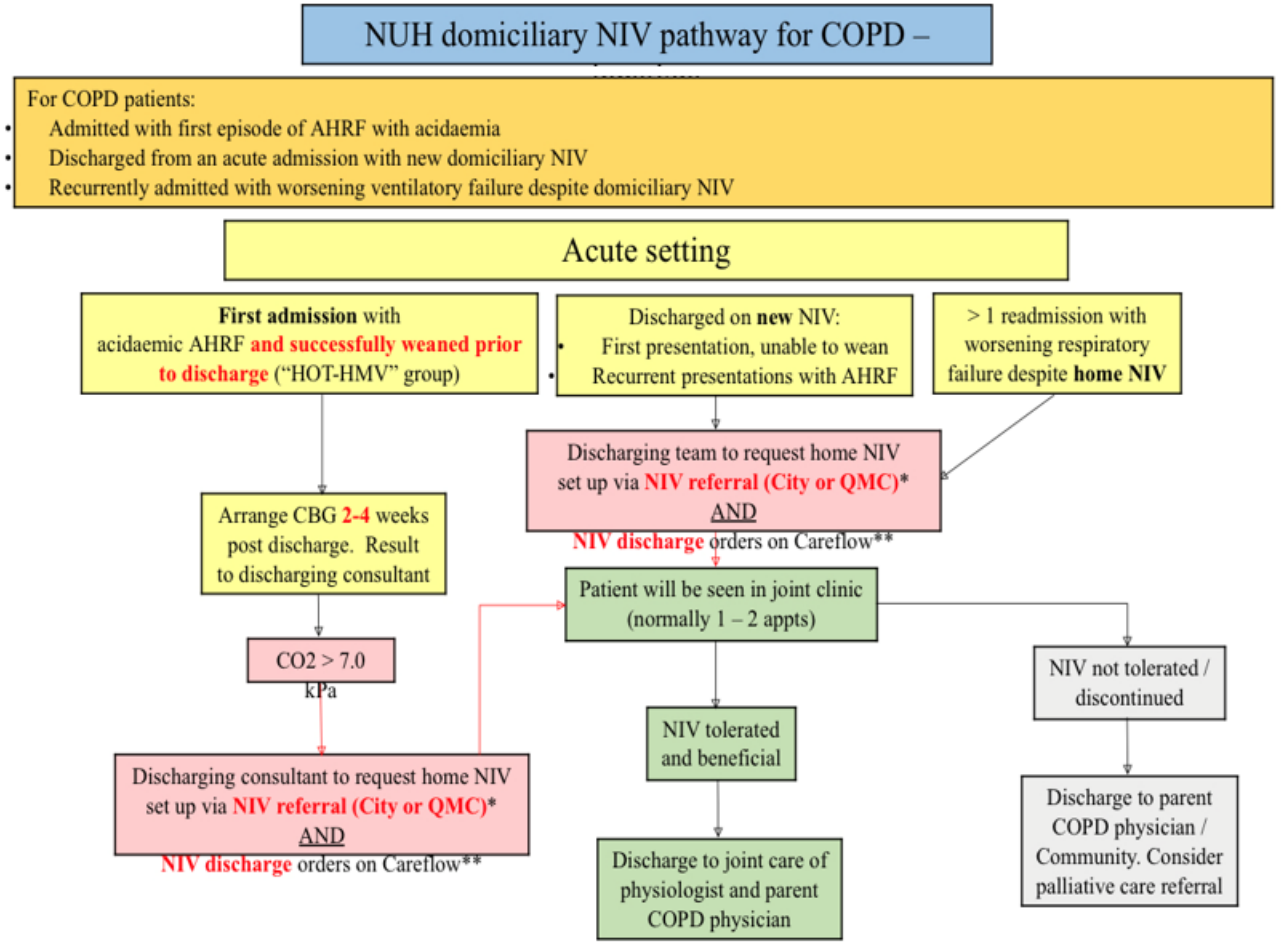
1st admission: She was admitted with IECOPD with decompensated T2RF (Ph 7.25, PCo2 9.35), reversed to normal Ph/PCo2 with Abx, steroid & nebs. CXR showed emphysematous changes. She was discharged with respiratory nurse OPA.

2nd admission: Few days later, she was re-admitted with the same presentation of IECOPD with decompensated T2RF (Ph 7.33, PCo2 8.9), persisting despite standard medical therapy. CXR showed RLZ opacification. She improved with NIV, which was gradually weaned over 5 days. In the following 6 days, daily monitoring of blood gases assured no further hypercapnia after stopping NIV (Ph 7.4, PCo2 5.4). she was monitored for 48 hours after successful weaning off oxygen, then discharged with OP lung function tests and domiciliary NIV assessment in 4 weeks as per HOT-HMV.

3rd admission: Few days post-discharge, symptoms recurred and IECOPD medical treatment was initiated at home by ambulance. However, she rapidly desaturated on 15L O2, leading to two successive cardiac arrests (PEA). ROSC was achieved in hospital, followed by trial of thoracocentesis for suspicion of Pneumothorax but showed minimal effect. CXR showed no pneumothorax, and severe T2RF was noted (Ph 7.0, PCo2 10.9). Given her low physiological and functional reserve, end-of-life care was initiated and she passed away in hours.

Discussion Despite clinical improvement, NIV weaning over 5 days, maintaining normocapnia for 6 days Post NIV, maintaining oxygen saturation on room air for 48 hours post O2 therapy, a rapid deterioration happened only 3 days post-discharge.

Conclusion Recurrent admission with IECOPD with T2RF in a short span of time should be considered as a higher risk of rapid clinical deterioration.



Learning Points

On top of following trust guidelines, initiation of domiciliary NIV pre-discharge should be considered based on clinical judgement in patients who had recurrent IECOPD with T2RF admissions in a short span of time once NIV is required.

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WHEN MANIA MASKS LUPUS: A RARE NEUROPSYCHIATRIC MANIFESTATION OF SYSTEMIC LUPUS ERYTHREMATOSUS

Authors: Dr. Shibin Thamban, Dr. Smitha Muraleedharan, Dr. Sanjana Nair (Department of Internal Medicine, Aster Medcity Kochi, India)

INTRODUCTION

Neuropsychiatric systemic lupus erythematosus (NPSLE) is one of the most challenging manifestations of lupus, presenting with diverse neurological and psychiatric syndromes. Organic mania is an exceptionally rare presentation and is frequently misdiagnosed as a primary psychiatric disorder, often delaying appropriate immunomodulatory therapy

CASE

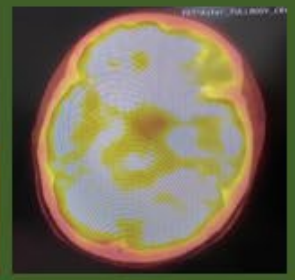
A 28-year-old female known case of psoriasis, psoriatic arthritis, hypothyroidism, PCOS and endometriosis presented with **acute confusion, agitation, psychosis, and tonic posturing of all limbs.** On examination, she had tachycardia, conscious with irrelevant talk and excess word output, tonic posturing of hands with diffuse wating of muscles of both hands.

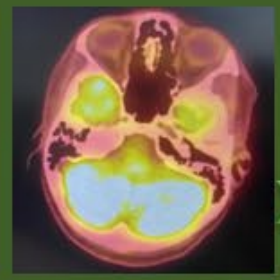
PAST MEDICAL HISTORY

Psoriatic arthritis- treated with sulfasalazine and low-dose prednisolone, later switched to methotrexate (10-15 mg/wk) and subsequently to Secukinumab (150 mg weekly. She had been on Ayurvedic medications for 6 m.

WORKUP

PS: microcytic hypochromic anaemia with neutrophilic leucocytosis; CRP,ESR- Negative
URE: no proteinuria, pus cells- nil
RFT, LFT- Normal, K+:3.1, Ca: 8.2, Phos: 3, TSH 6.0
Infective work up- PCT- 0.06, Blood , urine culture-sterile
→Infection was excluded





MRI brain with contrast: symmetric mild FLAIR hyperintensity in the basal ganglia, insular cortex, hippocampus and amygdala
CSF study: TC – 1;sugar normal 7; protein normal 33.2; KOH- no fungal elements; CSF TB panel: Negative and CBNAAT- Negative; Autoimmune encephalitis panel-negative **NCS:** axonal neuropathy
Autoimmune workup: ANA profile- RIB 1+ Ro 52 3+ SSA 3+ RNP/SM 3+ SM-ve ;
Anti-dsDNA 101.46 (borderline)
APLA work up: Negative
Complement: Normal
GAD65 antibody positive; NMDA/VGKC –Neg.
PET scan: Increased metabolic uptake in cerebellum/basal ganglia/medial temporal lobe . Diffuse muscle uptake. Moderate Pericardial effusion noted.

MANAGEMENT

She was initiated on IVIG (2 g/kg over 5 days; total 100 g) after an MDT and continued on steroids.

Based on the clinical, laboratory, and radiological findings, she was diagnosed as a possible evolving lupus with neurological involvement and Rituximab was initiated.

DISCUSSION

This case illustrates organic mania as a rare neuropsychiatric manifestation of evolving SLE, initially mimicking primary psychiatric illness. Diagnosis was challenging due to multiple autoimmune comorbidities, multisystem involvement, and inconclusive CSF findings. Positive autoimmune markers, PET-CT changes, and response to immunotherapy supported neuropsychiatric lupus with autoimmune encephalitis overlap. Multidisciplinary management and timely immunotherapy were crucial, emphasizing the need for high suspicion in young patients with acute psychiatric presentations and systemic features

CONCLUSION

Organic mania is an uncommon but important presentation of neuropsychiatric lupus. This case demonstrates the critical importance of considering SLE in the differential diagnosis of acute psychosis or mania, particularly in patients with autoimmune background and systemic involvement. Early MD management with immunotherapy can be life-saving.

Drain Safely, Document Safely – Standardising Pleural Procedure Documentation To Improve Post Procedure Care

Dr Shriddha Bhatkal MBBS MRCP[1], Dr Thomas Orpwood MBChB iBSc[1], Dr Elspeth Potton MA FRCP[1]
[1]East Surrey Hospital, Surrey and Sussex Healthcare NHS Trust

Introduction

Pleural procedures are not without risk. Technology such as ultrasound guidance helps mitigate these risks yet serious incidents are still occurring. The majority of these incidents seem to occur outside of respiratory settings and lack of clear documentation has been highlighted as a key problem area in such incidents[1].

Our pre-intervention audit of pleural documentation against local safety standards for invasive procedures (LocSSIPs) demonstrated that[2]:

- **17%** of cases did not document use of imaging techniques
- **34%** had no documented post procedure care plan
- **57%** did not mention observed side effects, or lack thereof.

We therefore developed an e-proforma to autogenerate prompts to document the key safety aspects of pleural procedures.

Methodology

The e-proforma was created based on the safety issues previously raised as well as the British Thoracic Society (BTS) guidance for pleural procedures, investigations and aftercare[1,3]. These include:

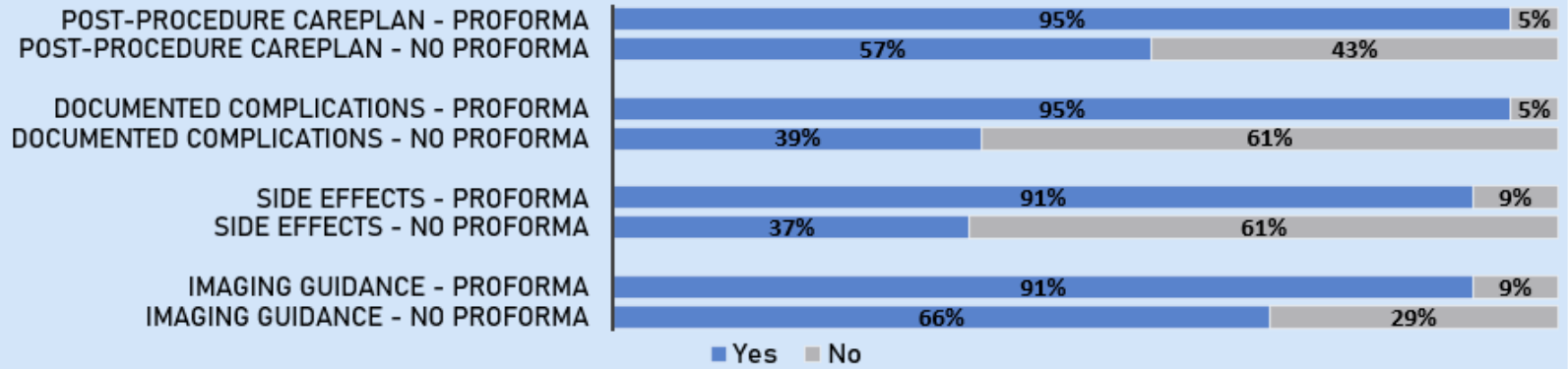
- Anticoagulation, INR, platelet count
- Ultrasound imaging findings
- Procedural technique
- Side effects and any immediate complications
- Post procedure care plan (investigations, analgesia, observations, CXR, drain management +/- clamping instructions)

PDSA cycles were staged over 4 months to implement the proforma and involved a pilot launch on the respiratory ward, departmental teaching on AMU, posters in key medical areas and a grand-round presentation.

NHS Surrey and Sussex Healthcare NHS Trust

Scan the QR code to see the plural e-proforma template

Results



In those who used the pleural proforma, procedures done documented use of imaging guidance and its findings 25% more often when compared to those that did not use the proforma. It was also observed that there was a 38% increase in the documentation of a post-procedure care plan. Furthermore, the documentation of complications and side effects (or lack thereof) was 56% and 54% higher respectively when compared to those who did not use the proforma to document their pleural procedures.

In the 4 month period observed, the respiratory department used the proforma for 24% of their pleural procedures and AMU for 54%. There was no use of the proforma in the emergency department, interventional radiology, ITU, surgery or care of the elderly department.

Discussion and Conclusion

As pleural procedures are being increasingly carried out in the non-respiratory setting, having a standardised e-proforma improves the documentation of key safety aspects. This also enables opportunities to document clear post-procedure care plans as well as informing non-specialists of key investigations to request as per BTS guidelines.
Further work is required to streamline the proforma to make it easier to use in emergency situations as well as increasing other, non-medical, department's familiarity with the proforma.

References

1. Stanton AE, Juniper M, Bedawi E, McNaughton L, Clive AO, De Fonseka D, et al. Pleural procedural safety in the UK: is everyone's house in order? Reflections from the BTS National Pleural Service Organisational Audit and a national review of patient safety incidents. BMJ Open Respiratory Research. 2 March 2025; 12(1). Available from: https://doi.org/10.1136/bmjresp-2024-002840
2. Bhatkal S, Potton E. 168 Improving pleural procedure safety and coding through standardised documentation: the experience of a UK district general hospital. BMJ Open Quality. 19 May 2025; 14(3). Available from https://doi.org/10.1136/bmjoq-2025-QSHU.168
3. Asciak A, Bedawi EO, Bhatnagar R, Clive AO, Hassan M, Lloyd H et al. British Thoracic Society Clinical Statement on pleural procedures. Thorax. 11 July 2023; 78(3). Available from https://doi.org/10.1136/thorax-2022-219371

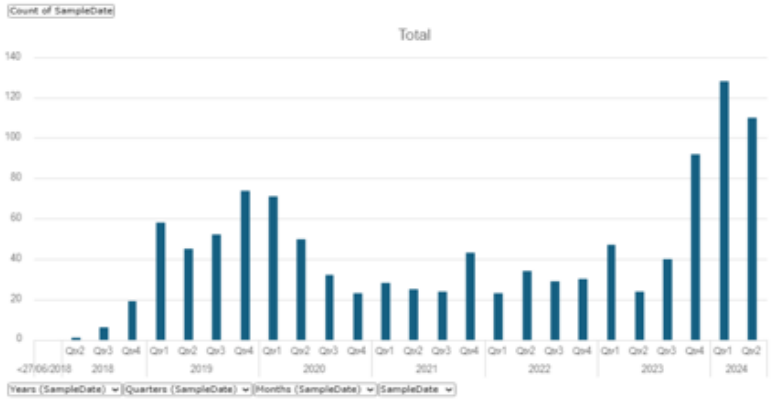
Clinical and Radiological Features of patients hospitalised with Mycoplasma pneumoniae

Bala, Sithu; Absar, Shazia; Waicus, Sarah; Mallia, Patrick
Royal Free London NHS Foundation Trust – London (United Kingdom)

Introduction

Mycoplasma pneumoniae causes respiratory infections including upper respiratory tract infection, acute bronchitis and community acquired pneumonia. Epidemics usually occur at 3 to 5-year intervals. Last UK epidemic was in 2019.

The aim of this retrospective study is to review epidemiological, clinical and radiological features of Mycoplasma infection in adults in the first post-pandemic epidemic.



Graph 1: Patients tested positive with mycoplasma infection over a 5-year period between 2018 and 2024 (Royal Free Trust)

Methods

68 patients (27 males and 41 females) diagnosed with mycoplasma infection (either serology or PCR positive results) between October 2023, and May 2024 were included.

Mean age was 39.9 years, and median was 38.5 years.

We analysed and reviewed the data under 4 domains: smoking status, radiological features, associated co-morbidities, and complications post mycoplasma infection.

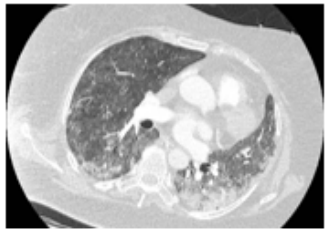


Figure 1: Ground-glass changes

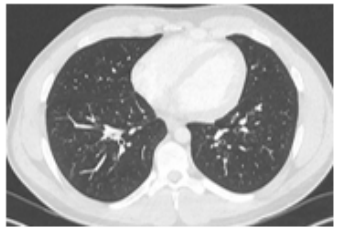


Figure 2: Tree-in-bud nodularity

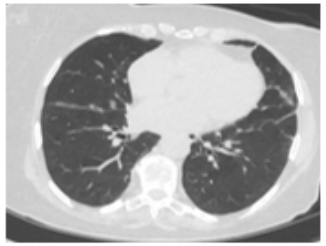


Figure 3: Atelectasis

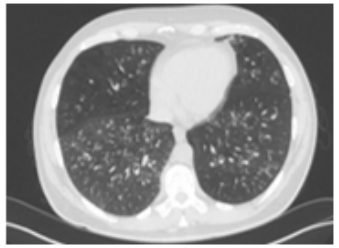


Figure 4: bilateral Infiltrates

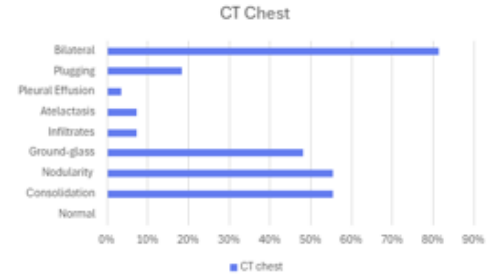
Results

11.8% were current smokers, 13.2% ex-smokers and 75% non-smokers, on review of smoking status in the cohort.

Radiological abnormalities are shown in Graph2. Bilateral involvement was more commonly noted on CT Chest compared to Chest X-ray. Tree-in-bud nodularity was noted in 55%, ground-glass opacities note in 48.2%, and pleural effusion was only noted in 3.7% of all the patients who had CT imaging. 25 patients reviewed at 6 weeks follow up, all patients had radiological resolution and 60% had persistent symptoms.

A total of 38.2% of patients diagnosed with mycoplasma infection have associated comorbidities, and the rest (61.8%) do not.

In terms of noticeable complications, 4 patients had a rash, one of which presented with erythema multiforme, 1 had haemolytic anaemia, and 1 patient suffered acute inflammatory demyelinating polyneuropathy (AIDP) as a complication post infection.



Graph 2 : Different Radiological patterns on CT Chest

Conclusions

Our review suggest that the epidemiology of Mycoplasma pneumoniae is different compared to a review on BMJ Best Practice, as all our patients lived at home, were older and a minority smoked.
Common radiological appearances were bilateral involvement, nodularity and ground-glass opacities, and were more commonly detected with CT.
Complications are rare but can be serious. Complete symptomatic recovery can be prolonged but radiological recovery is usual.

Repeated presentation with exercise induced asthma exacerbation- Have you considered EILO?

Lwin Paing, Saquib Siddiqui

Introduction

We present a case of exercise-induced laryngeal obstruction (EILO) masquerading as asthma exacerbation.

Case Presentation

28-years old female presented to A&E with breathlessness and wheeze with multiple previous admissions with asthma exacerbation. Further exploration revealed onset during marathon training. Symptoms triggered at peak exercise and no other exposure to trigger factors. She had wheeze on auscultation.

Poor response to asthma treatment prompted investigation for asthma mimics.

Asthma screening blood panels were done which showed unremarkable. Most recent spirometry was unremarkable.

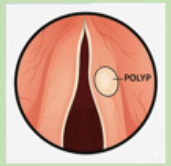
Continuous laryngoscopy during exercise confirmed swelling of the left vocal fold causing obstruction. Biopsy showed benign pathology, surgically removed by ENT.

Postoperatively, no recurrence of symptoms.

NHS South Tees Hospitals NHS Foundation Trust

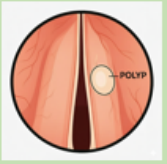
Discussion

- EILO is temporary, reversible, and inappropriate paradoxical movement of the vocal cords or supraglottic structures during inspiration, triggered by exercise.
- More common in young females due to narrower laryngeal anatomy.
- Manifest as dyspnoea, high-pitch inspiratory breathing sounds to clear-cut stridor, respiratory distress, tachypnoea and or panic reactions. Symptoms remain inactive until intense exercise pursues.
- Symptoms typically appear during maximal intense physical activities and resolve within 2-3min of exercise cessation unless ongoing hyperventilation
- EILO often mimics asthma but differs in timing and no response to treatment.
- Continuous laryngoscopy during exercise is the diagnostic gold standard.
- Management requires a multidisciplinary approach with respiratory physicians, ENT specialists, speech therapists, and psychologists.
- If non-surgical therapy is refractory, supraglottoplasty can be considered. Any vocal cord lesion can be surgically resected for resolution of symptoms as was done in our patient.



Vocal cord at rest

Fig 1. Illustration on changes of vocal cords



Vocal cord on exertion

Key Learning Points

1. EILO can mimic exercise-induced asthma and lead to misdiagnosis and failed treatment.
2. Always consider asthma mimics when symptoms are exercise-related and unresponsive to standard therapy.
3. Multidisciplinary management provides the best outcomes

References

1) Sayad E, Das S. Exercise-Induced Laryngeal Obstruction. https://www.ncbi.nlm.nih.gov/books/NBK556148/
2) Arne Coussement , Pieter Goeminne , Nico De Crem et al. A 63-Year-Old Man With Persistent Chest Constriction on exercise, DOI:10.1016/j.chest.2025.03.004
3) Makiko Ohtani, Masamitsu Kono, Shunji Tamagawa et al. Exercise-induced laryngeal obstruction in a competitive swimmer associated with the use of a snorkel, DOI: 10.1016/j.jsams.2025.04.001
4) Hege Havstad Clemm, J Tod Olin, Cameron McIntosh et al. Exercise-induced laryngeal obstruction (EILO) in athletes: https://doi.org/10.1136/bjsports-2021-104704
5) Thomas Halvorsen, Emil Schwarz Walsted, Caterina Bucca et al. Inducible laryngeal obstruction: an official joint European Respiratory Society and European Laryngological Society statement,

UNMASKING VEXAS SYNDROME THROUGH A CASE OF FEVER OF UNKNOWN ORIGIN

Sourav Hariram [1], Nwe Ni Win [1]
[1] Department of General Medicine, North West Anglia NHS Foundation Trust

INTRODUCTION

- VEXAS syndrome is a recently identified autoinflammatory disorder with distinctive hematological and systemic inflammatory features.
- The syndrome was first described in a study by Beck et al.[1] in 2020 with the acronym VEXAS standing for:

V	E	X	A	S
Vacuoles	E1 Ubiquitin activating enzyme	X-linked	Auto-Inflammatory	Somatic

- Recognition remains limited due to its recent discovery, clinical heterogeneity, and overlap with other conditions.
- This case highlights the VEXAS syndrome as a potential cause of fever of unknown origin (FUO) and emphasizes the diagnostic complexity faced and therapeutic considerations.

PATHOGENESIS OF VEXAS SYNDROME

Somatic UBA1 Mutation (X-chromosome)

p.Met41 variants
↓ UBA1b, ↑ UBA1c → Myeloid Restricted clonal hematopoiesis

↓ E1 Enzyme Function
→ Impaired Ubiquitylation
Protein accumulation → ER stress
→ Unfolded protein response

Systemic Inflammation

Recurrent fevers, fatigue, weight loss, Neutrophilic dermatosis, Relapsing chondritis, Pulmonary infiltrates, arthritis, Elevated CRP/ESR
→ Clinical phenotype of autoinflammation

Haematologic Changes

Marrow vacuolization (Promyelocytes, proerythroblasts)
Macrocytosis, cytopenias, Myelodysplastic syndrome (MDS) overlap / clonal dysplasia, Thrombosis (venous and arterial) due to inflammatory and endothelial activation
→ Haematologic and thrombotic manifestations

Systemic Inflammation and Haematological Abnormalities (PET-CT: diffuse marrow hypermetabolism is frequent)

CASE PRESENTATION

Patient Profile	77-year-old Caucasian male
Presenting Complaints (Over 2 months)	Persistent low-grade fevers, profuse night sweats, unintentional weight loss, generalized malaise and fatigue.
Initial investigations	• **Blood cultures and autoimmune screen :** No evidence of infection or autoimmune disease • **CT Chest, abdomen, pelvis :** No signs of malignancy, lymphadenopathy or occult infection • **Quantiferon-TB Gold test :** Negative
Escalated diagnostics due to persistence of symptoms	• **PET-CT scan:** Demonstrated diffuse bone marrow activation • **Bone marrow aspirate and Trephine (BMAT):** Presence of vacuolated megakaryocytes
Definitive Diagnosis	**Next-generation sequencing (NGS):** UBA1 somatic mutation detected
Final diagnosis	VEXAS syndrome

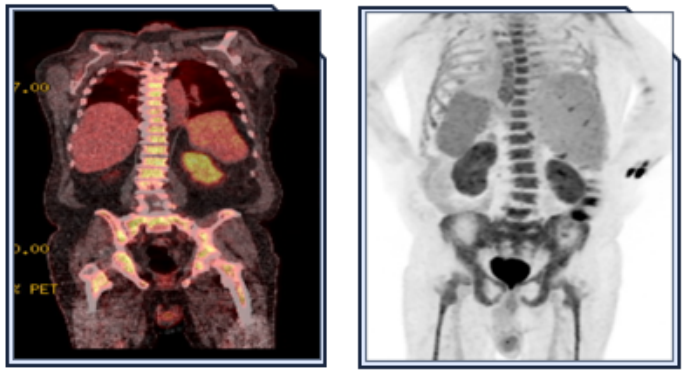


Fig.1 and Fig 2. (above) are PET-CT scans that demonstrate an increased Fluorodeoxyglucose (FDG) uptake in the spleen along with diffuse uptake in the bone marrow as well. This thus confirms hypermetabolic activity in above structures

FOLLOWUP AND DISCUSSION

- The patient was commenced on intravenous corticosteroids which showed a favourable clinical response. (Resolution of fever and systemic symptoms)
- However an attempt to taper the steroids led to the recurrence of symptoms indicating steroid dependency.
- Tocilizumab (IL-6 receptor inhibitor) was initiated following a multidisciplinary team discussion between hematology and rheumatology. This resulted in sustained symptom control.
- The patient now continues under joint follow-up with rheumatology and hematology and is under the respective team surveillance.

Discussion and Key learning points:-

- Diagnosis often relies on high index of clinical suspicion, bone marrow findings and genetic confirmation of UBA1 somatic mutations
- The syndrome carries a high morbidity burden and has a 5 year survival of upto 63% as of latest ongoing studies.[2] Complications that increase morbidity include thromoembolic events and cytopenias.
- Corticosteroids remains first-line and biologics illustrated in above case can offer symptom control, but do not halt disease progression.
- In terms of future directions, clinical trials are essential to study emerging therapies and advance understanding. Allogenic hematopoietic stem cell transplantation (allo-HCT) shows promise as a potentially curative approach, however is currently limited to select cases that have demonstrated remission.[3]

CONCLUSION

VEXAS syndrome should be considered in unexplained febrile illnesses. Being aware of its manifestations, diagnostic workup, symptom directed management and emerging treatments is essential for early diagnosis and optimal care. Multidisciplinary collaboration is essential to optimise outcomes in this complex and emerging disease entity.

References

Scan here to view references

Improving Antibiotic Prescribing: Closing the gap for better patient care

Dr Sourav Saha; Dr Naqsh Fatima-Junior clinical fellow; Ysbyty Ystrad Fawr

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Aneurin Bevan
Aneurin Bevan University Health Board

Background:

Antimicrobial resistance (AMR) is one of the most pressing global health threats, with inappropriate antibiotic use contributing substantially to its rise [1,2]. Clinical consequences include treatment failure, increased morbidity, prolonged hospital stays, and higher healthcare costs [3]. Inappropriate practices such as missed doses, incomplete or unreviewed courses, and abrupt discontinuations are key drivers of resistance [4]. Antimicrobial stewardship programmes (ASPs) aim to optimise therapy, reduce harm, and preserve the effectiveness of existing antibiotics [5,6]. Within this context, a baseline audit in our local hospital identified significant prescribing gaps, emphasising the need for focused improvement.

Aim:

To evaluate adherence to stewardship guidance in a general medical setting, implement low-cost, practical interventions to improve antibiotic prescribing, and assess their impact through a re-audit cycle [1,7].

Methods:
The audit was designed around ABUHB intranet guidance and the Start Smart – Then Focus framework [1,8]. Cycle 1 included 76 patients and Cycle 2 included 52 patients; both conducted retrospectively over four months. Data points included: (1) completeness of antibiotic prescription at initiation, (2) documentation of review at day 3 and day 4, (3) incidence of missed doses, and (4) abrupt or unexplained cessation.

Interventions:
Between cycles, targeted interventions were introduced to reinforce stewardship principles. These included:

Teaching sessions for residents' doctors and nursing staff.

Circulation of educational leaflets through WhatsApp groups and display as posters on wards.

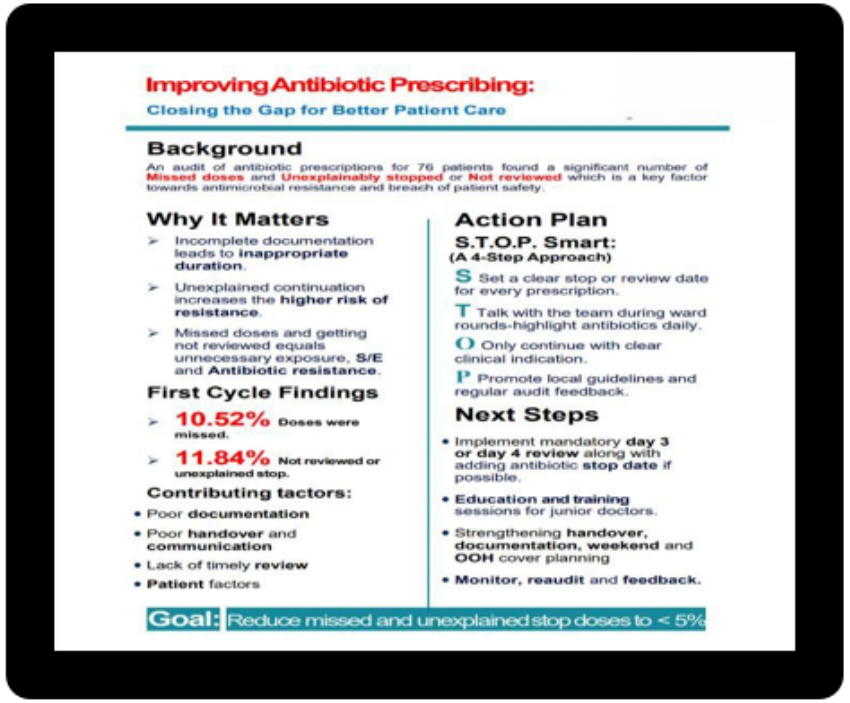
Leaflets stapled directly to drug charts as visual prompts.

Nursing staff reminders during board rounds to highlight antibiotics requiring review.

Introduction of structured Friday ward rounds incorporating a checklist to ensure antibiotic review.

Integration in the handover and discharge planning.

Microbiology team involvement.



Results:
Cycle 1 demonstrated suboptimal prescribing, with low rates of initial full-course prescription, inconsistent day 3 or 4 reviews, and several missed or abruptly discontinued courses. Following interventions, Cycle 2 showed measurable improvement in most parameters: full course prescriptions increased from 22 to 27, day 3 reviews rose from 30 to 36, missed doses fell from 8 to 3, and abrupt cessations reduced from 6 to 2. However, day 4 review documentation decreased from 24 to 14, highlighting an area requiring ongoing attention.

INDICATOR	CYCLE 1 (n=76)	CYCLE 2 (n=52)	CHANGE
Full course prescribed initially	22	27	↑
Day 3 review	30	36	↑
Day 4 review	24	14	↓
Missed doses	8	3	↓
Abrupt cessation (unexplained)	6	2	↓

Conclusion:
This audit highlights that straightforward, sustainable interventions can deliver significant improvements in antibiotic prescribing [5–7]. Education, structured reminders, and multidisciplinary reinforcement reduced prescribing errors and enhanced stewardship practices. Continuous audit and feedback cycles are essential to sustain progress, with integration of review prompts into electronic prescribing systems offering a potential next step [8–10]. Overall, this project demonstrates that small-scale, low-cost initiatives can positively influence prescribing behaviour and improve patient safety while supporting global efforts against AMR

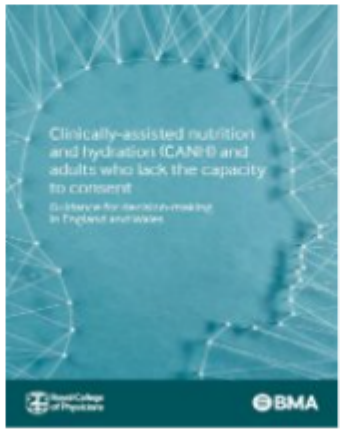
References:
1. Public Health England. Start Smart – Then Focus: Antimicrobial Stewardship Toolkit for English Hospitals. PHE; 2015. 2. WHO. Antimicrobial Resistance: Global Report on Surveillance. Geneva: World Health Organization; 2014. 3. NICE. Antimicrobial Stewardship: Systems and Processes for Effective Antimicrobial Medicine Use (NG15). 2015. 4. O'Neill J. Tackling Drug-Resistant Infections Globally: Final Report and Recommendations. 2016. 5. Davey P, Marwick CA, Scott CL, et al. Interventions to improve antibiotic prescribing practices for hospital inpatients. Cochrane Database Syst Rev. 20172;:CD003543. 6. Rawson TM, Moore LSP, Hernandez B, et al. A systematic review of clinical decision support systems for antimicrobial stewardship. Clin Infect Dis. 2017;65(1):123–129. 7. Health Education England. Antimicrobial Stewardship: Improving Prescribing Practice. 2019. 8. Holmes AH, Moore LS, Sundsfjord A, et al. Understanding the mechanisms and drivers of antimicrobial resistance. Lancet. 2016;387(10014):176–187. 9. NICE. Antimicrobial Stewardship: Changing Risk-related Behaviours (NG63). 2017. 10. Dyar OJ, Huttner B, Schouten J, Pulcini C. What is antimicrobial stewardship? Clin Microbiol Infect. 2017;23(11):793–798.

Successful withdrawal of Clinically-assisted Nutrition and Hydration (CANH) for a patient in a persistent vegetative state at a District General Hospital in the UK. Reflection on the UK law, 2024 BMA/RCP guidelines and the Islamic law.

Divakar Prabhu, Sugna[1], IMT2, Wexham Park Hospital; Menzies, Sarah[2], Respiratory Consultant, Wexham Park Hospital

Background

The withdrawal of CANH is a topic that has been reviewed by the UK legal system several times. Starting in 1993, it was established that CANH is a treatment and not routine care[1]. Since then, there have been several notable cases defining when this law can be applied and who fits the criteria[2]. In 2018, the Supreme Court concluded that there was no legal requirement for cases to be brought to the court provided there was agreement upon what was in the patient's best interests. The BMA/RCP CANH guidelines were initially written in 2018, with a recent update in 2024[3].



Case history

Mrs. K, a fit 60-year-old woman with no comorbidities.

- She was visiting Qatar in early November 2024 where she had an out-of-hospital cardiac arrest with immediate cardiopulmonary resuscitation (downtime 17 minutes).
- She had an anterior STEMI on arrival at the hospital and underwent PCI. She remained intubated until mid-November; after which a Tracheostomy was performed. Brain imaging demonstrated a hypoxic ischaemic encephalopathy.
- Her family requested withdrawal of care, citing her wishes to avoid living with a disability. The hospital consulted its Ethical and Legal departments and concluded that they could not withdraw nutrition without an explicit directive from the patient. She had not made a living will previously.
- She was repatriated to her local hospital in the UK after 8 weeks. She remained in a vegetative state with a GCS of 8/15 (E4,V1,M3) throughout, with no acute concerns from a cardiology standpoint.
- Blood investigations were unremarkable. Her repeat imaging remained unchanged, and an EEG showed no defined electrocortical activity.
- In accordance with her family's statements of her likely intentions, her consultant followed the BMA/RCP 2024 CANH guideline, obtaining opinions from specialists in neurology, neurorehabilitation, palliative care and the Trust's legal team, and secured letters of support from family and friends. Nutrition was withdrawn 8 days after repatriation, with palliative care involvement. She passed away peacefully after 3 weeks.

Discussion

Our patient was in an Islamic country when she went into a Prolonged Disorder of Consciousness. In Islamic law, nutritional support is generally considered basic care and not medical treatment[4]. As she had not previously documented her wish to be allowed to die in the event of her suffering an event leading to significant disability, the Ethical and Legal departments in Qatar were unable to sanction the removal of her nutrition and hydration.

When she returned to the UK, we could apply the BMA/RCP CANH guidelines as she met the criteria. It was a challenging process emotionally and practically, and this had not been done previously in our hospital as far as we were aware. We had to work through the clinical steps and ensured we sought the opinions of all of her close family and friends and had evidence of this, at a very difficult time.

Overall, our experience of the process was positive, and we hope that the UK CANH guidelines benefit other clinicians, patients, and their families in the future.

1 January

2025

To Whom It May Concern:

[redacted] been my close friend for 22 years. Over the years we shared the experiences of raising our young families in different countries, and we shared many conversations about the joys, trials and tribulations of family life, motherhood, marriage, and womanhood. We shared our hopes, fears, frustrations and aspirations.

[redacted] was a beautiful, vital person. She was private, dignified, independent and lived life on her terms, fully and with joy and celebration. She loved and protected fiercely, and her family were always her centre.

I speak in the past tense because th[redacted] e know and love is no longer with us. I believe beyond any doubt that in the absence of hope for a full recovery of her mental faculties and return to who she was before her heart attack, she would not want her life support to be continued. I do not believe that she'd choose CANH to extend her life in her present condition. She'd not want it for herself and she would hate for her much loved children and husband to remain in a state of suspended (and extended) grief, their lives centred around her in her present stat[redacted] ould want any decision th[redacted] family have reached regarding removing her CANH support to be respected as they are an extremely loving and close family. A family who know each other's intentions, and who beyond any doubt would only choose in the best interest o[redacted] d in accordance with her stated wishes.

Please feel free to contact me if necessary for further discussion, or with any questions.

Figure 1 –letter of support

References

1. Great Britain. House of Lords. Airedale NHS Trust v. Bland. All Engl Law Rep. 1993 Feb 4;[1993]1:821-96. PMID: 11648606.
2. McHale J. A right to die or a right to live? Discontinuing medical treatment. Br J Nurs. 2011 Nov 10-23;20(20):1308-9. doi: 10.12968/bjon.2011.20.20.1308. PMID: 22068006.
3. Clinically assisted nutrition and hydration toolkit [Internet]. The British Medical Association is the trade union and professional body for doctors in the UK. Available from: https://www.bma.org.uk/advice-and-support/ethics/adults-who-lack-capacity/clinicallyassisted-nutrition-and-hydration
4. Alsolamy S. Islamic views on artificial nutrition and hydration in terminally ill patients. Bioethics. 2014 Feb;28(2):96-9. doi: 10.1111/j.1467-8519.2012.01996.x. Epub 2012 Jul 29. PMID: 22845721.
5. Szawarski, Piotr & Kakar, Vivek. (2012). Classic Cases Revisited: Anthony Bland and Withdrawal of Artificial Nutrition and Hydration in the UK. Journal of the Intensive Care Society. 13. 126-129. 10.1177/175114371201300209

Severe SLE complicated by HLH, PRES, and CMV: diagnostic and therapeutic challenges

Authors: Dr Sumaiya Khalil[1], Dr Maria Ashwini[1], Dr Mohammad Ehsan Siddiqui[1], Dr Fahim Dilbar[1], Dr Fiona Hayes[1]
[1] Barking Havering and Redbridge University Hospitals NHS Trust, London, UK

Background

SLE is a multisystem inflammatory disease. Secondary HLH is rare but life-threatening. Immunosuppression is essential yet increases infection risk. PRES may arise from hypertension, therapy, or infection and can mimic neuropsychiatric lupus.

Initial Diagnosis

A 36-year-old woman presented with fever, pancytopenia, and rash, meeting SLICC criteria for SLE. Persistent fevers, cytopenias and hyperferritenemia, despite corticosteroids suggested secondary HLH.

HLH

HLH confirmed by H-score and bone marrow haemophagocytosis. Managed with methylprednisolone and cyclophosphamide. Refractory inflammation required Anakinra, leading to improvement in cytopenias and ferritin

CMV Infection

Developed fever and cytopenias during immunosuppression. CMVPCR positive; ganciclovir led to viral clearance. This underscored the infection-immunosuppression balance.

PRES

She developed visual disturbance and seizures. MRI showed parieto-occipital PRES. Likely due to hypertension and immunotherapy. Resolved with BP control and supportive care.

Recovery

Multidisciplinary care achieved full recovery with normal counts, resolved inflammation, and restored neurological function.

Conclusion

SLE with HLH poses diagnostic and management challenges. Early HLH recognition and balanced immunomodulation are key to prevent mortality.

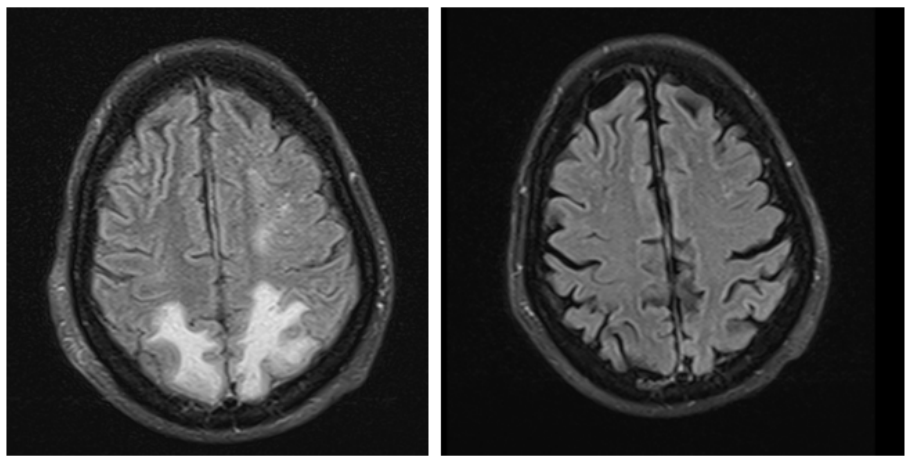


Fig 1 : Posterior reversible encephalopathy syndrome (PRES)
Fig 2: Resolution of parieto-occipital oedematous changes secondary to PRES after 1 month

Learning Points

- Recognize HLH early in uncontrolled SLE.
- Balance immunosuppression against infection risk.
- PRES can mimic neuropsychiatric lupus but is reversible .

The Gift of Sight

A Service Evaluation of Corneal Donation at Ty Bryngwyn Hospice (TBG)

By Dr Talia Bartley, Prince Philip Hospital

Introduction

- The GMC state that health care professionals **should explore tissue donation** with every patient who is at the **end of their life** [1]
- A UK study by Sutehall et al (2023) demonstrated that approximately **46% of hospice patients are eligible** for cornea donation [2],however in practice only **4%** of patients had their **beliefs** regarding cornea donation explored [3]
- NHS eye bank supply is **21% lower than demand**, creating a **2-year waiting list** for recipients of cornea donation [4,5]

Cycle 1

Out of **35 deaths** in TBG hospice between October 2024 and January 2025

- **20 (57.1%)** patients **eligible** to donate their corneas
- **1 (2.8%)** cornea donation **discussion,** this patient gave consent to donate their corneas
- **0** corneas donated, records suggest no corneas donated since **2023**

Method

Retrospective cohort study involving multiple plan, do, study, act (PDSA) cycles used with the following interventions:

- **Eligibility criteria** poster
- Admission **proforma prompt**
- **Teaching** provided to TBG staff
- Hospice **partnership** with NHS blood and transplant established

Objective: Increase the rate of cornea donation discussions with eligible TBG patients by 70% and therefore, increase the rate of cornea donation

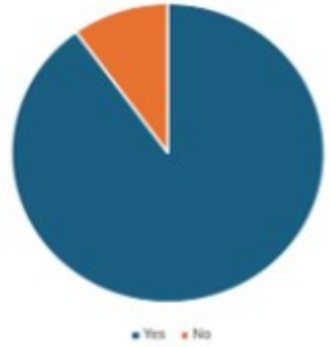
Cycle 2

Out of **21 deaths** between February 2025 and May 2025

- **10 (47.6%)** patients were **eligible** to donate their corneas
- Out of the eligible cohort **9 (90%)** patients had their **wishes** regarding cornea donation discussed
- Patients who were eligible and gave consent to donate their corneas comprised of **3 (14.3%) of the total cohort**
- Out of this group, **2 (66.7%)** of patients **donated their corneas**

Figure 1: Patients who had their wishes regarding cornea donation discussed between October 2024 and January 2025

Figure 2: Patients who had their wishes regarding cornea donation discussed between February and May 2025



Conclusion

- **Education and clinician prompting** for cornea donation discussions can **increase the rate of cornea discussions and donation** within eligible hospice patients
- This sample size is small, **meta-analysis** with similar studies in other locations would be necessary before **statistically significant** results could be demonstrated
- Hospices/ palliative care units **should evaluate** their cornea donation services and encourage **open discussions** with patients and NOKs

1. General Medical Council. Treatment and care towards the end of life: good practice in decision making [Internet]. Gmc-uk.org. 2024. Available from: https://www.gmc-uk.org/professional-standards/the-professional-standards/treatment-and-care-towards-the-end-of-life
2. Long Sutehall T, Banyana Cecilia Madi Sowunmi, Hurlow A, Faull C, Rayment C, Jacob F, et al. The potential for eye donation from hospice and palliative care clinical settings in England: a retrospective case note review of deceased patients' records. Cell and Tissue Banking. 2022 Nov 2;24(2):341–9
3. Hospice and palliative care services could encourage eye donation. 2024 Apr 16 [cited 2025 April 10]; Available from: https://evidence.nihr.ac.uk/alert/hospice-and-palliative-care-services-could-encourage-eye-donation/
4. NHS Blood and Transplant eye banks 21% below levels needed [Internet]. NHS Blood and Transplant. 2017 [cited 2025 March 8]. Available from: https://www.nhsbt.nhs.uk/news/nhs-blood-and-transplant-eye-banks-21-below-levels-needed/
5. Corneal and Tissue donation - St Nicholas Hospice Care website [Internet]. St Nicholas Hospice Care website. 2016 [cited 2025 March 3]. Available from: https://stnicholashospice.org.uk/how-can-we-help/getting-help/preparing-for-end-of-life/corneal-and-tissue-donation/

Starved for immunity: A Rare Case of Disseminated Mycobacterium szulgai

Dr Tanushree Dewan*, **Dr Mansha Bhirvani*** Dr Divina Morais*, Dr Niladri Dutta, Dr Sana Ahmer, Dr Daniel Menzies
Glan Clwyd Hospital
* Denotes joint first authorship

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Betsi Cadwaladr University Health Board

Introduction

- Nontuberculous mycobacteria (NTM) are environmental pathogens.
- Mycobacterium szulgazi is rare (<0.2% isolates) but pathogenic.
- This case highlights the link between malnutrition, psychiatric illness, and infection.

Presentation

- 42F with bulimia, anxiety & depression
- Weakness, polydipsia, Na 116 mmol, BMI 13kg/m²

Investigation

- CT Chest: Upper lope cavitary changes
  Blood culture: Mycobacterium szulgai

Treatment

- Macrolide, Rifampicin, Fluoroquinolone

Outcome

- Deterioration, multi-organ failure and death

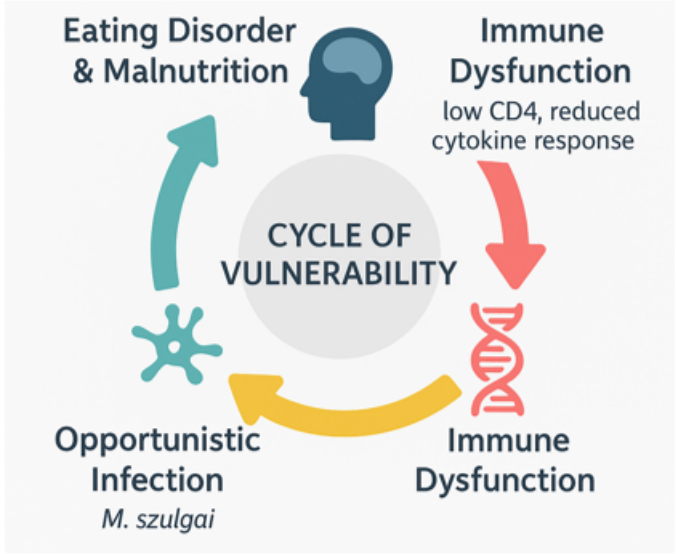


Image 1; Cycle of vulnerability

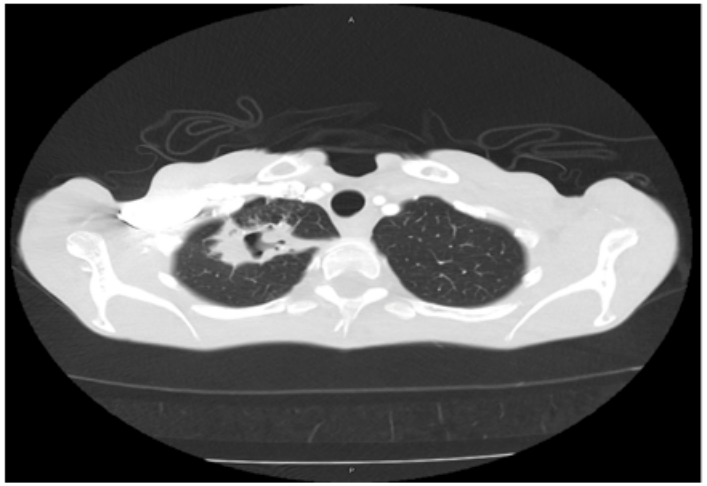


Image 2: CT chest: Cavitary changes

Discussion

- Severe malnutrition → functional immunodeficiency.
- Disseminated NTM infection is possible without HIV/immunosuppression.
- Diagnostic delay common due to subtle imaging/culture requirements.
- Requires prolonged multidrug therapy (>12 months).
- Multidisciplinary input vital.

Conclusion

- This case highlights the role of psychiatric disorders and nutritional neglect in predisposing to opportunistic infections
- M. szulgai infection may occur in malnourished psychiatric patients.
- Early multidisciplinary care (psychiatry, ID, nutrition) is essential.
- Mental health and nutrition underpin infection outcomes.

References

1. Prevots DR, Marras TK. Clin Chest Med. 2015;36(1):1–13.
2. Henry M, et al. Clin Infect Dis. 2004;39(11):1709–12.
3. Cederholm T, Jensen GL. Curr Opin Clin Nutr Metab Care. 2017;20(2):161–8.
4. Shin S, et al. Tuberc Respir Dis. 2013;75(1):1–8.
5. Daley CL, et al. Am J Respir Crit Care Med. 2020;202(5):e62–122.

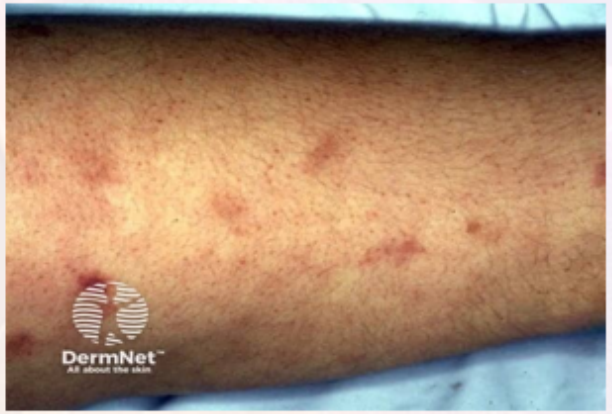
Cutaneous Polyarteritis Nodosa: From Misdiagnosis to Definitive Diagnosis

Dr Tanushree Dewan*, Dr Maria E John*, Dr Akhil Tomy, Dr Cristoss Gregory, Dr Tahir Aziz
Glan Clwyd Hospital

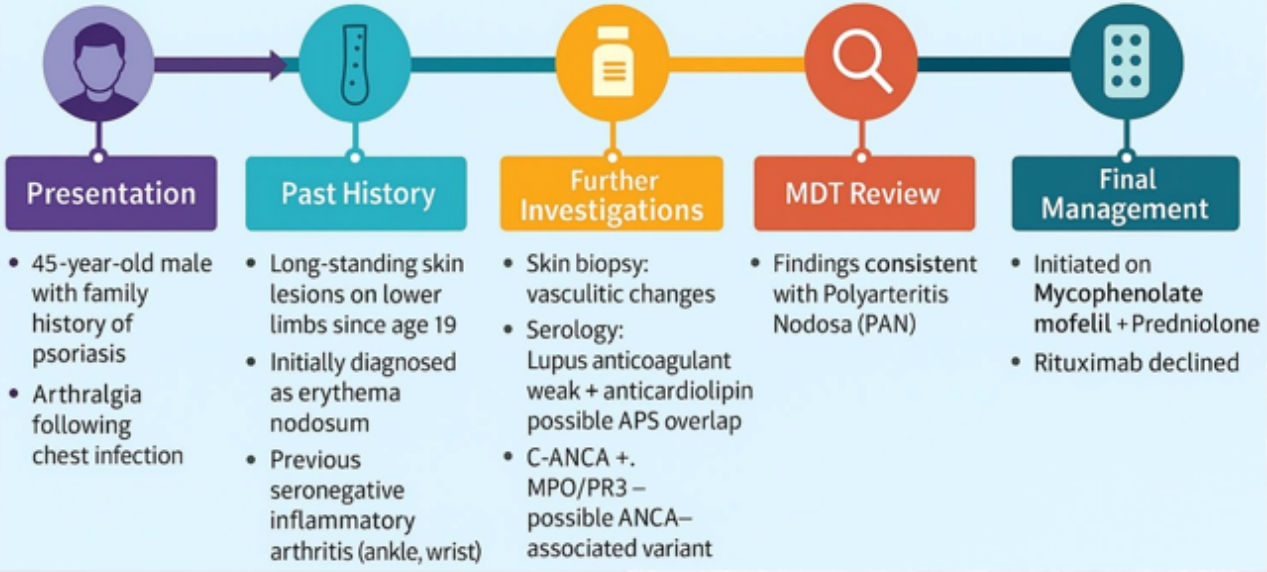
Introduction

Polyarteritis nodosa is a medium vessel neutrophilic vasculitis with systemic or cutaneous forms.
Cutaneous PAN often presents with skin and peripheral nerve involvement[1], occasionally with myalgia and constitutional symptoms.

We report the case of a 45-year-old man with chronic inflammatory arthritis and persistent cutaneous vasculitis lesions.



Case Presentation

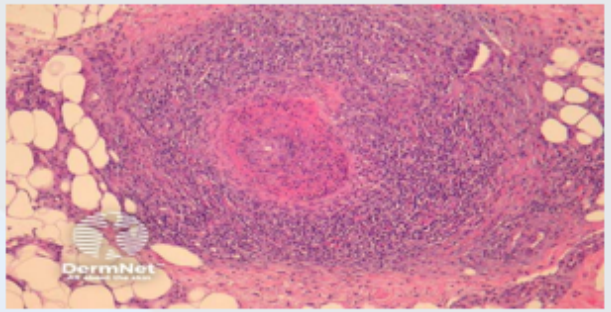


Discussion

Diagnostic challenge:
- PAN can mimic other rheumatologic and dermatologic conditions.
- Cutaneous signs include nodules, ulcers, necrosis, and livedo reticularis[2].
- **Skin biopsy** is key for confirmation[3].

***Clinical features*:**
- Arthralgia may precede other symptoms, causing diagnostic delay[4].
- **Cutaneous vs Systemic PAN:**
- Differentiation is vital; systemic PAN has worse prognosis[5].
- Cutaneous PAN rarely progresses to systemic form[6].

***Treatment*:**
- **Steroids** are first-line.
- **Rituximab** shows mixed results in refractory cases[7].
- **Infliximab** may offer benefit in select cases.
- Biologics hold promise but need further study.



Conclusion

PAN remains a diagnostic challenge due to its variable presentation. This case emphasizes the need for timely MDT input and early diagnosis. It also stresses on the notion of initiating novel treatment modalities and further improving our understanding of their efficacy.

References

1.Matteoda MA et al. Cutaneous polyarteritis nodosa. An Bras Dermatol. 2015;90(Suppl 1):188–90.
2.Saghari S et al. Polyarteritis nodosa with complications: a diagnostic challenge. Cureus. 2023;15(11):e49677.
3.Morgan AJ, Schwartz RA. Cutaneous polyarteritis nodosa: review. Clin Exp Dermatol. 2010;35(5):514–20.
4.Takamatsu R et al. Arthritis as initial manifestation in cutaneous PAN. Case Rep Rheumatol. 2020;2020:8897358.
5.Liang I et al. Spectrum of cutaneous PAN: two contrasting cases. Clin Case Rep. 2022;10(12):e6659
6. Nakamura T et al. Cutaneous PAN: revisiting definition and criteria. J Dermatol. 2008;35(9):543–50.
7. Boukhris I et al. Rituximab efficacy in refractory PAN. Pan Afr Med J. 2023;45:92

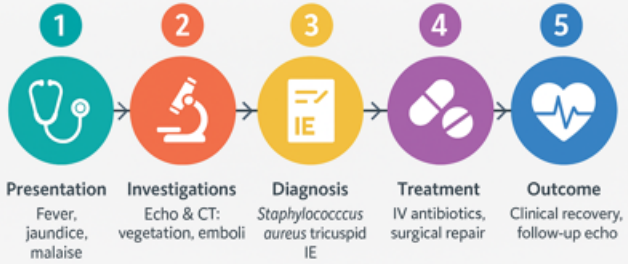
When Risk Factors Deceive: A Rare Case of Tricuspid Valve Endocarditis

Dr Tanushree Dewan*, Dr Akhil Tomy, Dr Maria John, Dr Cristoss Gregory, Dr Soon Neoh, Dr Chetan Upadhyaya
Glan Clwyd Hospital, Betsi Cadwaladr University Health Board

Introduction

- Infective endocarditis (IE) involving the tricuspid valve accounts for 5–10% of IE cases.
- Typically seen in intravenous drug users or those with central venous catheters.
- Right-sided IE in patients without risk factors is rare.
- Highlights importance of early diagnosis and multidisciplinary care.

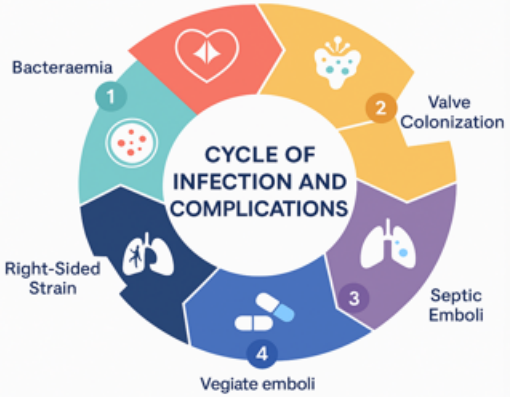
CLINICAL COURSE OF TRICUSPID VALVE ENDOCARDITIS



Discussion

- Non-IVDU tricuspid IE is rare; transient bacteremia and indwelling devices possible risks.
- Staphylococcus aureus is the predominant organism.
- Large vegetations (>2 cm) and septic emboli → surgical indication.
- Early surgery prevents right heart failure, improves survival.
- Atypical presentation causes diagnostic delay.

Mechanism of Tricuspid Valve Endocarditis



Clinical Course

History and examination

- 47-year-old male with fever, jaundice, and malaise; no IVDU history.
- Systolic murmur, hepatomegaly.

Investigation

- Labs: leukocytosis, elevated CRP, cholestatic LFTs.
- Blood cultures: Staphylococcus aureus.
- Echo: 2.4 cm tricuspid vegetation, severe regurgitation.
- CT thorax: septic emboli to lungs.

Management

- Managed with IV antibiotics then surgical repair.

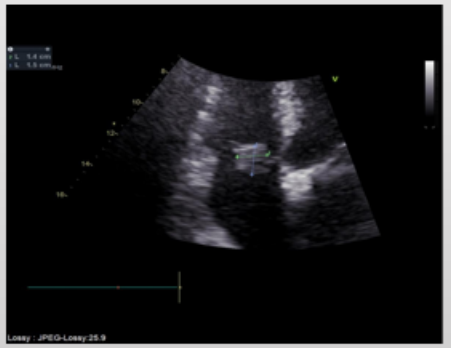
Risk Factors

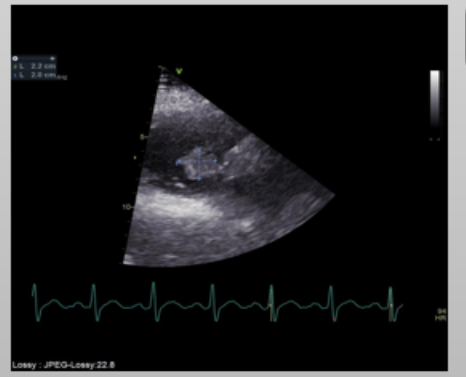
1. Intravenous drug use
2. Central venous catheters / pacemaker leads
3. Chronic infection or bacteremia
4. Immunosuppression or renal failure
5. Dental / skin sources, idiopathic

Indications for Surgery

1. Vegetations > 20 mm with pulmonary emlboli
2. Persistent bacteremia despite therapy
3. Severe regurgitation causing right heart failure
4. Fungal or resistant organisms
5. Prosthetic involvement or large mobile vegetations

Echo Images





Conclusion

- Tricuspid IE can occur in non-IVDU patients.
- Early recognition and multidisciplinary care are key.
- Surgical intervention for large vegetations or persistent sepsis.

References

1. Habib G, et al. Eur Heart J. 2015;36:3075–3128.
2. Nappi F, et al. J Thorac Cardiovasc Surg. 2019;157(1):172–182.
3. Akinosoglou K, et al. J Infect Public Health. 2014;7(6):357–369.
4. Hussain ST, et al. Ann Thorac Surg. 2016;101(1):116–123.
5. Cahill TJ, et al. Lancet. 2016;387(10021):882–893.

Prolonged survival in metastatic triple negative breast cancer: A case series.

Oladapo Adesua | Tanushree Dewan. Glan Clwyd Hospital

Med+ 2025

1. Introduction

- Triple negative breast cancer (TNBC) lacks of oestrogen, HER2 and progesterone receptors. It accounts for 15–20% of breast cancer cases and is generally high grade with elevated proliferation rates and aggressive
- Chemotherapy remains standard therapy (1).
- Metastatic TNBC has a poor prognosis with low survival months despite treatment (2).

2.Method

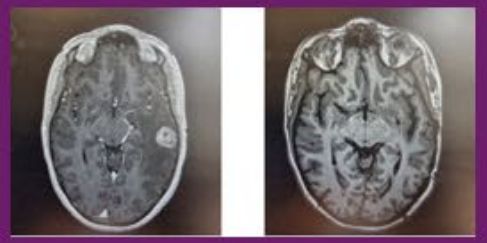
- We look at two women diagnosed 7 years ago with metastatic disease, their management and disease course.

3.

2017: breast lump with biopsy, mammoplasty and diagnosis.

Chemotherapy x6 cycles with adjuvant radiotherapy.

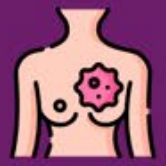
2018: brain metastasis. Steroids and stereotactic radiosurgery



a.2018
b.2025

Treatment complications: Anaphylaxis to Taxotere, neutropenic sepsis, avascular necrosis of femoral head leading to THR.

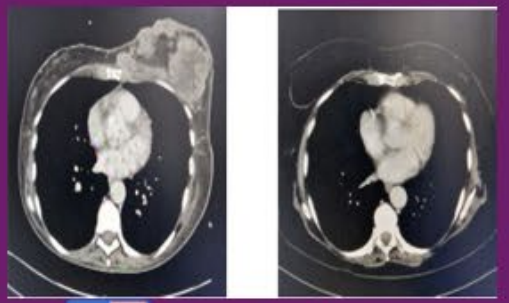
4.



2017: fungating lesion and worsening sciatica. Diagnosis with vertebral metastasis.

On weekly chemotherapy with resolution of symptoms and disease stabilization

Radiotherapy to the spine



a. 2017
b. 2015

Complications: Nausea and initial failed treatment, pulmonary embolism.

5. Discussion

- These two cases notably have surpassed the median survival rate of 8 -13 months. Kesireddy et al.
- Factors identified correlating with improved survival include multiagent therapy and individualized approach.
- Recent advances have led to increased treatment options in TNBC with PARP inhibitors and immune checkpoint inhibitors approved for treatment.
- Overall, this data emphasizes the need for an individualized approach to TNBC management, where therapy is guided by thorough evaluation of patient and tumor characteristics.

6. Conclusion

Though associated with unfavorable prognosis; these cases demonstrate that individualized treatment approaches contribute to prolonged survival. Their outcomes highlight TNBC's heterogeneity and the need to tailor management while advancing novel therapies.

References

1. Zagami P, Carey LA. Triple negative breast cancer: pitfalls and progress. NPJ Breast Cancer. 2022;8:95.
2. Dent R, Trudeau M, Pritchard KI, Hanna WM, Kahn HK, Sawka CA, et al. Triple-negative breast cancer: clinical features and patterns of recurrence. Clin Cancer Res. 2007;13(15):4429–34.
3. Kesireddy M, Smith ER, Johnson K, Patel R, Brown A, Lee J, et al. Overall survival and prognostic factors in metastatic triple-negative breast cancer: a national cancer database analysis. Cancers (Basel). 2024;16(10):1791. doi:10.3390/cancers16101791.
4. Chua BM, La Course BD. Case report of long-term survival with metastatic triple-negative breast carcinoma: treatment possibilities for metastatic disease. Medicine (Baltimore). 2019;98(16):e15302. doi:10.1097/MD.0000000000015302.
5. Dr Julie Jones consultant oncologist

A Rare Case of Gadolinium induced Polyarthritis: A Case Report

Dr Anooja Anil, Dr Samantha Goh, Dr Nasreen Saleem

NHS Nottingham University Hospitals NHS Trust

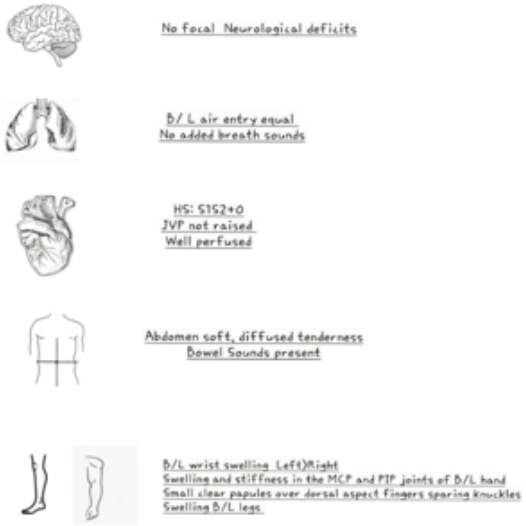
Background

Gadolinium based contrast agents (GBCAs) have been widely used and accepted in MRI imaging and are generally considered safe.

Nephrogenic systemic fibrosis (NSF) has long been a recognised entity in patients with renal impairment(1) however over the recent years, emerging literature, although limited, suggest that gadolinium exposure may be associated with chronic systemic symptoms even in patients with a normal renal function.

Presentation of Symptoms:

30 year old male
Background of Hep C and IVDU.
History of OP contrast enhanced MRI for a longstanding facial swelling.
At the time of MRI developed breathing difficulties which resolved with reassurance.
Few hours later developed –fever and myalgia which was managed with simple analgesia.
The following day developed joint swelling and stiffness in the metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints of his hands.
Initially he reported no associated rashes.
Symptoms worsened - stiffness and pain in bilateral hands and legs while mobilization ,abdominal pain and a small rash on his left arm.



Investigations : CK 1659, eGFR >90, CRP 4.9
Nerve Conduction Study and EMG : Normal
MRI contrast : Lipoma confirmed with biopsy later
Management: Expert opinion from Consultants in Neurology, Radiology, Dermatology, Rheumatology taken and treated as Gadolinium-induced Polyarthritis with IV fluids, analgesia and supportive care.

Discussion

This case adds to the growing body of evidence that suggests gadolinium exposure, even in patients with normal renal function may be associated with delayed-onset symptoms affecting the cutaneous and musculoskeletal system. (2)Previous studies have demonstrated gadolinium deposition in multiple organs including the brain, bone and skin.(3) Very few have reported associations with joint involvement. In addition, confirmation of histopathological modifications in such incidences have yet to be established. (4)

Reference:

1.Bernstein EJ, Schmidt-Lauber C, Kay J. Nephrogenic systemic fibrosis: A systemic fibrosing disease resulting from gadolinium exposure. Best Pract Res Clin Rheumatol. 2012 Aug;26(4):489–503.
2. Semelka RC, Ramalho J, Vakharia A, AlObaidy M, Burke LM, Jay M, et al. Gadolinium deposition disease: Initial description of a disease that has been around for a while. Magn Reson Imaging. 2016 Dec;34(10):1383–90.
3. Darrah TH, Prutsman-Pfeiffer JJ, Poreda RJ, Ellen Campbell M, Hauschka P V., Hannigan RE. Incorporation of excess gadolinium into human bone from medical contrast agents. Metallomics. 2009;1(6):479.
4. Fitch G, Williams K, Freeston JE, Dass S, Grainger A, Hodgson R, et al. Ultrasound and magnetic resonance imaging assessment of joint disease in symptomatic patients with cystic fibrosis arthropathy. Journal of Cystic Fibrosis. 2016 Jul;15(4):e35–40.

Rota & Workforce Communication Quality Improvement Project (QIP)

Zhao Xuan Tan[1], Ambreen Sadiq[2]

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2) General Medicine, Heartlands Hospital, Birmingham

NHS
University Hospitals Birmingham
NHS Foundation Trust

Aim

- To consider the outcomes and recommendations from cycle 1, review current practice and assess how we may be able to improve the working conditions, staffing levels, and overall well-being of resident doctors at each of our hospital sites, thereby enhancing patient care and safety.

Objectives

- Improve Rota Management
- Enhance Staffing Levels
- Clarify Payroll Processes
- Strengthen Communication
- Enhance Sickness Cover
- Support Resident Doctor Well-being
- Promote Exception Reporting

Demographics of Respondents

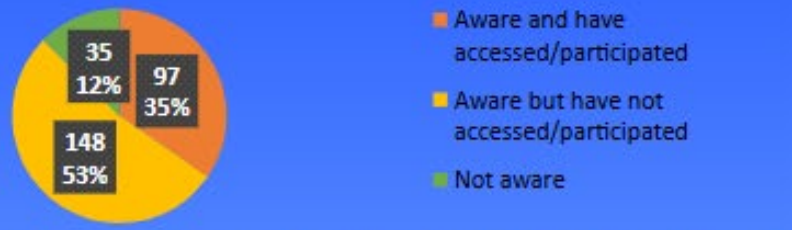
- There are a total of 280 respondents, ranging from locum (3), international training fellow (20), locally employed doctors (LEDs) (123) and doctors in training (132). Amongst these respondents, 141 of them were core trainees, 68 were registrars, 63 of them were foundation trainees. There were 8 respondents who did not declare their grade. Majority of respondents (124) work in QEHB, followed by 93 respondents from BHH, and 44 respondents from GHH. These respondents are from various medical specialties in UHB Trust.

GOSW and Exception Reporting

- Our Trust expanded exception reporting to our locally employed doctors (LEDs) in August 2024. This expansion affects the work of the whole team.
- Several key factors affect team morale: workload, work-life balance support, educational opportunities, staffing levels, rota gaps, and stress/burnout.
- 57% of respondents are aware of the process to submit exception report. 17% of respondents had submitted exception report, but 5% of the respondents are not satisfied with the outcome. Fear of repercussions and blame culture remain significant barriers to exception reporting. Resident doctors may also believe that exception reporting won't lead to meaningful changes.
- The Trust needs to foster a culture where exception reporting is recognized as a contractual right—one that directly impacts both doctor wellbeing and patient safety

Resident Doctor Wellbeing Officers

Are you aware of Resident Doctor Wellbeing Officers?



- Provide pastoral support that is independent from the clinical and educational supervisory framework.
- Have key working relationships with Post Graduate Medical Education in support of Resident Doctors Wellbeing.
- Can assist with confidential referrals to Occupational Health and signpost to other health professionals.
- There is 37% improvement compared to last year.

If there are issues, is there a named rota coordinator you can contact?

Medical Workforce Team and Rota

There is 14% improvement this year compared to last year as there were 71% (198) respondents who received their rota at least 6 weeks prior to start of placement.

A majority (55%) of respondents had to organise swaps themselves without any support.

51% of respondents often get their break on a normal working day. On the other hand, 2% of respondents never get their break on a normal working day. For long day on call shift, 42% of respondents often get their break, whereas 4% of respondents never get their break. 46% of respondents often get their break on a night shift, compared to 6% who never get their break.

The most challenging aspect of managing current rota is when people informed under short notice because individualising rotas and adjusting for specific needs take a lot of time manually.

Sickness reporting policy compliance has been an issue.

Challenges around annual leave primarily relate to minimum staffing requirements not being met.

Conclusion

Key recommendations in this QIP include improving the shift swap process, proper management of sickness notification, effective communication between parties. Additionally, reinforcing the role of the GOSW within the Medical Education division and encouraging exception reporting were suggested to address these concerns.

In a recent Royal College of Physicians (RCP) survey, 56% of resident doctors were not satisfied with their training. Many reported lack of supervision, excessive rota gaps, limited access to outpatient and procedural training. Doctors need to learn a broader set of skills, including leadership, digital or risk-management skills, to equip them for modern consultant roles.[1]

Apart from that, patient safety is an aspect of our consideration in this QIP. This is evaluated via opportunity for resident doctors to take break during shifts. There is still margin for improvement to encourage resident doctors to take break to improve work performance and minimise harm to patients. Consequences of staff fatigue include impaired decision making, medication errors, reduced attention and [illegible] incivility.[2]

References

1. RCP 'next gen' survey: fewer than half of resident doctors surveyed are satisfied with their clinical training.
2. The impact of staff fatigue on patient safety.

Neuropsychiatric adverse effects following Ashwagandha supplementation

A Case of Sleep Abnormalities, Acute Confusion and Retrograde Amnesia temporally associated with ashwagandha ingestion in a Healthy Adult

Dr G. Thushani Anuththara[1], Dr Sarah Amin[1], Dr Benedict Sebastiampillai[1]
[1]Department of Acute Medicine, Peterborough City Hospital

Royal College of Physicians

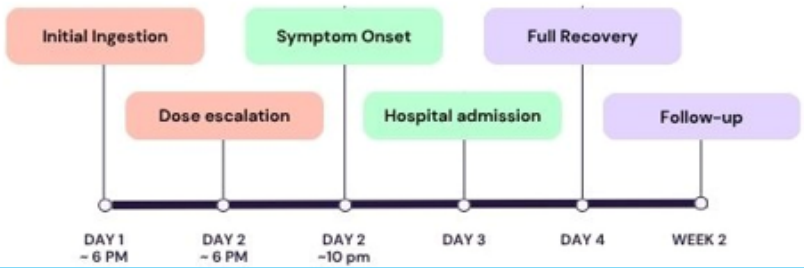
NHS North West Anglia NHS Foundation Trust

Introduction

- Ashwagandha (***Withania somnifera***) is a popular adaptogenic herb
- Extensively used in traditional Ayurvedic medicine
- Ashwagandha supplementation has increased significantly in Western countries

Case Presentation

- Patient: 50-year-old male, previously well
- Clinical features:
  - **Prolonged sleep** (~23 hours)
  - **Intermittent abnormal behaviours during sleep**
  - **Altered mental status on waking**
  - **Transient memory loss**
  - Vitals: haemodynamically stable
  - Neurology: no focal deficits. **4AT- 10**
- Clinical Timeline:



Investigations

- Blood tests:
  - Mild neutrophil leucocytosis
  - Normal inflammatory markers
- Urgent NCCT head: No acute pathology
- MRI Brain: No structural abnormalities
- CSF Analysis: Unremarkable

Management

- Initial Approach:
  - Working diagnoses:
    - **Infective meningoencephalitis**
    - **Drug-induced encephalopathy**
  - Empirical IV antibiotics and antivirals
  - Immediate Ashwagandha discontinuation
  - Supportive care
- Treatment Evolution:
  - Antimicrobials stopped after negative workup
  - Continued monitoring
- Clinical Outcome:
  - Complete resolution by day 4
  - Sustained recovery at 2 week follow up

Discussion

- Evidence suggesting Drug-induced aetiology:
  - Close temporal relationship
  - Recent dosage escalation
  - Rapid resolution post discontinuation
  - **Exclusion of alternative diagnoses**
  - Similar reactions documented in literature
  - **Naranjo Adverse Drug Reaction Probability Scale: 7**
- Probable risk factors:
  - **Individual metabolic variability**
  - **Genetic polymorphisms in drug metabolising enzymes**
  - **Dose escalation patterns**

Key Clinical Messages

- **Comprehensive drug history: consider herbal supplements**
- **Adverse event/drug interaction reporting**
- **Clinician awareness/ Patient education**

References

- Singh N et al., 2011, Afr J Tradit Complement Altern Med, doi:10.4314/ajtcam.v8i5S.9.
- Mishra L et al, 2000; Altern Med Rev, doi:10.21275/SR25520190842
- Fazlani M et al., 2025, Cureus, doi:10.7759/cureus.89104.

Designing an On-Call Handbook to increase the confidence of foundation year doctors

Devon Ward, Timothy Ho, Jessie Yu, Seher Zaidi *University Hospitals of Liverpool Group, UK*

NHS University Hospitals of Liverpool Group

Introduction

Resident doctors often report their on-call shifts to be the most difficult and stressful aspects of their roles.

Contributary factors include unfamiliarity with their new role and environment, local guidelines or practices and the availability of services and equipment.

This quality improvement project aimed to identify the key factors affecting doctors starting their on-call shifts and to design resources to support their work.

Methods

Dec 2024 — A pre-intervention questionnaire was sent to FY1 doctors at a Liverpool Hospital Trust to establish their confidence and concerns.

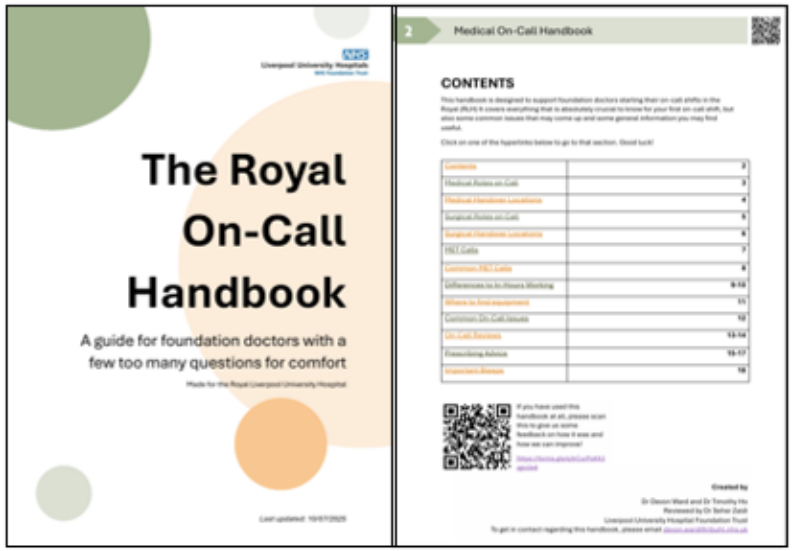
Feedback was gathered from a mix of Likert scales, MQC and free-text boxes.

Jan-Apr 2025 — Based on their feedback, an 18-page handbook was designed and circulated in physical and digital versions.

Apr-Aug 2025 — A follow-up questionnaire was then circulated to the outgoing and incoming cohorts of FY1s to establish the perceived utility and impact from the handbook

The Handbook

Access the full handbook via the QR code:



Conclusions

- The handbook was favourably received and improved resident doctor's confidence with managing their clinical work, induction and local orientation.
- This resource can be readily adapted for use in other hospitals or for other cohorts requiring induction such as for International Medical Graduates.

Pre-Intervention feedback *(n = 17)*

Respondents reported that, when starting FY1, their biggest concerns and areas of least confidence were as follows:

- Ordering investigations and referrals (58.9%)
- Managing and escalating medical situations (47.8%)
- Orientation to roles and responsibilities (35.3%)

88.2% of respondents preferred any resources to be made accessible digitally.

Post-Intervention feedback *(n = 27)*

81.5% reported frequent use of the handbook whilst on-call and during induction with 95% reporting it being of suitable size and accessibility.

Respondents reported improvement in their confidence across all topics covered by the handbook.

In addition to the pre-intervention feedback, the most favourably received topics covered by the handbook were:

- Equipment access and locations (81.5%)
- Key extensions and contact details (74.1%)
- Making referrals to other services (74.1%)

The least useful aspects were guidance on internal systems (i.e. ICE, PACS) (25.9%) and prescribing (22.2%)

Evaluation of Teriparatide treatment for Osteoporosis at South Warwickshire NHS Foundation Trust

S Baloch[1], J Odia[1], Y Hall[1], B Vasta[1]
1:SOUTH WARWICKSHIRE NHS FOUNDATION TRUST-

INTRODUCTION

Osteoporosis is characterized by low bone density and altered bone microstructure, increasing lifetime risk of fragility fractures affecting over 1 in 3 women and 1 in 5 men.
These fractures cause pain, disability, reduced quality of life, and increased mortality, with significant cost to the UK healthcare system.

Teriparatide, a synthetic parathyroid hormone analogue, stimulates bone formation and is recommended for high-risk postmenopausal women with severe osteoporosis.
NICE and NOGG recommend Teriparatide for:

- T-score ≤ –4.0, or
- T-score ≤ –3.5 with ≥2 fractures
- Bisphosphonate intolerance or poor response.

This audit evaluates DEXA follow-up scans using NICE and NOGG criteria.

OBJECTIVES

- **Determine** the utility of DEXA-scans conducted at one and two years after starting therapy.
- **Assess** if performing DEXA-scans at baseline and at two years is a more practical and effective strategy.
- **Minimise** unnecessary DEXA-scans and enhance both service efficiency and patient care delivery.

MATERIALS &METHODS

- This study employed a retrospective design. 65 patients deemed eligible, 58 began treatment with Teriparatide.
- Data source: electronic records, ICE. Focusing on variables such as demographics, indications for therapy, treatment adherence, DEXA-scan results, side effects and subsequent management following treatment.

RESULTS

•**Median age:** 80 years
•**Gender:** 88% female, 12% male
•**Indications for Teriparatide use:**
•Osteoporotic fragility fractures 63.1%;
•Vertebral fractures 36.9%
•**Baseline DEXA scans:** 100% of patients
Follow-up scans
•47% had scans at both year one and year two (spine and neck of femur)
•53% had a single follow-up scan, mostly at year two
•No management changes resulted from year one scans
•Average interval between Teriparatide and follow-on therapy: 11.5 months

Fig 1: T Score Improvement

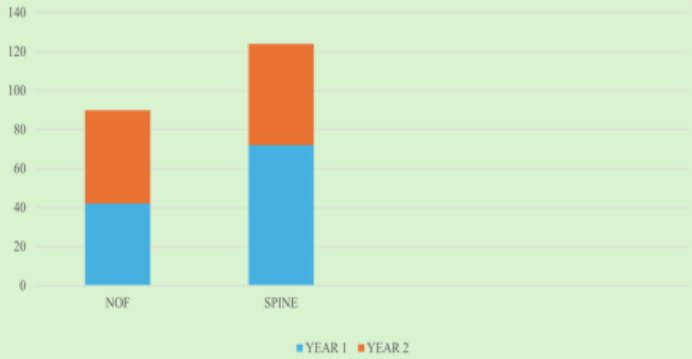
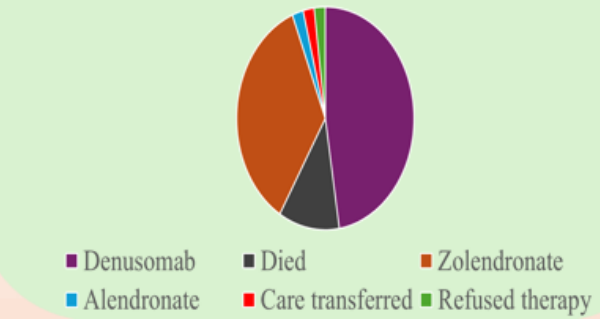


Fig 2: Follow -Through Therapy



CONCLUSION

- Teriparatide therapy improved bone mineral density, particularly the spine.
- No changes in management resulted from DEXA-scans performed at year one in likely due to bone mineral density improvement.

LIMITATIONS

- A single-centre, retrospective study; with small sample size.
- Presence of hip replacements restricted Neck-of-Femur DEXA-scan interpretation.

RECOMMENDATIONS

- Establish a local protocol to conduct DEXA-scans at baseline and at two years, unless additional scans are clinically indicated.
- Seamless transition to antiresorptive therapy post teriparatide to prevent treatment gaps.

REFERENCES

1.Osteoporosis prevention of fragility fractures: https://cks.nice.org.uk/topics/osteoporosis-prevention-of-fragility-fractures/backgroundinformation/prevalence/ [accessed 24thAugust2025]
2. Epidemiology, Burden, and Treatment of Osteoporosis in the United Kingdom: https://www.osteoporosis.foundation/sites/iofbonehealth/files/scope-2021/UK%20report.pdf [accessed 24thAugust2025]
3.Teriparatide for the secondary prevention of osteoporotic fragility fractures in Postmenopausal women: https://www.nice.org.uk/guidance/TA161/chapter/1-Recommendations [accessed 23rdAugust2025]
4.National Osteoporosis Guidelines Group;Guideline-2024.pdf : https://www.nogg.org.uk/sites/nogg/download/NOGG-Guideline2024.pdf?v5 [accessed 23rdAugust2025]

Audit of Endometrial Biopsies in Post-Menopausal Patients Aged 50+: Defining Adequacy Standards for Safer Diagnosis

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[2] Department of Cellular Pathology, Whittington Health NHS Trust

Introduction

Endometrial biopsy is a key investigation for post-menopausal bleeding (PMB). Specimen adequacy is critical for accurate diagnosis, yet no universally accepted criteria exist.

The Royal College of Pathologists (RCPath) guidance states adequacy depends on clinical context and tissue volume [1] while the British Gynaecological Cancer Society (BGCS) guidelines highlight that transvaginal ultrasound (TVS) demonstrating endometrial thickness (ET) <4 mm carries a high negative predictive value for endometrial malignancy, and in most cases such biopsy is not required unless there are recurrent symptoms or irregular ultrasound features [2].

Ensuring adequacy of sampling is essential for reliable diagnosis and appropriate patient management, as variation in practice may result in unnecessary procedures or missed pathology.

Aims

- To audit adequacy of endometrial biopsies in women aged ≥50 years.
- To identify areas for improvement and propose a standardised adequacy framework for endometrial pathology.

Methods

A retrospective audit was conducted on the first 350 endometrial biopsies from women aged ≥50 years (Jan-May 2024).

Data included clinical details, ET documentation, adequacy of glandular architecture, and repeat biopsy rates.

Data were benchmarked against RCPath tissue pathways & BGCS guidelines.

Results

Table 1: Summary of audit findings (*n = 350*)

Variable	% (n)
Clinical information (hysteroscopy/imaging) provided	76.9 (269)
ET measurement provided	8.6 (30)
Adequate for glandular assessment	74 (259)
Atrophic / ET <4mm	29.7 (104)
Sufficient tissue in atrophic cases	52.9 (55)
Repeat biopsies received (inadequate cases)	9.9 (9)

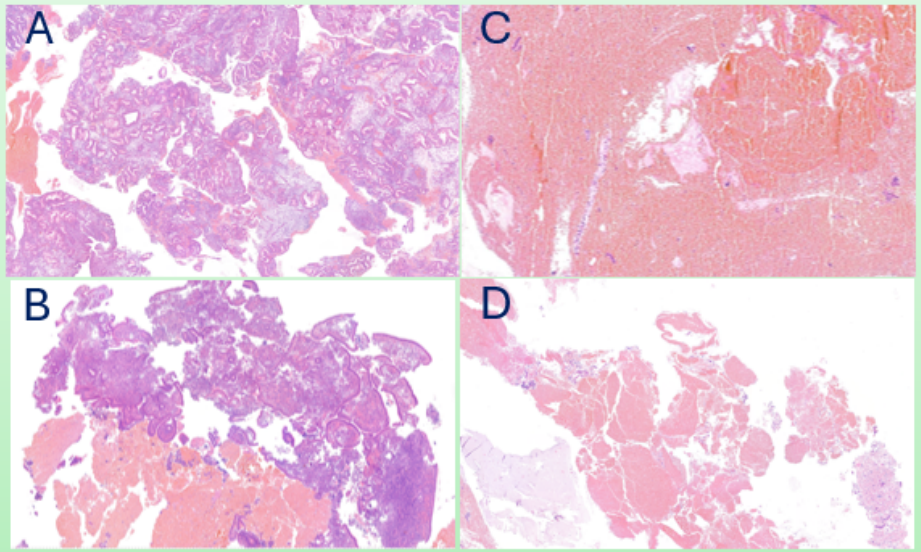

Figure 1. Representative histological examples of endometrial biopsy. **(A)** and **(B)** show sufficient endometrial tissue containing well-preserved glands and stroma, allowing assessment of glandular architecture. **(C)** and **(D)** demonstrate inadequate samples composed mainly of blood, fibromuscular tissue, and debris without identifiable endometrial glands, rendering the specimen not assessable for diagnostic interpretation.

Discussion

Prior literature advises reserving the term "inadequate" for cases without any endometrial tissue and using "not assessable" where tissue is scant [3] while strip-based adequacy thresholds may provide objectivity [4].

Improving adequacy standards will reduce repeat procedures and ensure timely diagnosis, directly benefiting patient safety and outcomes.

Conclusion

This audit identified inconsistent documentation of ET and atrophy. In the absence of standardised adequacy criteria, terminology was applied inconsistently across reports. There was limited adherence by the clinical team to repeat biopsy recommendations noted in pathology reports.

Planned actions include disseminating findings, implementing a uniform adequacy framework within the gynaecological pathology team, and conducting a re-audit within 18 months to assess improvement.

References

[1] Ganesan R, Singh N and McCluggage WG. Tissue pathways for gynaecological pathology. London: The Royal College of Pathologists, 2023. Available at: https://www.rcpath.org/profession/guidelines/cancer-datasets-and-tissue-pathways.html [Accessed 2 Sept 2025].

[2] Morrison J, Balega J, Buckley L, *et al.* British Gynaecological Cancer Society (BGCS) Uterine Cancer Guidelines: Recommendations for practice. *Eur J Obstet Gynecol Reprod Biol* 2023;270:50-89.

[3] McCluggage WG. My approach to the interpretation of endometrial biopsies and curettings. *J Clin Pathol* 2006;59(8):801-812.

[4] Sakhdari A, Moghaddam PA and Liu Y. Endometrial samples from postmenopausal women: a proposal for adequacy criteria. *Int J Gynecol Pathol* 2016;35(6):525-530.

Mismatch Repair Immunohistochemistry and Germline Pathogenic Variants in Lynch Syndrome-associated Endometrial Cancer: A Retrospective Audit

Malcolm Scott[1,2], Tunch Akmandor[1,3], Nikhil P. Ganeshram[4], Damneet Thind[1], Rupali Arora[1]

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[2] Department of Women's Cancer, EGA Institute for Women's Health, University College London
[3] Advanced Diagnostics, Health Services Laboratories [4] Newstead Wood School

UCL EGA Institute for Women's Health

NHS University College London Hospitals NHS Foundation Trust

Introduction

Endometrial cancer (EC) is frequently the first clinical manifestation of Lynch syndrome in women, sometimes preceding colorectal cancer [1,2].

Universal screening with mismatch repair (MMR) immunohistochemistry (IHC) is recommended to identify patients at risk [3]. Concordance between IHC and germline pathogenic variants (PVs) is critical to guide genetic counselling and family cascade testing.

Discordance may result in missed diagnoses or unnecessary investigations. Audits are essential to evaluate the reliability of IHC, highlight diagnostic gaps, and support pathway improvement.

Aim

To audit concordance between MMR IHC and germline genetic results in Lynch syndrome associated endometrial cancer, and to identify areas for diagnostic optimisation.

Methodology

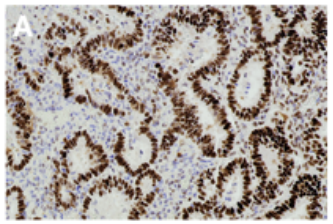
We retrospectively analysed 15 women with confirmed Lynch syndrome who developed endometrial cancer between 2008 and 2024. Clinical variables included age, body mass index (BMI; categorised as <30, ≥30, or unknown), FIGO stage, and histology.

IHC for MLH1, PMS2, MSH2, and MSH6 was compared with germline PV status. Expected loss patterns were defined per gene. Positive stromal internal control was identified in every case, confirming optimal staining quality.

Concordance was defined when IHC results matched the germline PV. Discordant cases were highlighted for further evaluation.

Results

The median age at diagnosis was 41 years (range 31-57). BMI distribution included eight patients with BMI <30, five with BMI ≥30, and two with unknown values. Most tumours were Stage IA (13/15), with one Stage IB and one Stage IIIB. Histology across 15 cases was predominantly (80%) endometrioid, with one mixed cases: endometrioid/clear cell.



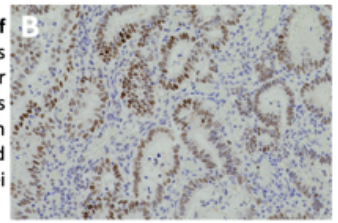
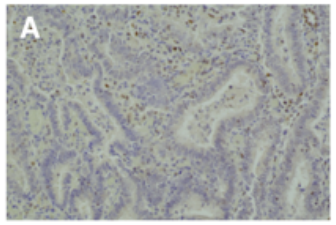
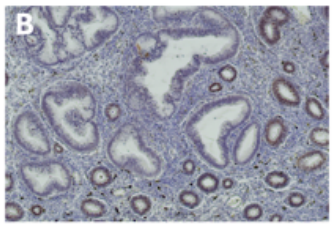


Figure 1. Retained nuclear expression of MMR in EC. *(A)* IHC for **MSH2** shows diffuse, strong nuclear staining in tumour cells. *(B)* IHC for **MSH6** demonstrates similarly strong nuclear staining. Both consistent with ***retained expression***, and internal stromal with lymphocytic nuclei serve as positive internal controls (×20).

Table 1: Concordance between MMR IHC and germline pathogenic variants (*n=15*)

Gene (PV)	Cases (n)	Concordant % (*n*)	Typical IHC pattern observed	Special Notes
MLH1	6	100%	MLH1 & PMS2 loss	-
MSH2	8	87.5%	MSH2 & MSH6 loss	1 case with isolated MSH6 loss only (possible point mutation in MSH2)
MHS6	1	0%	Isolated MSH6 loss expected	Case showed dual MSH2+MSH6 loss despite MSH6 PV (possible 2° MSH2 alteration or variant misclassification)
Total	15	86.7%	-	2 discordant cases (13.3%)





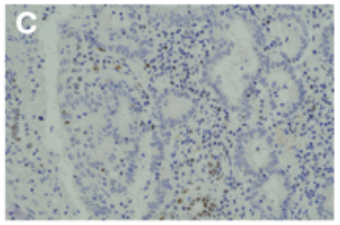


Figure 2. Loss of MMR protein expression in endometrial carcinoma. *(A)* **MSH2 loss:** tumour nuclei show complete absence of staining, while adjacent normal glands retain strong nuclear expression (×20). *(B)* **PMS2 loss:** tumour nuclei are negative with retained staining in non-neoplastic stromal and lymphocytic nuclei (×20). *(C)* **MLH1 loss:** tumour cells demonstrate complete nuclear absence of MLH1 with preserved staining in surrounding benign glands (×20).

Discussion

Overall concordance was 86.7% (13/15). MLH1 PVs were fully concordant (6/6), while one MSH2 PV case showed isolated MSH6 loss.

The single MSH6 PV case demonstrated dual MSH2+MSH6 loss, suggesting a possible secondary MSH2 alteration or misclassified variant. These findings highlight the reliability of IHC but emphasise the need for confirmatory germline testing in discordant cases due to the heterodimeric nature of MSH2-MSH6 [4,5].

Reflex MLH1 promoter methylation testing should be incorporated into standard workflows. Repeat IHC, MSI-PCR, or tumour sequencing may be performed in discordant or equivocal cases [6-8].

Conclusion

This audit demonstrates that MMR IHC is highly concordant with germline PV status in Lynch syndrome associated endometrial cancer, supporting its use as a frontline screening tool.

Discordant cases underline the importance of molecular confirmation and multidisciplinary review. Regular audits strengthen diagnostic quality, safeguard patient safety, and optimise Lynch syndrome detection and counselling.

References

[1] Lu, K. H., *et al.* (2005). Gynecologic cancer as a "sentinel cancer" for women with hereditary nonpolyposis colorectal cancer syndrome. Obstet Gynecol,105(3): 569-574.
[2] Ryan, N. A. J., *et al.* (2019). The proportion of endometrial cancers associated with Lynch syndrome: a systematic review of the literature and meta-analysis. Genet Med, 21(10): 2167-2180.
[3] Concin, N., *et al.* (2021). ESGO/ESTRO/ESP guidelines for the management of patients with endometrial carcinoma. Int J Gynecol Cancer, 31(1): 12-39.
[4] Hampel, H., *et al.* (2005) Screening for the Lynch syndrome (hereditary nonpolyposis colorectal cancer). N Engl J Med, 352(18): 1851-1860.
[5] Mensenkamp, A. R., *et al.* (2014). Somatic mutations in MLH1 and MSH2 are a frequent cause of mismatch-repair deficiency in Lynch syndrome-like tumors. Gastroenterology, 146(3): 643-648.
[6] Stelloo, E., *et al.* (2017) Practical guidance for mismatch repair-deficiency testing in endometrial cancer. Ann Oncol, 28(1): 96-102.
[7] Buchanan, D. D., *et al.* (2017). Tumor testing to identify Lynch syndrome in two Australian colorectal cancer cohorts. J Gastroenterol Hepatol, 32(2):427-38.
[8] NICE (2020). Molecular testing strategies for Lynch syndrome in people with colorectal cancer [DG42]. *Available from:* https://www.nice.org.uk/guidance/dg42/chapter/1-Recommendations

Evaluation of Investigations in Suspected Nitrous Oxide-Induced Neuropathy at a UK Tertiary Centre

Dr Umang Thakrar, Dr Mohammed Farghal, Professor Farzad Fatehi
University Hospitals of Leicester NHS Trust

Introduction

- In the United Kingdom, 3.3% of 16–24-year-olds report using nitrous oxide recreationally, making it the third most commonly used drug amongst this age group.[1]
- Excessive use can lead to severe neurological complications, most notably subacute combined degeneration of the spinal cord (SACD).[2]
- National guidelines set out by the Royal College of Emergency Medicine and the Association of British Neurologists were introduced to standardise investigations.[3,4]
- Accurate and timely investigations are essential to confirm nitrous oxide-related neuropathy, as well as exclude alternative causes of similar presentations. [5]
- This audit evaluated the adherence to recommended investigations for patients with suspected nitrous oxide-induced neuropathy at University Hospitals of Leicester (UHL).

Methods

- This retrospective audit reviewed electronic records of patients at UHL coded with nitrous oxide neuropathy between 2023 and 2025. Ten cases were identified.
- Records were analysed to determine whether patients underwent the recommended investigations, whether appropriate vitamin B12 treatment was given and if neurology follow up was arranged.
- Investigations included: full blood count, urea and electrolytes, thyroid function tests (TFTs), vitamin B12, MMA, homocysteine, and HIV and syphilis serology.

Results

- One out of ten patients received the full recommended set of investigations.
- TFTs and HIV and syphilis serology were the most frequently omitted.
- TFTs were not performed in 50% of cases.
- 30% of patients lacked HIV and syphilis serology, with syphilis testing alone omitted in 30%.
- MMA testing was omitted in 30% of patients.
- 60% of patients had appropriate neurology follow-up arranged upon discharge.
- All patients received appropriate treatment.

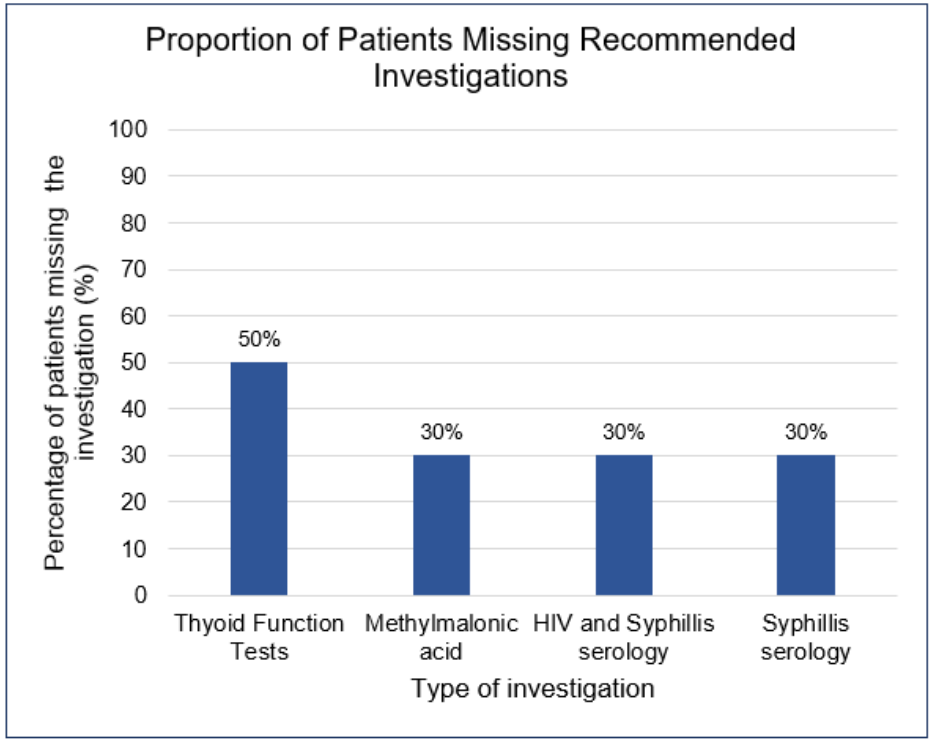


Figure 1. *Bar chart showing the proportion of patients with suspected nitrous oxide–induced neuropathy who did not receive thyroid function tests (TFTs), HIV/syphilis serology, methylmalonic acid (MMA), or syphilis serology alone.*

Discussion

- Thyroid function tests, as well as HIV and syphilis serology, should be routinely performed in patients presenting with distal sensorimotor neuropathy or myelopathy, as these conditions may mimic SACD.[4,5]
- MMA is a sensitive marker of functional vitamin B12 deficiency and is often raised in nitrous oxide related SACD, even when serum vitamin B12 levels are normal, and should therefore be investigated in patients with suspected nitrous-oxide toxicity.[2]

Conclusion

- A clearly defined local protocol is essential to ensure standardised care for patients with suspected nitrous oxide-induced neuropathy.
- Future work should focus on evaluating regional adherence to recommended guidelines and assessing patient compliance with intramuscular vitamin B12 injections in the community, exploring the impact on patient outcomes.

References

1. Office for National Statistics. Drug misuse in England and Wales: year ending March 2024. London: ONS, 2024.
2. Paris A, Lake L, Joseph A, et al. Nitrous oxide-induced subacute combined degeneration of the cord: diagnosis and treatment. Pract Neurol 2023;23:222-8.
3. Humphries C, Buchanan M, Gillings M, Manitheepan K, Wood D. Suspected nitrous oxide toxicity in Emergency Departments: Best Practice Guideline. London: Royal College of Emergency Medicine, 2023.
4. Paris A, Lake L, Joseph A, et al. Clinical Practice Guide: Nitrous oxide-induced subacute combined degeneration of the cord. London: Association of British Neurologists, 2023.
5. Castelli G, Desai KM, Cantone RE. Peripheral neuropathy: evaluation and differential diagnosis. Am Fam Physician 2020;102:732-9.

University Hospitals Birmingham
NHS Foundation Trust

Approach to primary differentiated thyroid cancer identified during evaluation of primary lung cancer.

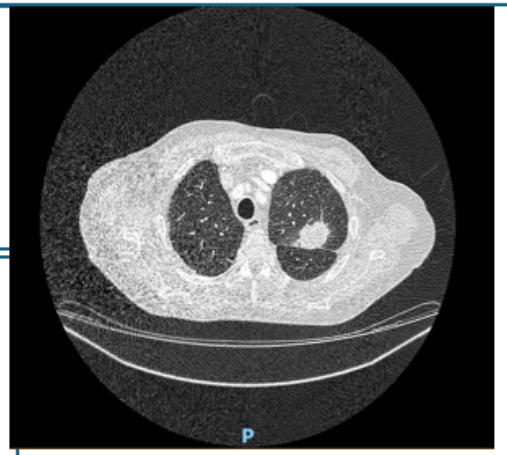
Porwal, Vishma; Tahsin, Saara; Kalaiah, Yogesh
University hospitals Birmingham NHS Trust

Introduction

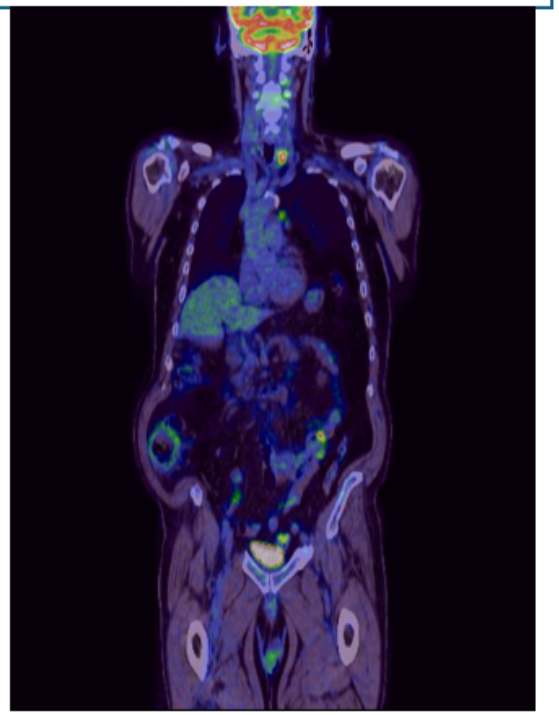
Incidental FDG-avid thyroid nodules on PET-CT scans may represent either metastasis or a synchronous primary malignancy. Accurate distinction is vital, as management and prognosis differ significantly. We present a rare case of concurrent primary lung adenocarcinoma and primary papillary thyroid carcinoma.

Case Report

An 80-year-old man presented with a persistent chest infection, and imaging revealed a left upper lobe mass. Histology confirmed lung adenocarcinoma with a KRAS G12C mutation and high PD-L1 expression. PET-CT showed an additional 2 cm FDG-avid thyroid nodule, which ultrasound and FNA confirmed as papillary thyroid carcinoma with normal thyroid function.



4.2 x 3.1 cm soft tissue mass: T2aN1Mx.



This confirmed left primary lung adenocarcinoma with PET/CT staging of T2bN2M0 and with a focal uptake seen within a part calcified 20mm nodule at the inferior pole of the left thyroid lobe.

Discussion

The patient was managed through a multidisciplinary team involving oncology, endocrinology, radiology, and palliative care. Given the aggressive nature of his lung adenocarcinoma, lung-directed chemoradiotherapy was prioritised, followed by durvalumab maintenance. The thyroid lesion remained stable, and surgery was deferred as his condition declined. This case highlights the importance of recognising synchronous primaries, thorough evaluation of FDG-avid thyroid nodules, and multidisciplinary decision-making to avoid overtreatment in patients with limited prognosis.

Conclusion

The case highlights the need to carefully evaluate incidental PET-CT findings and distinguish between metastasis and synchronous primaries. Management should prioritise the more aggressive malignancy, while indolent tumours may be safely observed. Early multidisciplinary and palliative input ensures treatment remains balanced, appropriate, and patient-centred.

References

1.Albany C et al. *J Thorac Dis.* 2011;3:271–3.
2.Ferra J et al. *Eur J Case Rep Intern Med.* 2021;8.
3.Haugen BR et al. *Thyroid.* 2016;26:1–133.
4.de Leijer JF et al. *Eur J Case Rep Intern Med.* 2021.

BREAKING BARRIERS TO TIMELY DISCHARGE

Dr Wachi Jain, Dr Kanav Jain, Dr Sachi Jain

BACKGROUND

Stroke is a clinical syndrome of presumed vascular origin characterized by rapidly developing signs of focal or global disturbance of cerebral functions which lasts longer than 24 hours or leads to death (NICE guidelines). It remains a leading cause of morbidity in the UK, with approximately 126,000 admissions in England every year. Prolonged hospital stays are associated with increased costs, reduced patient flow, in-hospital complications and delayed rehabilitation.

AIM

To evaluate length of stay (LOS) of stroke patients admitted to our stroke unit, identify factors contributing to discharge delays, and suggest interventions to improve patient flow.

METHODS

A retrospective review of case notes and records of 62 patients admitted with stroke between October and November 2023, Data included age, gender, comorbidities (AF. HTN, DM, hyperlipidaemia, IHD), NIHSS on admission, modified Rankin Scale pre-- and post-admission, discharge pathway, and causes of delay in discharge after MFFD

RESULTS

Delays in discharge were due to medical, social and rehabilitation reasons. Social causes for delay were more prominent about 50% which included awaiting package of care, best interest meeting, transfer planning and awaiting fast track discharge.

CONCLUSION

-Recommendations: Identifying high risk patients using predictive tools and implement early tailored discharge planning.

-Enhanced coordination between stroke team, social services and the families to expedite actions on patient care pathways.

-For stable patients (e.g., low mRS), need a rapid discharge pathway that prioritizes early discharge within 3 days.

Therapeutic Dilemma in Lemierre's Syndrome: Anticoagulation Considerations

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Royal Berkshire NHS Foundation Trust

Royal College of Physicians

INTRODUCTION

Lemierre's syndrome is a rare septic thrombophlebitis usually arising from oropharyngeal infection, with Fusobacterium necrophorum the predominant pathogen.[1] It is characterised by internal jugular vein thrombosis and septic emboli. Anticoagulation in Lemierre's remains controversial, with limited evidence to guide practice.[2-3] We report an atypical case of Lemierre's syndrome due to Staphylococcus aureus in a middle-aged woman with multiple chronic conditions, where infection management and anticoagulation required careful multidisciplinary decision making.

CASE REPORT

A woman in her early sixties with atrial fibrillation on long-term warfarin, type 2 diabetes mellitus, and hypertension presented with two weeks of worsening confusion, fluctuating consciousness, and new left-sided weakness. On arrival, she was noted to have a supratherapeutic INR of 9, elevated inflammatory markers and normal platelets. Neurological examination showed left hemiparesis and variable GCS.

Urgent CT brain excluded haemorrhage. MRI brain confirmed acute infarcts in the right thalamus, midbrain, and medial temporal lobe, with a right subdural empyema. Extensive odontogenic sinusitis with an oroantral fistula was also evident. Contrast-enhanced sequences revealed multiloculated empyema, early orbital involvement, and a non-occlusive thrombus in the right sigmoid sinus and jugular bulb, consistent with Lemierre's syndrome (Fig1 & Fig2). Blood cultures later grew Staphylococcus aureus.

She was transferred to a tertiary centre for joint management with neurosurgery and ENT/oral-maxillofacial teams and underwent functional endoscopic sinus surgery and tooth extraction. Broad-spectrum intravenous antibiotics were commenced, later tailored to prolonged linezolid therapy.

Repeat imaging post-procedure confirmed cerebral venous sinus thrombosis,possibly due to septic embolization. She was anticoagulated initially with therapeutic dalteparin and later switched back to warfarin. Over the following weeks, she showed neurological recovery and was transferred for inpatient rehabilitation. Interval imaging demonstrated resolution of the empyema and evolving, stable infarcts, with mild dural thickening.

IMAGING

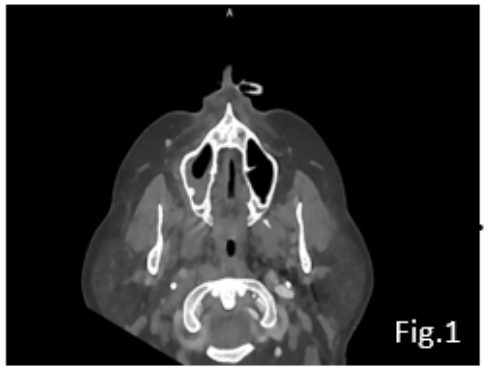
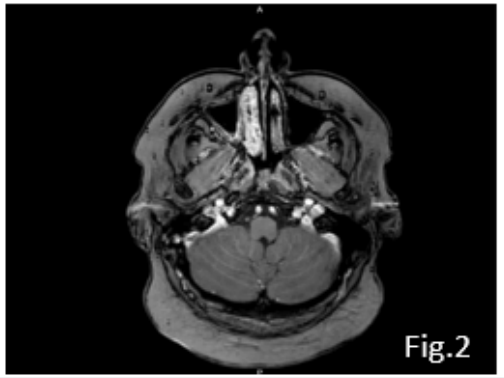


Fig1. Axial CT venogram demonstrating thrombus within the right internal jugular vein at the C1-C2 vertebra level.

Fig2. Axial contrast-enhanced MRI showing thrombus within the right jugular bulb



CONCLUSION

This case highlights the complex therapeutic dilemmas of Lemierre's syndrome in a middle-aged patient with significant comorbidities. While antibiotics remain the cornerstone of treatment, the role of anticoagulation is far less certain. Our patient developed extensive thrombosis despite a supratherapeutic INR, showing that infection-driven endothelial injury, venous stasis, and systemic inflammation can bypass vitamin K–dependent pathways (Virchow's triad).[4] The decision to reverse warfarin, pursue neurosurgical and ENT intervention, and later restart anticoagulation underscores the need for multidisciplinary, patient-centred care.

References 1. Riordan T. Human infection with Fusobacterium necrophorum (Necrobacillosis), with a focus on Lemierre's syndrome. Clinical microbiology reviews 2007;20(4):622–59. 2. Kuppalli K, Livorsi D, Talati NJ, Osborn M. Lemierre's syndrome due to Fusobacterium necrophorum. The Lancet Infectious Diseases 2012;12(10):808–15. 3. Phua CK, Chadachan VM, Acharya R. Lemierre syndrome—should we anticoagulate? A case report and review of the literature. The International journal of angiology : official publication of the International College of Angiology 2013;22(2):137–42. 4. Bagot CN, Arya R. Virchow and his triad: a question of attribution. British journal of haematology 2008;143(2):180–90.

SOCIAL MEDIA SHAPING SALUBRITY

Ali, Warda[1]; Jamson, Brogan[2]; Nalla, Nanda Kishore[1]
[1]NUH -Nottingham University Hospitals NHS Trust ; [2]United Lincolnshire Hospitals NHS Trust

INTRODUCTION

- **Case:** 23-year-old male presented with nausea, vomiting, fatigue, thirst, diarrhoea, and toothache
- **History:** Ingested approximately 1,000,000 units of over-the-counter vitamin D after viewing a misleading social media video promoting its benefits, resulting In severe hypercalcaemia secondary to vitamin D toxicity. [1]

MATERIALS AND METHODS

- **Permission** from the patient via written consent.
- The investigations and management as per the Nottingham University **Trust guidelines**. [2]
- Independent literature search undertaken including two databases: **PubMed and Science Direct**. [3,4]

Further correspondence: Warda Ali
warda.ali3@nhs.net
Acknowledgement: Dr Abilash Sathya

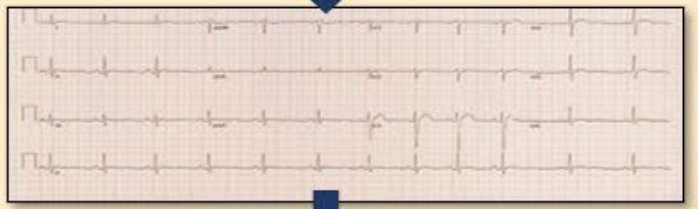
RESULTS AND DISCUSSION

- **Laboratory results on admission:**

-Vitamin D: 2747 nmol/L (toxicity >375 nmol/L)
-Calcium: 4.2 mmol/L (normal 2.2–2.6 mmol/L)
-Parathyroid hormone (PTH): 8.0 pmol/L (normal 1.6–7 pmol/L)

- **Other investigations:** Normal liver function tests, blood film, and cultures. Normal imaging: Chest X-ray, CT thorax, abdomen, and pelvis. ECG: NSR
- **Initial management:** Intravenous 0.9% NaCl fluids, 4–6 L over 24 hours for rehydration and calciuresis. Oral prednisolone 15 mg once daily for 5 days due to slow biochemical response. [2,5]
- **Subsequent course:** Readmission due to decline in renal function after discharge. Treated with IV fluids and weaning regime of prednisolone.[5,6]

FIGURE 1: ECG



- **Highlight**: clinical consequences of excessive vitamin D supplementation in a healthy individual as influenced by non-professional health advice on social media.
- **Social media's growing influence** on health-related matters presents both educational opportunities as well as risks when misinformation occurs. [7, 8]
- **Vitamin D:** vital for calcium and phosphate homeostasis, fat-soluble (accumulates in body tissues, raising toxicity risks)
- **Symptoms of toxicity:** diverse and affects; gastrointestinal, cardiac, renal, and mental health systems. [1]

CONCLUSION

- **This case underscores risks of unsupervised supplementation and highlights the impact of health misinformation on social media.**
- It calls for stricter regulation of digital health claims and improved public education on supplement safety to prevent similar cases

REFERENCES

Scan me!

MED 11 – 12 November 2025

Scan to download ReSPECT form sample

ReSPECT

A Quality Improvement Project

HOW DID WE DO?

Casserene E Shen Yeow, Olamide Oladipupo, Akmal Hallman, Nur Edriana Hizreen M Hizam

NHS
Norfolk and Norwich University Hospitals
NHS Foundation Trust

Background

The Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) enables discussions with patients or representatives about treatment preferences and care escalation, including CPR. Introduced in 2015, it is now widely used across NHS trusts in England. It provides personalised recommendations for emergencies when patients cannot make decisions, forming a key part of Advanced Care Planning (ACP) in geriatric care.

Objectives

To improve the completion of ReSPECT form in geriatric wards and to increase awareness and completion of ACP in geriatric wards.

Methods

- Reviewed 100 inpatient records from five geriatric wards at Norfolk and Norwich University Hospital.
- Assessed ReSPECT form completion against Resuscitation Council UK guidelines.
- Delivered a targeted educational session following presentation of initial findings.
- Conducted a re-audit of 63 patients two weeks later to assess improvement.

Table 1

Results

- Overall ReSPECT form completion improved only slightly from 70% to 72% after intervention.
- Section 4b (CPR and escalation decisions) showed high completion (84% → 92%).
- Detailed ACP documentation declined (14% → 11%).
- Clinician feedback indicated that ACP discussions were often viewed as inappropriate for the acute setting and should be initiated in the community.
- Section-by-section completion rates are summarised in Table 1.

Conclusion

Overall improvement in ReSPECT completion and ACP engagement was minimal despite staff education. Time constraints, staff uncertainty, and unclear guidance highlight the need for continued training and system-level change.

References

- Resuscitation Council UK. ReSPECT: Recommended Summary Plan for Emergency Care and Treatment. 2015. [www.resus.org.uk/respect]
- Royal College of Physicians et al. Advance Care Planning. Concise Guidance No. 12. London: RCP; 2009.
- Eli K et al. Why are some ReSPECT conversations left incomplete? Resuscitation Plus. 2022; 10.

Utilization of FRAX Tool for Primary Prevention of Fragility Fracture in Older Person Assessment Unit at Morriston Hospital

M Danish[1], A Awuzie[1]; H Y Sanda[2]; A Slowinski[1]; Y Mon[1]; S Chenna[1]
Morriston Hospital, Swansea Bay University Health Board; [2]University Hospital of Llandough, Cardiff and Vale University Health Board

Introduction

- Osteoporosis is a major public health concern, particularly among frail older adults.
- Fragility fractures increase morbidity, mortality, and hospital admissions.
- The FRAX tool estimates the 10-year fracture risk and guides prevention strategies.
- This audit assessed the use of FRAX scoring and primary prevention treatments in an older person assessment unit .

Aim

- To evaluate the utilization of the FRAX tool in assessing fracture risk and guiding primary prevention of fragility fractures among older adults admitted to the older person assessment unit at Morriston Hospital.

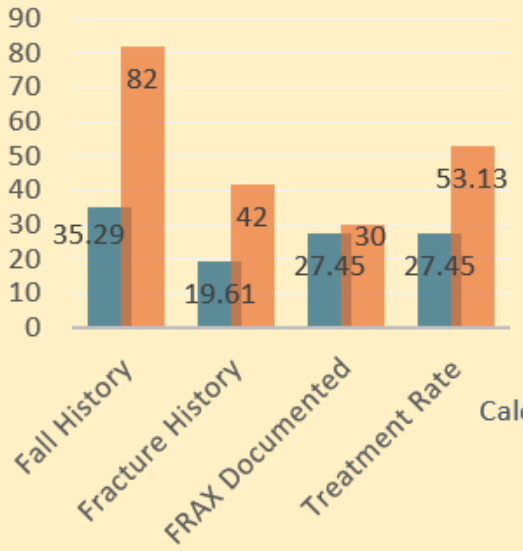
Method

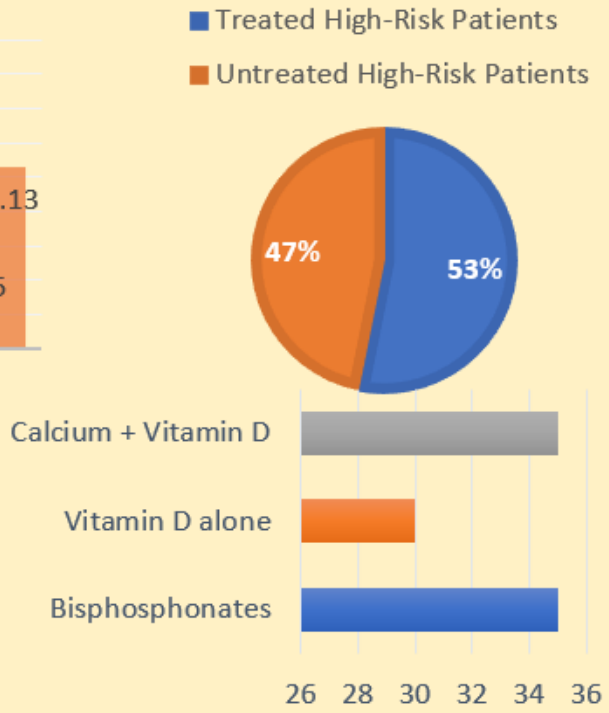
- Two retrospective audit cycles were conducted. The first included 51 patients (May–August 2024), and the second 50 patients (January–April 2025), admitted with falls. Data collected included age, sex, Clinical Frailty Score (CFS), fall/fracture history, FRAX score completion, and osteoporosis treatment status.

Results

In the first cycle, patients averaged 82.8 years old, with 60.78% female and a mean CFS of 5.43. Prior fractures were noted in 19.61%, and 35.29% had previous falls. Only 27.45% received osteoporosis treatment, and FRAX scoring was rarely used.

The re-audit showed a mean age of 83, with equal gender distribution. Fall history rose to 82%, and fracture history to 42%. FRAX scores were recorded in just 30% of cases. Among high-risk patients, 53.13% received treatment, while 46.88% did not. Treatments included bisphosphonates (35%), vitamin D alone (30%), and calcium/vitamin D combinations (35%).





Recommendation

- Implement FRAX tool as part of admission checklist.
- Provide training sessions for junior doctors and nurses.
- Establish multidisciplinary reviews (geriatrician, pharmacist, physiotherapist).
- Audit again post-intervention to evaluate improvement.

Conclusion

. Due to underutilization of FRAX tool and undertreatment od osteoporosis ,this study highlights the importance of better education, standardization of protocols and integration of FRAX into routine assessments in both primary and secondary care settings.

References

1. Kanis, J.A., McCloskey, E.V., Johansson, H., Cooper, C. and Rizzoli, R., 2008. *European guidance for the diagnosis and management of osteoporosis in postmenopausal women*. Osteoporosis International, 19(4), pp.399-428.

Kanis, J.A., Oden, A., Johansson, H., Borgstrom, F., Ström, O., McCloskey, E., 2007. *FRAX and the assessment of fracture probability in men and women from the UK*. Osteoporosis International, 18(4), pp.385–397.

National Institute for Health and Care Excellence (NICE), 2021. *Osteoporosis: assessing the risk of fragility fracture (NG146)*. London: NICE. Available at: https://www.nice.org.uk/guidance/ng146 [Accessed 20 October 2025].

Hyperkalemia and Cardiovascular Outcomes in Type 2 Diabetes and Heart Failure with Reduced Ejection Fraction Treated with Sodium-- glucose cotransporter-2(SGLT2) Inhibitor plus Mineralocorticoid Antagonist versus Mineralocorticoid Antagonist Alone

Otabor Emmanuel; Okunlola Ayoyimika; Idowu Abiodun ; Adebolu Olayinka; Hassan Abdulraheem ; Hamilton, Michael; Lam Justin; Alomari Laith; Thurairajasingam Krija

Jefferson Einstein Philadelphia Hospital, Philadelphia; United Lincolnshire Hospitals, NHS Trust ; Saint Peter's University hospital, New Brunswick, ; Imperial College London

Royal College of Physicians

Introduction & background

- MRA therapy in T2DM patients with HFrEF often leads to hyperkalemia.

- SGLT2 inhibitors may lessen potassium burden and enhance cardiovascular outcomes.

- Real-world evidence supporting these effects remains limited.

Aims

- The primary aim of this study was to determine whether, in adults with T2DM and HFrEF already receiving MRA therapy, the addition of an SGLT2 inhibitor reduces hyperkalemia
- Secondary outcomes including major adverse cardiovascular events (MACE), compared with MRA therapy alone.

Method

- This was a real-world, retrospective cohort study using the TriNetX Global Collaborative Network, which includes anonymized data from 148 healthcare organizations worldwide.
- Adults with type 2 diabetes mellitus and heart failure with reduced ejection fraction (LVEF ≤ 40%) who received spironolactone or eplerenone between 2020 and 2024 were identified.
- Two cohorts were compared: those who added an SGLT2 inhibitor at least one month after MRA initiation versus those maintained on MRA alone. After 1:1 propensity-score matching, 2,989 patients were included in each group.
- The primary outcome was hyperkalemia , with secondary outcomes including severe hyperkalemia, all-cause mortality, major adverse cardiovascular events, and arrhythmia.

Results

Outcome	MRA + SGLT2	MRA Alone	p-value	Interpretation
Hyperkalemia > 6.0 mmol/L	5.6 %	8.7 %	< 0.001	45 % lower risk
All-cause mortality	10.6 %	21.6 %	< 0.001	59 % lower mortality
MACE (MI, stroke, PE, cardiac arrest)	10.3 %	14.1 %	0.006	37 % lower MACE
Arrhythmia (AF, VT, VF)	11.2 %	12.5 %	0.033	24 % lower risk

Conclusion

- In a real-world, propensity-matched cohort of T2DM and HFrEF patients on MRA therapy, adding an SGLT2 inhibitor reduced hyperkalemia risk.
- The combination therapy also lowered rates of major adverse cardiovascular events (MACE) and arrhythmias.
- Overall, it was linked to decreased all-cause mortality within one year compared with MRA alone.

References

1. *Cooper LB, Lippmann SJ, Greiner MA, et al . Use of Mineralocorticoid Receptor Antagonists in Patients With Heart Failure and Comorbid Diabetes Mellitus or Chronic Kidney Disease. J Am Heart Assoc. 2017 Dec 23;6(12):e006540. doi: 10.1161/JAHA.117.006540. PMID: 29275368; PMCID: PMC5779000.*
2. *2. Wing S, Ray JG, Yau K, et al. SGLT2 Inhibitors and Risk for Hyperkalemia Among Individuals Receiving RAAS Inhibitors. JAMA Intern Med. 2025;185(7):827–836. doi:10.1001/jamainternmed.2025.0686*

Masquerading of Mesenteric Ischemia – A Case Report

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Royal Liverpool University Hospital – Liverpool, England

Introduction

Inflammatory bowel disease (IBD) is a chronic gastrointestinal condition characterized by inflammation of the intestinal tract, leading to non specific symptoms such as abdominal pain, diarrhoea, and weight loss.

This case presents a unique diagnostic challenge involving a 46-year-old female with IBD-like symptoms who developed a significant ischaemic complication, ultimately leading to a revision of the initial diagnosis.

Case presentation

- **6 mo history:** Abdominal pain and intermittent diarrhoea → referred to colorectal clinic.
- **Investigations (OP) :** FIT 79 µg/g ↑, fecal calprotectin >1700 µg/g ↑, normal FBC/U&E, ferritin 198 ↑ → suspected IBD.
- **Colonoscopy (OP):** Erythema, diffuse ulcerations (caecum → rectum); histology: mild–moderate chronic inflammation → provisional IBD.
- **Few days later:** Admitted with Acute worsening with bilious vomiting.
- **CT (Day 1):** Mild splenic changes; started IV steroids for presumed flare.
- **Day 3:** Pain refractory; CXR → pneumoperitoneum, lactate 2.18
- **Repeat CT:** Occlusive **SMA thrombus**, hepatic-flexure perforation, bowel ischaemia (caecum–20 cm TI), necrotic gallbladder.
- **Surgery:** Right hemicolectomy, SMA stent, cholecystectomy.
- **Recovery:** 11-day ICU stay → discharged on apixaban + aspirin.
- **Outcome:** IBD diagnosis retracted → **final: SMA thrombosis with ischaemic bowel (IBD mimic).**

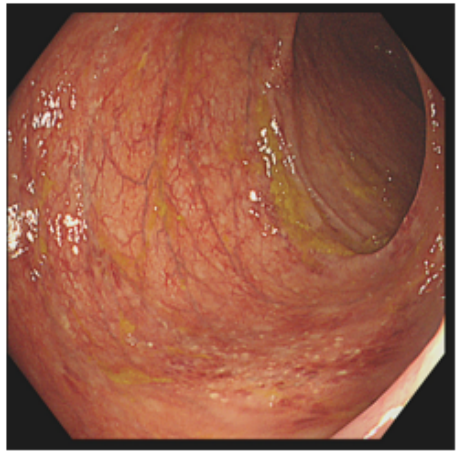

Image 1: Inflamed and congested Ascending colon.

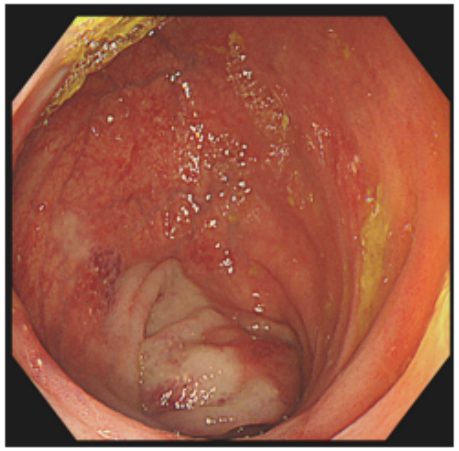

Image 2: Inflamed and congested cecum

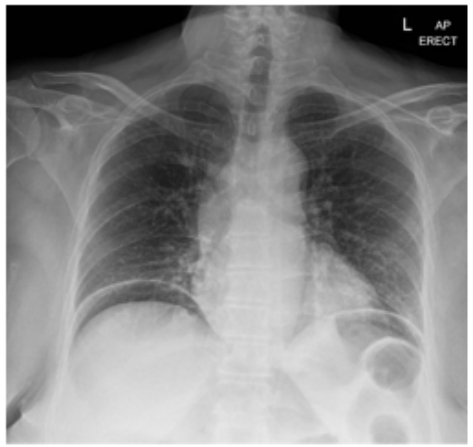

Image 3: Air under diaphragm from pneumoperitoneum

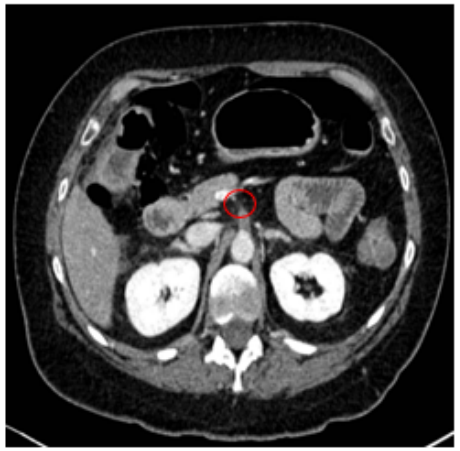

Image 4: SMA Thrombus on CTA

Discussion & conclusion

- A prior diagnosis of IBS may have obscured the development of evolving mesenteric ischaemia.
- Retrospective imaging revealed a superior mesenteric artery (SMA) thrombus that was initially missed.
- The presumed IBD diagnosis was later overturned following identification of ischaemic bowel and vascular pathology.
- Highlights the need for diagnostic vigilance when gastrointestinal symptoms are atypical or disease progression is unexpected.
- SMA thrombosis can mimic IBD and demands early recognition and multidisciplinary management to prevent complications.

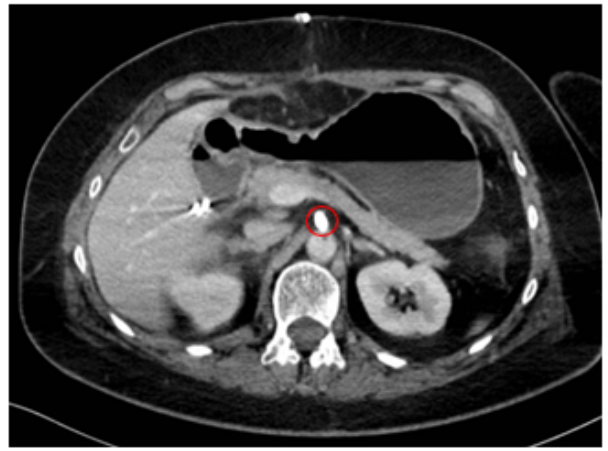

Image 5: Stenting of SMA

Impact of Colour Coded Lanyard implementation in a clinical setting (Quality Improvement Project)

Dr YuenKang Tham; Dr Ayoade Adesanya; Dr Alice Barnes; Dr Danyal Usman; Dr Siobhan Lewis
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GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Caerdydd a'r Fro
Cardiff and Vale University Health Board

Introduction

Time is of essence in influencing optimal patient outcomes.

The frequent lack of **effective identification** methods within the multidisciplinary settings of healthcare facilities lead to delays in **task delegation** and completion in situations ranging from medical **emergencies** (e.g. Cardiac Arrest, Trauma calls) to **routine** jobs (e.g. Discharge letters, cannulation).

Unnecessary stress, effort to identify staff, increased workload, poor patient outcomes, poor staff (+ public) experience and increased expenses arise from this.

We set out to improve these factors via introduction of colour coded lanyards within the medical department of Cardiff and Vale University Health Board.

Method

Coloured lanyards with **inscribed** grades ('Foundation Year Doctor', 'Senior House Officer', 'Specialist Registrar' and 'Consultant') were purchased.

Medical clinicians and patients were surveyed on their abilities to identify different clinician grades and how this is thought to affect them.

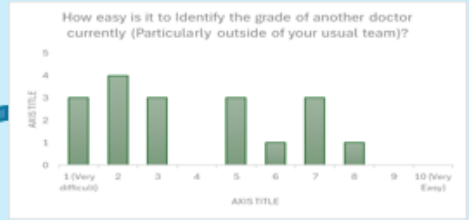
We then distributed the lanyards throughout the medical department, in accordance to on-call equivalent roles.

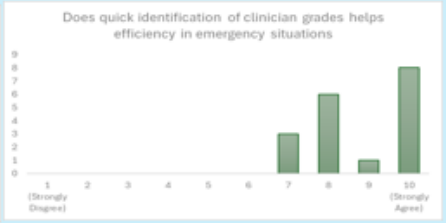
After a period of 3 months the survey was repeated.

Picture: Courtesy of Z.Burton Queen Alexandra Hospital

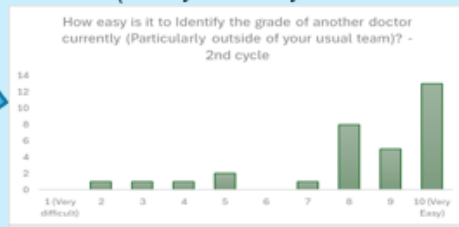
Results

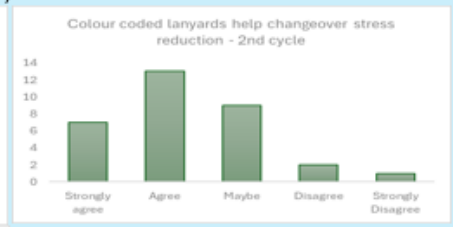
Clinicians (Initial Survey):

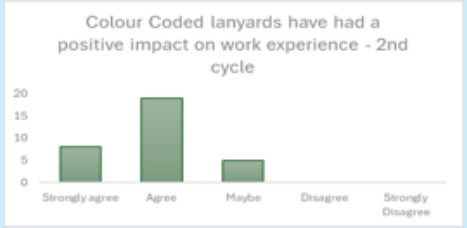




Clinicians (Survey after Lanyards distributed):







Clinicians:
1. Lanyards significantly improved ease for staff identification of clinician roles
2. Clincians uninamously report that quick identification of clinician grades help management efficacy
3. Strong consensus that lanyards reduced stress and improved work experience

Patients (Initial Survey):

Patients (Survey after Lanyards distributed):

Patients:
1. There was strong consensus that being able to know who they had consulted during their time in hospital improved their experience within the hospital
2. The lanyards significantly improved their ability to do so.

Discussion

Timely management significantly affect patient outcomes especially within an emergency settings.[1-4]

The reality is that medical emergency settings are chaotic and there is usually little opportunity for adequate formal introductions of individual roles.

Working in a **Multidisciplinary Team (MDT) environment** with regular staff rotation in the NHS predisposes to the same issues during non-emergency settings.

This study shows that the lanyards are an **effective** measure to mitigate these.

Improving hospital staff experience and stress levels is likely to motivate and attract staff to the local workforce. Also improve public perception with the sense of order.

The lanyards are inexpensive, hence **cost effective** (£1.08 each). They are **logistically viable** in all hospital and healthcare settings (Compared to acquiring specific badge printing machines)

They are widely accepted **culturally**, without affecting an individual's chosen outfit (For cultural or personal reasons) – as in the instance of coloured scrubs.

Additionally, prior work from West Hertfordshire backed by the **BMA** has shown that such lanyards are effective in reducing workplace discrimination such as sexism.[5]

Contrary to popular belief, lanyards have not been shown to be of significant infection risk, with **no evidence of increased infection spread** (In particular of MDR pathogens) – unlike Mobile phones and stethoscopes do. It is prudent we are proportionate in our assessments of weighing the potential benefits of this effective tool with perceived risks with available data.

References:
1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. https://www.bma.org.uk/news-and-opinion/one-cause-colour-coded-lanyard-scheme

A Grass Roots Approach To Rebuilding The Medical On-call Rota Following The Move Into The Midland Metropolitan University Hospital

Dr Zachary Pierrepont IMT3, West Midlands

Introduction

The Midland Metropolitan University Hospital (MMUH) is one of the largest acute hospitals to open in recent years. Following the merger of two acute sites, service pressures were anticipated, prompting the creation of a bespoke medical on-call rota to ensure safe coverage. This rota was informed by previous acute medical placement block experience within the trust [1]

Objective

To evaluate the bespoke MMUH medical on-call rota using a grass-roots, bottom-up approach that empowered Resident Doctors to make positive changes. The aim was to gather authentic feedback on wellbeing, workload, and educational value, and to collaboratively implement improvements based on lived experience.

Method

A mixed-methods survey assessed workload and wellbeing across shifts among Resident Doctors (FY1, SHO, and Registrar). Thematic analysis of feedback informed a co-design process with Resident Doctors, Consultants, and Rota Coordinators. A new rota was developed from this feedback and later evaluated by a Resident Doctor focus group.

Figure 1. A word cloud summarising the qualitative feedback from the review of the original medical on-call rota.

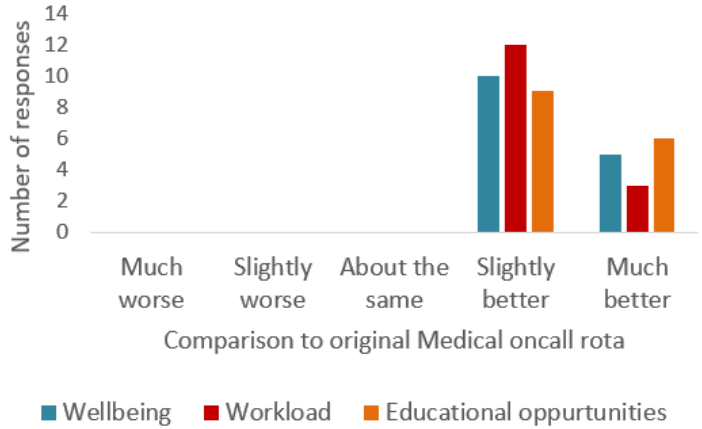


Figure 2. A bar chart summarising feedback comparing the new versus old medical on-call rota, assessing workload, wellbeing, and educational opportunities

Results

Survey responses of the original rota were collected from 71 Resident Doctors, representing 70% of those on the medical on-call rota. Over 60% reported negative wellbeing and unmanageable shifts. After implementing changes based on this feedback, the new rota was presented to a focus group of 15 Resident Doctors and received unanimous approval for improvements in wellbeing, workload, and training.

Conclusion

This project shows the powerful impact an on-call rota can have on Resident Doctor wellbeing. Empowering doctors to shape their own rota fosters ownership, drives sustainable workforce change, and inspires positive reform. Whilst the rota is newly introduced, continued feedback will be key to shaping lasting improvements.

References

Buka R, Best D, Clare S. Rota changes in acute and general internal medicine: delivering improved patient care and junior doctor training at the front and back door – acute medical unit placement blocks the way forward for Midland Met! Future Healthcare Journal. 2019 Mar;6(Suppl 1):42.

A CLINICAL RE-AUDIT ON REPEAT PATHOLOGY TESTING IN MEDICAL WARDS

Dr. Zarva Shahid
Warwick Hospital, South Warwickshire University NHS Foundation Trust

INTRODUCTION

Warwick hospital has set in place interventions to decrease the frequency of repeat pathology testing as per the Royal College of Physicians (RCP) guidelines on minimal interval testing (2021). A re-audit was performed to evaluate the effectiveness of these measures, to explore the reasons behind repeat tests and to highlight its financial impact.

METHOD

Across three medical wards, in March 2025, a random sample of 50 patients with repeat blood tests was selected. Five specific pathology tests, white cell count, urea and electrolytes, liver profile, bone profile, and C-reactive protein, were assessed. Retrospective patient clinical data were obtained through e-records and ICE systems. The tests were labelled as appropriate or inappropriate after comparison with Royal College of Physicians (RCP) guidelines on minimal interval testing (2021) [1]

The cost of each test was identified, and the overall financial impact of the inappropriate requests was calculated. A survey was sent to a sample of fifteen healthcare professionals across those departments to gain an understanding of the reasons for repeat testing.

RESULTS

1,340 blood tests were reviewed, and 682 (51%) were identified as inappropriate. This was a reduction from the previous audit, where 71% (1443 of 2021) were identified as inappropriate (Figure 1)

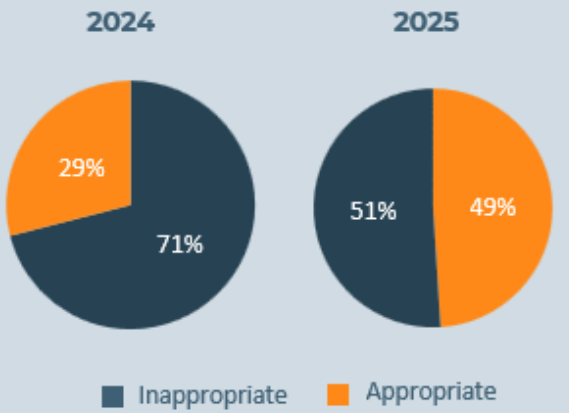


Figure 1: Percentage of appropriate and inappropriate pathology requests in 2024 and 2025.

Only urea and electrolytes showed a significant reduction in inappropriate results performed (27% from 75%). Reduction in liver function tests was also noted, but it was due to the high number of appropriate repeat tests from the gastroenterology ward (Figure 2).

- The white cell count was repeated the most inappropriately out of all five tests (62%), which was also identified as the most expensive test (£3.94 per test).
- For the sample of 50 patients, the percentage of inappropriate requests led to a total cost of £1,478 (Figure 3).
- If a similar proportion of inappropriate testing is predicted across all patients, the estimated financial loss to the trust would be £17,466 per month and £209,597 annually

	WCC	U&Es	CRP	Bone	LFTs	Total
Cost (£)	756	131	259	153	179	1,478

Figure 3: Cost of inappropriate tests performed.

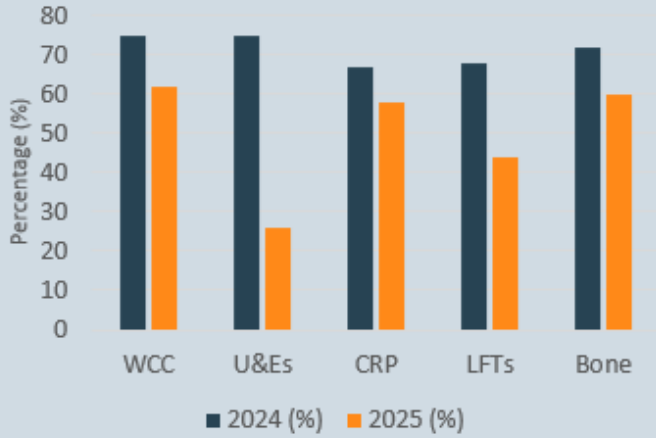


Figure 2: Percentage of inappropriate test requests performed in March 2024 and March 2025

87% of the healthcare professionals were unaware of the guidelines in place for minimal interval testing. The most common reasons for repeating pathology requests included, acute deterioration, senior requests and reprinting of test labels (Figure 4)

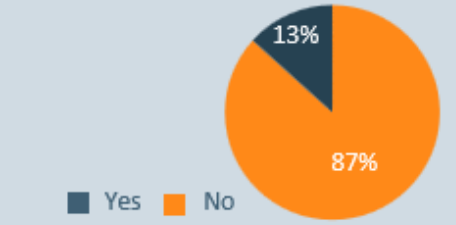


Figure 4: Responses to the survey question: "Are you aware of the RCP guidelines on minimal interval testing (2021)?"

CONCLUSION

There has been some improvement in unnecessary repeat pathology testing. However, more interventions are needed to allow compliance with the guidelines to improve patient care, sustainability and optimise resources and staff required for testing.

IMPLEMENTATIONS

- Posters to highlight the guidelines, the financial cost of each test, and how to cancel repeat requests on the system.
- Presentation at managerial meetings and grand-round to raise awareness of the findings.
- Seniors were encouraged during board rounds to guide appropriate repeat testing as per guidelines.

REFERENCE

1. Lang T, Croal B. National minimum retesting intervals in pathology. London: The Royal College of Pathologists; March 2021. [Internet]. Available from: https://www.rcpath.org/static/253e8950-3721-4aa2-8ddd4bd94f73040e/g147_national-minimum_retesting_intervals_in_pathology.pdf

ACKNOWLEDGEMENT: Special thanks to Dr. Tristan Page (Consultant Endocrinologist) and Vicky Gunewardena (Head of Financial Information) for the supervision and support.

Leading improvements for an effective patient-centred discharge process

Dr Zehra Irshad, Philippa Colenutt, Hardeep Bagga and Dr Asad Ali

University Hospital Coventry and Warwickshire, CV2 2DX

NHS University Hospitals Coventry & Warwickshire

Introduction and Aims: Discharge process is an essential part of patient care and safety. Patient survey revealed dissatisfaction with discharge process and delays in TTO (To Take out medications). Therefore, I aimed to deliver change and lead improvements with collaboration from Medicine Group and Pharmacy specialty. The aims included:
(a) Understanding discharge processes.
(b) Identifying area of improvements.
(c) Removing waste.

Method: Process was mapped to identify areas of improvement including when we can tell patient the time of discharge. Process waste was identified. Interventions were planned keeping patients at centre and 'Proof of concept' was ran with 4 wards for 3 weeks.

Figure 1: Process Mapping

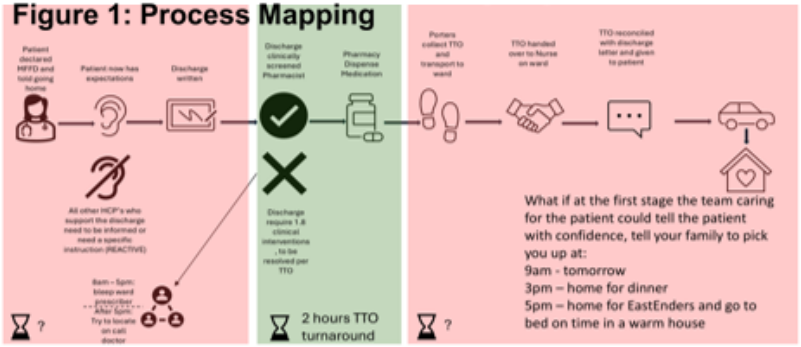
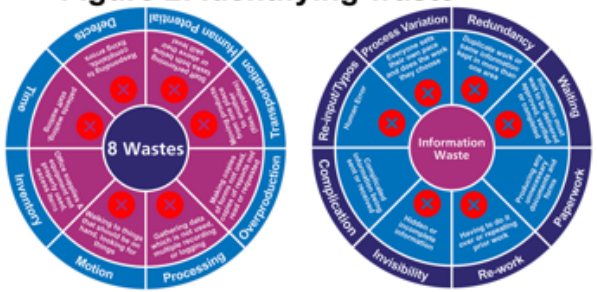


Figure 2: Identifying waste



Interventions: Multi-disciplinary approach was utilised for change to include nurses, doctors, pharmacists, managers and patients.

- Standard operating procedure for discharge process
- Discharge standards for TTO processing by Pharmacy

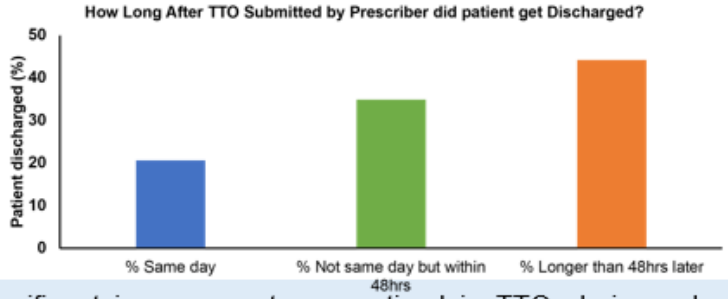
Submitted by Prescriber	Clinically Screened by Pharmacist	Dispensed by Pharmacy
Before 15:30*	Same Day	Same Day
Between 15:30 and 17:00	Same Day	Next Day
After 17:00	Next Day	Next Day

- Digitally live patient status board access
- TTO champions for each ward
- Pharmacy assistant to review every patient awaiting discharge and avoid medication duplication

Results: (n=300) -Figure 3: Behaviour change

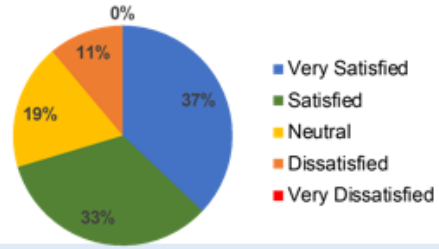
Figure 4:Waste removed

Results: (n=300) -Figure 5: Impact



Significant improvement was noticed in TTOs being submitted before cut off-(Figure 3) leading to 60% patients being discharged within 24-48 hours of being declared medically optimised-(Figure 5).Using patients own medication and non-duplication avoided £3407.62 in costs during the project. Patient feedback (n=27) showed 70% satisfaction rate-(Figure 6). Digitally live patient status board enabled easy access to updated data to all teams as per staff feedback.

Figure 6 How satisfied were you with the overall discharge process?



Conclusion: Patient-centred discharge standards and collaboration between teams allowed for the removal of waste, process and monetary. It also showed positive change in behaviour with TTO submission and processing, length of stay and patient and staff satisfaction. The project was widely recognised and has now rolled out to the wider-trust to improve patient care and safety.

A Rare Complication of Type 1 Diabetes: Mauriac Syndrome Presenting with Diabetic Ketoacidosis in a Young Adult

Authors: Dr Zoha Iftikhar [1], Dr Mir Umar Farooq [2]
Affiliations: East Kent Hospital and University Foundation Trust- William Harvey Hospital

East Kent Hospitals University NHS Foundation Trust

Introduction

Mauriac syndrome, also known as **glycogenic hepatopathy,** is a rare complication of poorly controlled Type 1 Diabetes Mellitus.

Pathophysiology:

- Fluctuating insulin and glucose levels cause excessive hepatic glycogen deposition, hepatomegaly and metabolic imbalance.

Presentation

A 22-year-old white British female with a history of poorly controlled T1DM and recurrent DKA.

- Admitted to the emergency department with confusion, agitation, hypotension, and a Glasgow Coma Scale (GCS) of 8/15.
- Examination findings included cold, mottled extremities and abdominal tenderness without peritonism.

Investigations

Initial Laboratory Findings:

Revealed a severe metabolic acidosis: pH 6.80, bicarbonate 0.9 mmol/L, base excess -30.6.
DKA confirmed with blood glucose 40.1 mmol/L and ketones 5 mmol/L. Initial lactate was 1.4 mmol/L, CRP 1 mg/L, WBC 24.5
Sepsis was ruled out on clinical exam & biochemistry

Further Biochemistry:

Liver function tests showed **mildly elevated transaminases with preserved synthetic function.**
Autoimmune and chronic liver disease screens were negative. Renal functions normal

Imaging:

A CT scan of the abdomen excluded bowel ischemia but showed gross hepatomegaly with fatty changes.

Management & Clinical Course

Managed in critical care for DKA with insulin, IV fluids, potassium, bicarbonate, and CVVHDF for severe acidemia. Despite correction of glucose, ketones, and pH, lactate paradoxically rose to 11 mmol/L. CVVHDF corrected acidosis but not lactatemia; hypoperfusion causes were excluded.
A variable-rate insulin infusion with glucose was found to worsen lactate levels.

Additional findings

- Transition to basal–bolus insulin achieved euglycemia and partial lactate improvement (5–7 mmol/L).
- Further history revealed **delayed menarche (age 17), short stature (<3rd percentile),** and **truncal obesity**.

These features, in conjunction with the normal clinical and biochemical picture, led to a **diagnosis of Mauriac syndrome.** (*Written informed patient consent obtained).*

Conclusion

- **Mauriac syndrome can present in young adults** with poorly controlled, long-standing T1DM, not just in children
- **Persistent lactate** elevation despite clinical improvement in DKA associated with **hepatomegaly with raised transaminases and short stature** in a Type 1 Diabetic should raise high index of suspicion for Mauriac syndrome.

References

1.*Deemer KS, et al., Case Rep Crit Care. 2016;2016:6072909. doi: 10.1155/2016/6072909. PMID: 27699071; PMCID: PMC5035668.*
2. Fitzpatrick E et al., a tertiary liver centre Archives of Disease in Childhood 2014;99:354-357.

CENTRAL PONTINE MYELINOSIS WITH NORMONATREMIA IN A CHRONIC ALCOHOLIC

Dr Zuha Khan I Dr Y Joel Suvarna Raju I Dr Samia Dilrus Syeda I Dr Ashwini Kumar

George Eliot Hospital NHS Trust

Introduction

Central pontine myelinosis (CPM) is usually linked with rapid correction of sodium.[1] In Chronic Alcoholics CPM may occur even with normonatremia although the cause and pathogenesis remains unclear.[1] Here we describe one such case.

Case Summary:

- 48-year-old male presented with acute confusion (2-day history); background of heavy alcohol use (12–14 units/day), 5 pack-year smoking, and occasional cannabis use.
- On examination: Disoriented but no focal deficits. Bloods and CT head were unremarkable.
- Admitted for observation; started on vitamin B and C replacement and referred to the alcohol liaison team.
- Despite treatment, confusion persisted. Mental health team found poor Mini-ACE score, confabulation, and lack of capacity.
- MRI brain showed T2/FLAIR hyperintensity in the central pons, suggestive of early CPM.
- Continued on vitamin therapy and supportive care; discharged to a care home. Over months, memory improved, confabulation resolved, but short-term recall remained impaired.

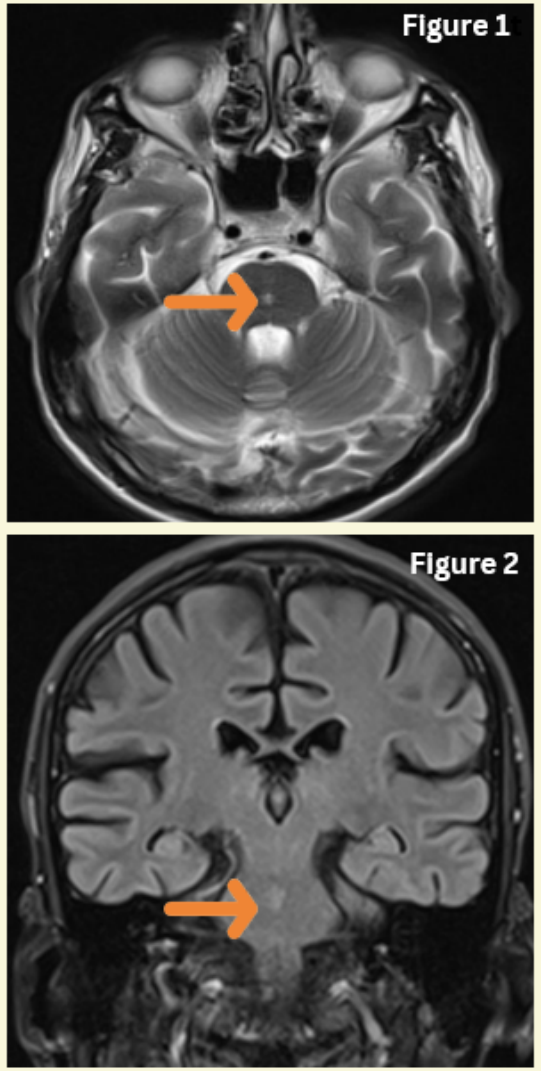


Figure 1 and 2 show images of MRI brain showing a hyperintensity in the pontine region s/o CPM.

Discussion:

Similar to published cases, this case highlights the atypical presentation of CPM in patients with chronic alcoholism.[2] The proposed hypothesis include osmotic changes during withdrawal, dysfunction of the liver, cerebral atrophy and chronic malnutrition, which may make the brain susceptible to demyelination despite stable electrolytes.[3-6]

Conclusion:

This is a rare case of CPM in a patient of chronic alcoholism which can manifest with subtle neurological deficits such as confusion. Physicians should pay attention to the development of CPM in chronic alcoholics and MRI is the key for early diagnosis.[3-4] CPM should be considered as a differential diagnosis in such patients and prompt neuroimaging should be performed to avoid delaying the diagnosis.

References

A Greener Pulse for Cardiology: Sustainability and Clinical Care in the NHS

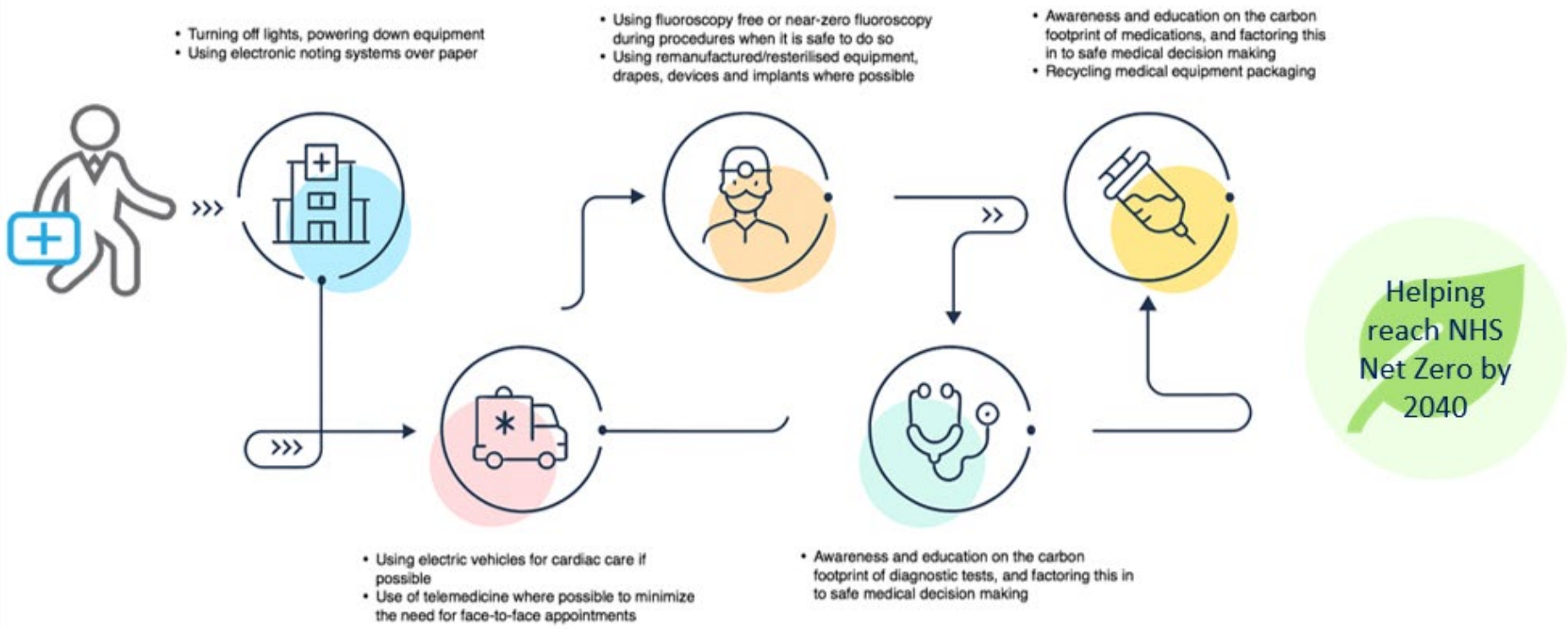
Cardiology Department, St Thomas' Hospital

Akansha Sethi & Jaspal Singh Gill

NHS

Guy's and St Thomas'

NHS Foundation Trust



Helping reach NHS Net Zero by 2040

Sustainable practice is the responsibility of all healthcare workers

Sustainable changes help:
- Economise health systems
- Improve patient care
- Help reach environmental targets

Balancing sustainabilty with patient care is a key consideration

Promoting low carbon and recyclable options via NHS supply chains at national level will aid uptake

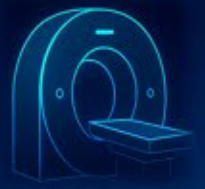
FROM X-RAYS TO INTELLIGENCE: EVIDENCE FOR LDCT AND AI IN LUNG CANCER SCREENING

Dr Amjad Alqharaibeh • Royal Papworth Hospital, Cambridge, UK

INTRODUCTION

- Lung cancer: leading cause of cancer death; survival is stage-dependent.
- CXR improved detection but no mortality benefit (PLCO).
- LDCT detects earlier disease and shows survival advantage.

KEY TRIALS / RESULTS



PLCO (CXR): no mortality reduction.
NLST (LDCT vs CXR): ~20% ↓ lung-cancer mortality.
NELSON (LDCT vs no screen): ~24% ↓ mortality in men.
UKLS / UK pilots: marked stage shift; ~76% stage I detection in pilots.
Net effect: LDCT = only modality with proven mortality benefit.

ROLE OF AI

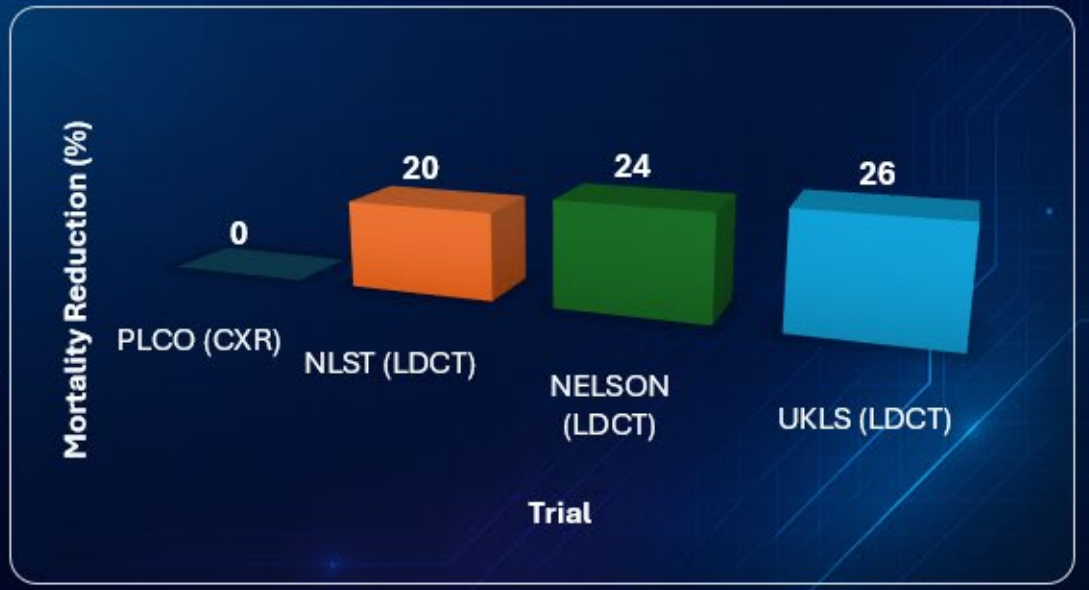
DL models on CXR: nodule sensitivity up to ~95%; boost reader accuracy.
Second-reader AI helps less-experienced clinicians.
Risk models (e.g., CXR-LC) outperform smoking-only criteria for prediction.
No proven mortality reduction yet; use for triage to LDCT and risk refinement.

GUIDELINES & PRACTICALS

- Guidelines (UK NSC, USPSTF, EC, WHO): endorse LDCT, exclude CXR for screening.
- Radiation: LDCT ~1–1.5 mSv vs CXR ~0.02 mSv. False positives managed via structured nodule pathways.
- Cost-effective in high-risk cohorts.

CONCLUSION / TAKE-HOME

- CXR is obsolete for screening.
- LDCT saves lives; implement in high-risk groups.
- AI enhances detection & risk stratification but does not replace LDCT.
- Future: AI-supported LDCT programmes.



References:
PLCO JAMA 2011; NLST NEJM 2011; NELSON NEJM 2020; UKLS Lancet Reg Health Eur 2021; AI meta-analyses Chest 2022; Eur Radiol 2023; JAMA Netw Open 2019.

Outcomes of Atrial Fibrillation Ablation: A Single-Centre Real-World Audit

Dr Amjad Algharaibeh • Royal Papworth Hospital, Cambridge, UK

Introduction

AF is the most common sustained arrhythmia with major morbidity/mortality. Catheter ablation—typically pulmonary vein isolation (PVI)—is established for patients refractory/intolerant to antiarrhythmics. We audited real-world outcomes after AF ablation at a UK tertiary centre.

Method

-Design: Retrospective audit of AF ablations (Jan–Dec 2018).
-Setting: Royal Papworth Hospital.
-Cohort: 499 first-time procedures (redo cases excluded).
-Data: Electronic records, procedural reports, and follow-up to 2024.
-Outcomes: AF/AT recurrence, complications, and symptom improvement.
-Techniques: Cryoballoon 50%, RF 40%, PVAC 10%.
-Strategy: PVI alone 81%; additional lines/substrate modification 17%.

Discussion & Conclusion

-Recurrence was higher than in the *FIRE AND ICE* trial, possibly influenced by longer follow-up and broader patient selection.
-Cryoballoon and RF outcomes were comparable, with a modestly higher recurrence after PVAC.
-The overall complication rate (6%) was lower than in the *FIRE AND ICE* trial.
-Continued auditing will help benchmark outcomes and guide integration of emerging technologies such as pulsed-field ablation.

n = 499
First-time ablations analyzed

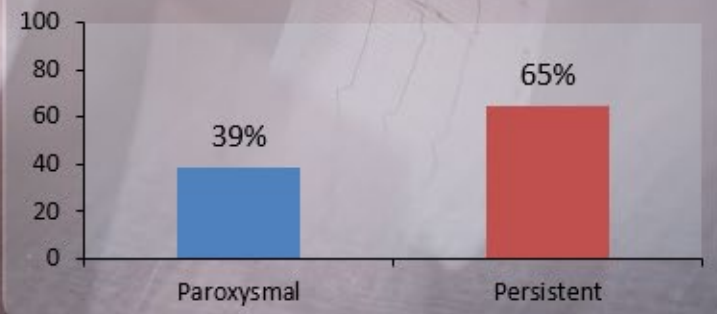
~72 months
Median follow-up (approx.)

66%
Clinical improvement

6%
Complications

AF Type Distribution

AF/AT Recurrence by AF Type



Recurrence by Technology

An audit comparing the use of Piperacillin-Tazobactam in the respiratory department against local guidelines

Dr Anmol Sanghrajka, Dr Jordan Taylor-Evans, and Dr Janice Ward

NHS
Northumbria Healthcare
NHS Foundation Trust

Introduction:

Antibiotic resistance is a growing public health concern, with significant implications for patient care[1], therefore, reducing inappropriate prescriptions is vital. Piperacillin-Tazobactam is a broad-spectrum antibiotic[2] and is an effective treatment for lower respiratory tract infections[3]. Local guidelines are a tool that can be used to guide appropriate antibiotic use, the guidelines used in this audit use severity scores as a tool to guide antibiotic selection; CURB65 score is used for community-acquired pneumonia (CAP) and the DECAF score for acute infective exacerbations of COPD (IECOPD).

Methods:

Data collected during December 2023 examined all Piperacillin-Tazobactam prescriptions across two respiratory wards and a respiratory support unit. Data were collected if the prescription in the post-take ward round was appropriate according to the trust guidelines. When severity score was used it was recorded if the advised antibiotics were prescribed.

Educational interventions were then put in place, including presenting at the consultant meeting and respiratory resident doctor teaching. Posters were created, encouraging the use of scoring systems, checking guidelines, and documenting decision-making. A second cycle of data was collected across the month of December 2024 to reflect the seasonal nature of respiratory infections.

Objectives: To identify the proportion of appropriate Piperacillin-Tazobactam prescriptions in the respiratory department and to identify if scoring systems were being utilized to guide antibiotic choices.

Results:

In 2023, 170 patients were recorded to have a prescription of Piperacillin-Tazobactam. 54.1% (n= 92) of these cases were prescribed this in line with local antimicrobial guidelines. Of the 108 patients with a diagnosis of a CAP or IECOPD, 24.1% (n=26) had a documented CURB65 or DECAF score. Of those with documented scores, 46.2% (n=12) of the prescriptions were in line with guidelines.

In 2024, 158 patients were included. 67.7% (n=107) had appropriate prescriptions when compared to trust guidelines; this improvement from 2023 is seen in Figure 1. For 107 patients, scoring systems were applicable (CAP or IECOPD). 47.7% (n=51) had a documented CURB65 or DECAF score, and in this group, 80.4% (n=41) had an appropriate Piperacillin-Tazobactam prescription. When collecting data, the importance of documentation when deviating from trust guidelines was demonstrated, which was highlighted in our interventions.

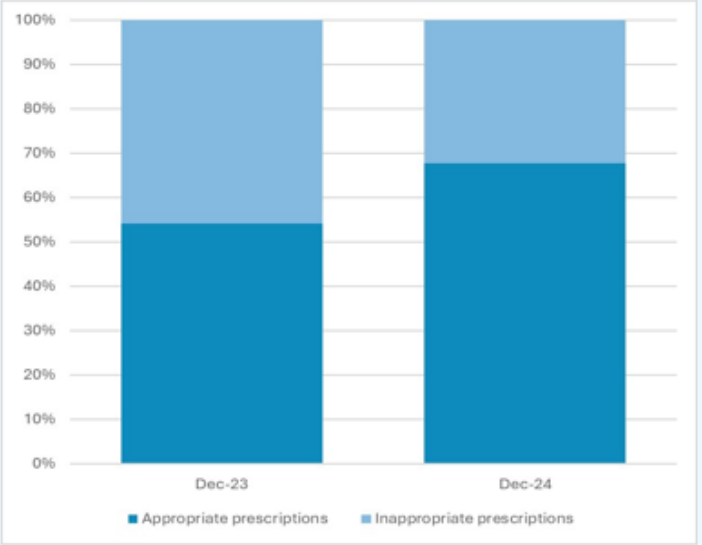


Figure 1: A comparison of the proportion of appropriate Piperacillin-Tazobactam prescriptions from 2023 to 2024.

Conclusions:

The interventions put in place insighted change in the proportion of appropriate Piperacillin-Tazobactam prescriptions; however, there was still a large proportion of inappropriate prescriptions. There was also an improvement in the use of severity scores and the proportion of people with an appropriate prescription in this group. This demonstrates an area of improvement to reduce the use of inappropriate prescribing of broad-spectrum antibiotics.

References:

1. Huemer M, Mairpady Shambat S, Brugger SD, Zinkernagel AS. Antibiotic resistance and persistence-Implications for human health and treatment perspectives. EMBO Rep. 2020 Dec 3;21(12):e51034.
2. Shah PJ, Ryzner KL. Evaluating the appropriate use of piperacillin/tazobactam in a community health system: a retrospective chart review. P T Peer-Rev J Formul Manag. 2013 Aug;38(8):462–83.
3. Perry CM, Markham A. Piperacillin/Tazobactam: An Updated Review of its Use in the Treatment of Bacterial Infections. Drugs. 1999;57(5):805–43.

DERMATOMYOSITIS TRIGGERED BY CHIKUNGUNYA VIRUS INFECTION

Authors: Arzoo Javed, Nehal Yemula, Aimen Ayaz, Onn Shaun Thein, Megan Rutter

Key points in history

- 40-year-old female with background of coeliac disease presented 4-week history of progressive shortness of breath on exertion, periorbital swelling, and a sandpaper-like rash along with recent travel to Miami and the Caribbean, where she recalled an infected mosquito bite.

Clinical events and work up

- Type 1 respiratory failure requiring ICU admission for HFNO - initially managed as ARDS
- Imaging showed bilateral ground-glass opacities, and inflammatory markers were significantly raised (Figure 1)
- Microbiological tests were negative except for a positive chikungunya virus IgM. Autoimmune screening revealed a strongly positive ANA & anti-Jo-1, weakly positive anti-Ro-52
- Signs of inflammatory myositis affecting thigh and gluteal compartments on MRI (Figure 3)
- CK peaked at 1566 U/L

Management

- 3 days of IV Methylprednisolone, followed by mycophenolate mofetil
- Clinical and radiological improvement (Figure 2) noted with CK levels improving to 399 U/L
- Discharged with ongoing rheumatology and respiratory follow up

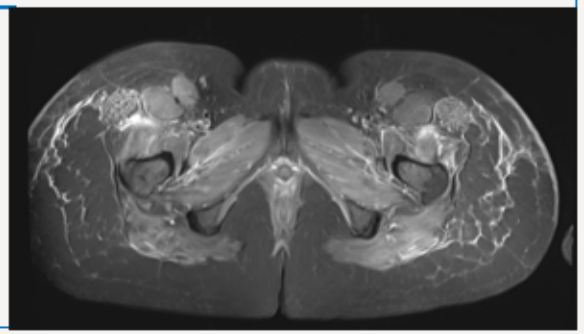


Figure 3: MRI pelvis axial view demonstrating changes consistent with myositis

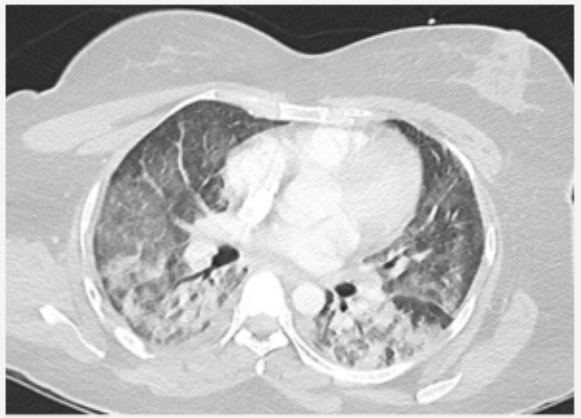


Figure 1: CECT scan chest axial view demonstrating bilateral ground glass changes pre-steroids

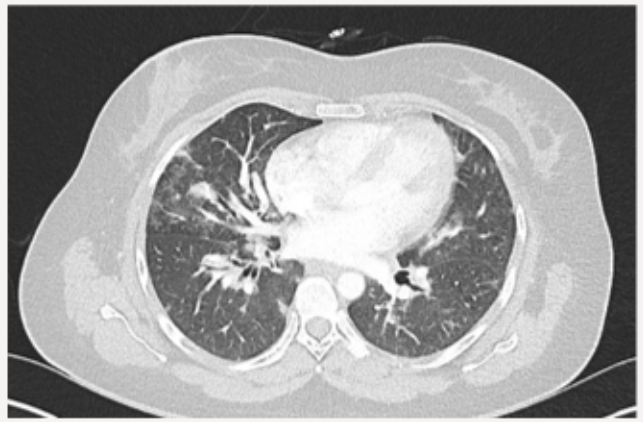


Figure 2: CECT scan chest axial view demonstrating clearer lung fields post-steroids

Discussion

Dermatomyositis following chikungunya virus (CHIKV) infection is exceptionally rare. To our knowledge, this is only the second reported case in the literature (1), and the first case occurring in the subacute phase(2,3).

Our patient's presentation was distinctive for its subacute onset, anti-Jo-1 antibody positivity, and severe lung involvement resembling ARDS. CHIKV, transmitted by Aedes mosquitoes, classically causes an acute febrile illness with rash and polyarthralgia (4).

This case highlights the importance of recognising post-viral autoimmune myopathies in patients with recent arboviral exposure, particularly when respiratory symptoms and myositis coexist. Early recognition and immunosuppressive therapy are key to improving outcomes and preventing long-term disability.

References

1.Raiza Cansian Tuão, Mariana, Paula, Isac Ribeiro Moulaz, Dalmaso BF, Cristo VV, et al. Antisynthetase Syndrome after chikungunya infection: A case report. Clinical Case Reports. 2022 Sep 1;10(9).
2. Dev N, Kumar R, Gogna A, Sharma S. Chikungunya-induced inflammatory myositis: a case report in India. Tropical doctor [Internet]. 2019 Jul;49(3):241–3. Available from: https://pubmed.ncbi.nlm.nih.gov/31018774/
3. Martins HA. Chikungunya and Myositis: A Case Report in Brazil. JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH. 2016
4. Vairo F, Haider N, Kock R, Ntoumi F, Ippolito G, Zumla A. Chikungunya. Infectious Disease Clinics of North America. 2019 Dec;33(4):1003–25.

Is the UK Foundation Programme fit for purpose in sustaining doctor–researcher careers? A narrative review and policy analysis

Mohammed Azib Zahid[1]

1. Southend University Hospital, MSE Trust

Introduction

Clinician-led research drives NHS quality and innovation; the UK clinical academic workforce is **contracting and ageing** (~3,090 FTE in 2024; ~3.4% of consultants; ~0.9% below consultant level) [1].The Foundation Programme (FP) is the universal entry point after graduation.

Question: Does FP provide time, training, mentorship and access for all F1–F2 to begin research pathways?

Methods

Narrative review (May 2021–Aug 2025) of primary sources:
– UKFPO/GMC FP Curriculum 2021 (research/scholarship; FPC13) [2].
– NHS England ICB annual assessment guidance (statutory research duty; KLOEs on facilitating/promoting/using research/innovation) [3].
– MSC clinical academic workforce update (2025) [1].
– UKFPO F2 Career Destinations Survey 2024 [4]
– NIHR Associate PI Scheme documentation [5].–
Deanery study-leave policies (West Midlands; Severn) [6,7].
– UKFPO SFP overview and 2025 SFP recruitment arrangements [8,9].

Thematic synthesis: **access, time, training, mentorship, policy levers, pipeline outcomes.**

Results

Curriculum intent vs reality
FP curriculum embeds research & scholarship; F2 may recruit for and/or conduct original research (FPC13) but there is no mandated protected research time or universal methods requirement [2].

Time/access during F1–F2
F1 time largely pre-committed to teaching; study-leave budgets limited or absent; tasters (≤5 days) often borrowed from F2 → research participation atypical in standard posts [6,7].

Scale of academic exposure
SFP provides structured opportunities but reaches a minority (8.3% of 2024 F2 respondents; 18% response rate) [4]. 2025 recruitment in England shared between medical schools and PIA [9].

Early-career route outside curriculum
NIHR Associate PI Scheme: ~6-month, in-work trial experience with certification; availability is site/study dependent (not universal) [5].

Policy lever now available
ICBs assessed on how they facilitate, promote and use research/innovation → actionable route to commission and performance-manage protected time, mentorship, and NIHR portfolio participation within FP delivery [3].

Interpretation
FP is partly fit for purpose (scholarship/QI assured; SFP strong for its cohort) but insufficient for most trainees given pipeline data [1–2,4].

Conclusions

Actionable reforms
Protected entitlement for all F1–F2 (e.g., 0.5 day/fortnight or 1 week/rotation) with e-portfolio evidence mapped to Domain 9/FPC13; rota compliance monitored [2,3].

Universal skills: brief methods + GCP (e-learning acceptable) to enable NIHR portfolio contribution [5].

Mentorship & visibility: named mentor for every FD + a live local study menu (NIHR portfolio; Associate PI-eligible) refreshed quarterly [5].S cale SFP to ≥10–15% over 3–5 years; pilot longitudinal micro-placements (0.5 day/week) aligned to 2025 recruitment arrangements [8,9].

Recognition: credit verified research activity (Associate PI completion, ethics submissions, portfolio delivery) in ARCP and early-career selection [10].

1 Medical Schools Council. Urgent intervention needed to address decline in clinical academics. London: MSC; 2025 Jul 15.
2 UK Foundation Programme. The Foundation Programme Curriculum 2021. London: UKFPO; 2021.
3 NHS England. Annual assessment of integrated care boards 2024/25: supporting guidance. London: NHS England; 2025 Jun 17 (updated 2025 Jun 27).
4 UK Foundation Programme Office. 2024 F2 Career Destinations Survey report. London: UKFPO; 2025 Jun 17.
5 National Institute for Health and Care Research. Associate Principal Investigator (PI) Scheme: overview. London: NIHR; 2025 [accessed 2025 Aug 9].
6 NHS England West Midlands. Foundation study leave guidance (F1/F2). Birmingham: NHSE WM; 2025 Apr.
7 NHS England South West (Severn). Study leave – Foundation. Bristol: NHSE SW (Severn); 2025 Apr 15.
8 UK Foundation Programme. Specialised Foundation Programme (SFP): overview. London: UKFPO; 2025 [accessed 2025 Aug 9].
9NHS England; Medical Schools Council. NHS England and MSC to manage SFP recruitment for 2025 (England): joint announcement. London: NHSE/MSC; 2024 Aug 22.
10 Royal College of Physicians. Making the case for research: resource kit for doctors. London: RCP; 2025 May.

An Audit to Highlight the Benefit and Importance of Pre-populated Consent Forms in Glaucoma Surgery

Deborah Charlesworth-Benedict, Alexander Delaney, Tasmin Berman
Countess of Chester Hospitals NHS Foundation Trust, Chester, UK

NHS Countess of Chester Hospital NHS Foundation Trust

Background

Informed consent is an essential part of ophthalmic surgery[1]. Recent advancements in glaucoma surgery have led to a significant increase in the number of different procedures which may be offered. In addition, patients often undergo phacoemulsification cataract surgery both as a standalone procedure and in combination with glaucoma surgery which can further impact visual prognosis.

It is therefore essential that patients are well informed about the risks and benefits of their specific procedure, and expectations about post-operative outcomes are appropriately managed.

To this end, generic paper consent forms are often insufficient. They require the clinician to populate the blank space with the risks and benefits of the procedure at the point of consent. This has the potential to cause significant variation in the explained risks and benefits for a particular procedure between patients. Moreover, the significant time cost in already busy clinics can often lead to the consent process being put off until the day of the procedure, against national guidance[1].

Aims

- Evaluate local consent processes to identify deviations from best practice and areas for improvement with reference to when they were completed and whether all appropriate risks were included.
- Introduce procedure-specific prepopulate consent forms to the service.
- Re-audit the consent outcomes after the introduction of the new forms to determine if there has been an improvement to the service.

Methods

Retrospective review of electronic patient records of all 57 patients who underwent glaucoma or cataract surgery under a single consultant at one site between September and November 2024.

The following parameters were reviewed; procedure, laterality, date of listing, date of consent, whether surgical risks were complete or not, and what was missing from the risks if not. Consent form risks were deemed complete if they included all risks as per the patient information from Glaucoma UK[2].

Procedure-specific pre-populated consent forms were then produced inclusive of additional risks. Consent processes were then re-audited over a similar period of time, following a period of implementation, to determine the impact of the pre-populated forms.

References
1. The Royal College of Ophthalmologists. Consent for ophthalmology procedures. 2020. [cited 2025 Jun 29]. Available from: https://www.rcophth.ac.uk/wp-content/uploads/2020/05/Standards-Of-Consent-For-Ophthalmology-Procedures-COVID-19.pdf.
2. https://glaucoma.uk/about-glaucoma/treatments-surgery/trabeculectomy-surgery/

Results

Pre-intervention results:

- Fifty-seven patients were included in the initial review. 32% of these were undergoing glaucoma surgery and 68% were undergoing cataract surgery.
- Of those undergoing glaucoma surgery, no consent forms met the standard for a complete list of appropriate risks.
- Commonly omitted risks were ptosis, suprachoroidal haemorrhage and worsening or development of cataract.

Post-intervention results:

- Forty-two patients were included in the re-audit. Overall, 97% of patients had the complete risks documented on the consent form, 62% patients were consented prior to the day of surgery and 38% were consented on the day of surgery. A similar number of patients had different types of surgery pre and post intervention.
- The main reason patients not being consented in clinic was patients being seen by allied health care professional who are unable to consent, a bilateral patient that was seen in the nurse led clinic (not approved to consent for bilateral surgery) and patients that had been listed for emergency surgery e.g. cyclodiode from casualty or medical retina clinic but needed to be discussed with consultant first. Additionally, one patient contacted the department wishing to be listed after discussion in clinic.
- Of those patients that were seen in the clinic and listed for surgery by someone who was able to consent appropriately 92% of patients were consented prior to surgery
- For glaucoma surgery and cataract surgery 100%, and 94% of patients respectively, had the complete risks documented on the consent form. The one patient who had incorrect consent was because an old non populated form was used.

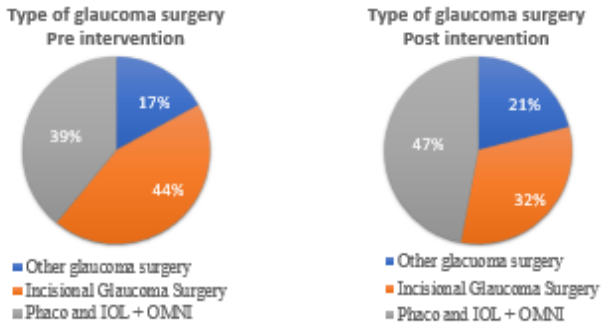


Figure 1: Types of Glaucoma Surgery

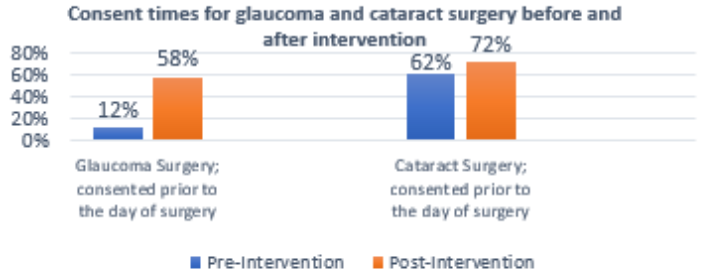
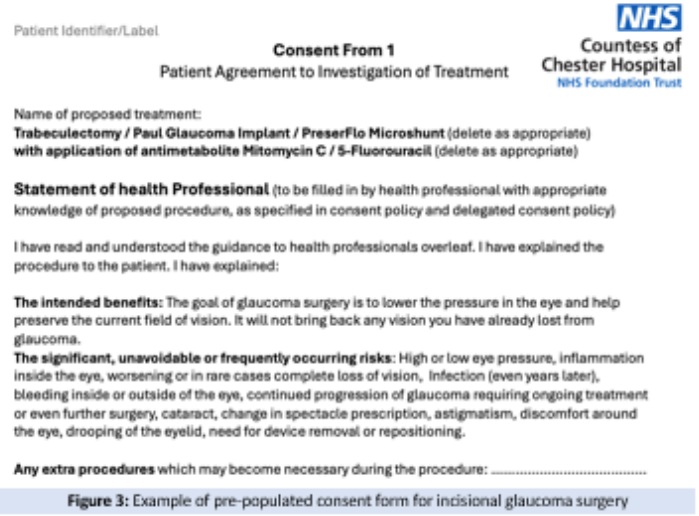


Figure 2: Consent times for glaucoma and cataract surgery before and after pre-populated consent forms implemented



Patient Identifier/Label

Consent From 1
Patient Agreement to Investigation of Treatment

NHS Countess of Chester Hospital NHS Foundation Trust

Name of proposed treatment:
Trabeculectomy / Paul Glaucoma Implant / PreserFlo Microshunt (delete as appropriate)
with application of antimetabolite Mitomycin C / 5-Fluorouracil (delete as appropriate)

Statement of health Professional (to be filled in by health professional with appropriate knowledge of proposed procedure, as specified in consent policy and delegated consent policy)

I have read and understood the guidance to health professionals overleaf. I have explained the procedure to the patient. I have explained:

The intended benefits: The goal of glaucoma surgery is to lower the pressure in the eye and help preserve the current field of vision. It will not bring back any vision you have already lost from glaucoma.
The significant, unavoidable or frequently occurring risks: High or low eye pressure, inflammation inside the eye, worsening or in rare cases complete loss of vision, Infection (even years later), bleeding inside or outside of the eye, continued progression of glaucoma requiring ongoing treatment or even further surgery, cataract, change in spectacle prescription, astigmatism, discomfort around the eye, drooping of the eyelid, need for device removal or repositioning.

Any extra procedures which may become necessary during the procedure: .....

Figure 3: Example of pre-populated consent form for incisional glaucoma surgery

Discussion

This audit has highlighted the benefit for pre-populated consent forms to ensure that patients are being consented appropriately, as well as mitigating against potential litigation. It may also help support allied health care professionals' consent with appropriate training.

Prepopulated consent forms also facilitate consenting at the time of listing in clinic rather than on the day of surgery, as less time is needed to complete the form.

Introducing the Wessex Pleural Ultrasound Course – A Regional Initiative to Address Thoracic Ultrasound Training Needs

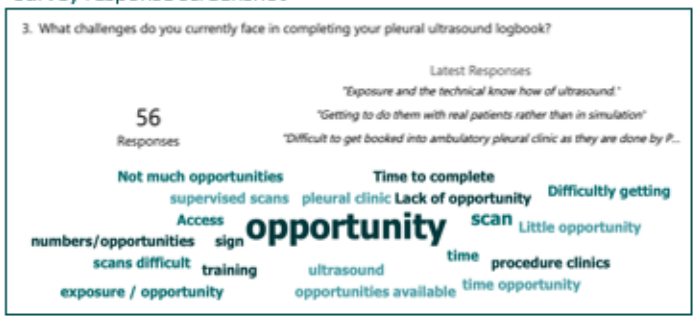
Dr Dahlia Abdul-Rahman[1*], Dr Ramkrishna Ramnauth[2]
[1]Clinical Pleural Fellow, Oxford University Hospitals NHS Trust, [2]Acute Medicine Consultant & FAMUS Lead for Wessex, Portsmouth Hospitals University NHS Trust *Corresponding author dahlia.abdul-rahman@ouh.nhs.uk

1 Identifying a Need

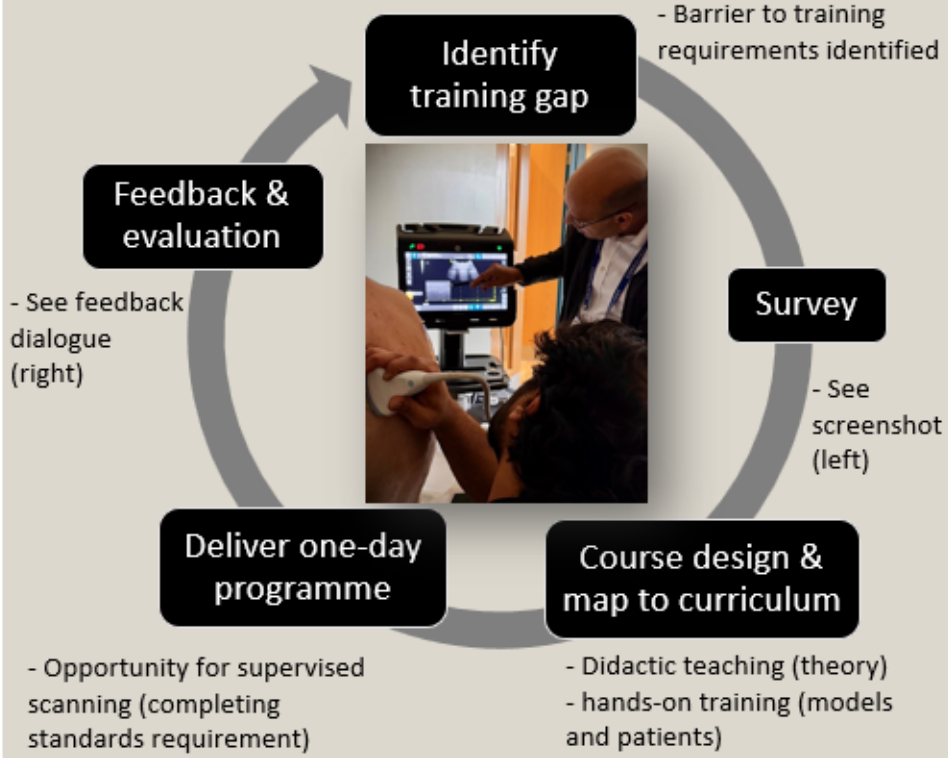
- ≥10 supervised scans required (Level 2 Primary Operator)
- Limited supervisor availability
- Training gap in Wessex

Regional trainee survey confirmed high demand for structured pleural US course

Survey response screenshot



2 Designing the Course



3 Outcomes and Feedback

Overall course quality	100%
Course content and delivery	100%
Quality of teaching	100%
Faculty rating	100%
Confidence post-course	89%

"If there's any chance for more pathology patients to scan during the day, that would be great. However, very happy with what we achieved today. Thank you!"

"A highly useful and interactive hands-on day. Excellently organised and highly experienced and knowledgeable faculty. Thank you so very much!"

"Excellent course – would recommend it"

A Sustainable Model for Regional Training

The Wessex Pleural Ultrasound Course effectively closed an identified regional training gap, with its development guided by trainee feedback through a pre-course survey. Feedback demonstrated great satisfaction and educational value. This model provides a sustainable, scalable framework for enhancing pleural ultrasound training in line with national standards.

'What a difference a day makes' - A peer driven QI project for IMT doctors enhancing educational experiences in outpatient medicine

Dr Dominic Ridgewell, Dr Katharine Hutchison, Dr Simon Patten, Dr Lindsay Jones
Royal Devon and Exeter Hospital

NHS Royal Devon University Healthcare NHS Foundation Trust

Background & Aims:

- Managing outpatient clinics is a key competency within the Internal Medicine Training (IMT) curriculum.
- However, access to meaningful outpatient learning opportunities remains constrained by service pressures.[1-3]
- This risks leaving IMT doctors inadequately prepared for independent practice during higher specialty training

This project aimed to enhance outpatient training experiences for IMTs through the development of peer-led interventions

Methods:

We conducted a baseline survey of Year 1 and 2 IMTs to assess their access to and perceptions of outpatient training. Initial findings identified systemic barriers, including competing time pressures, variability in educational quality, and negative impacts on trainee wellbeing.

Key change strategies implemented by IMT QIP team with assistance of IMT tutors included:

- ***Negotiating protected time for clinic attendance (monthly 'clinic day')***
- ***Circulating comprehensive lists of available clinics***
- ***Delivering targeted training on outpatient IT systems and clinical documentation***
- ***Working with clinical supervisors to identify appropriate learning opportunities.***

IMTs were then surveyed after these changes were implemented to assess their impact. Further changes are planned to build on progress made (see next steps).

Results:

Baseline Survey
(n=10, 08/24)

'The clinic days have been invaluable'

90% *Found it stressful meeting their outpatient clinic curriculum requirements*

0% *Agreed outpatient medicine was a departmental training priority for IMTs*

Next: 'Arrange clinic days for when supervisor has clinics'

30% *Of IMTs felt confident in managing medical patients in outpatient setting*

'Relieves stress of considering ward staffing'

90% *Of IMTs felt attending clinic has a positive impact on professional wellbeing*

Pre-intervention (n=33, 08/23-08/24)		Post-intervention (n=13, 08/24-12/24)
4	*Clinics attended each rotation (median)*	10
2	*Of which attended in **non-working time** (off days, annual leave)*	0
3	*Independent outpatient contacts per rotation (mean)*	8
21%	*Agreed they found it easy to attend clinics during their working day*	61%
39%	*Agreed they received specific feedback that improved their confidence in outpatient medicine*	69%
61%	*Agreed the educational quality of their outpatient medicine experience was high during rotation*	92%

Next Steps:

Our findings demonstrate that protected clinic time significantly enhances both the quantity and perceived quality of outpatient training experiences.

We are already undertaking further work to:

- Expand local feedback with each rotation giving frequent opportunity for interventions to improve training beyond outpatient medicine and recognise high quality rotations
- Trial new rotation specific clinic programmes for IMT trainees to improve mentorship and confidence in independent practice

References

1. Birns J, Mullender C, Balch I, Bryant C, Deaner A. Evaluation of training programmes mapped to the new internal medicinecurriculum. Future Healthcare Journal. 2020;7(2):116-9.
2. Nana M, Morgan H. Improving 'The Core' aspects of medical training: a trainee-led innovation. Future Healthc J. 2020;7(1):90-3.
3. National training survey results (https://www.gmc-uk.org/-/media/documents/national-training-survey-summary-report-2024_pdf107834344.pdf) (accessed 30/08/2025)

Hyponatremia Following Ischemic Stroke: A Study of 287 Patients in a Stroke High-Dependency Unit

Insha Aleena [1], VSBPradeep Konakanchi [2];
[1]Apollo Multispecialty Hospitals Ltd, Kolkata;
[2]Sandwell and West Birmingham Hospitals NHS Trust

INTRODUCTION:

Hyponatremia, a low serum sodium level (<135 mmol/L), is a common and critical electrolyte disorder in acute ischemic stroke patients. Even mild reductions can cause brain swelling and worsen neurological outcomes. It often stems from Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH) or Cerebral Salt Wasting (CSW), which require distinct management. Previous studies link hyponatremia to longer hospital stays and poorer functional recovery. Other electrolyte imbalances, like hypokalemia, also occur. This study aims to determine hyponatremia's incidence, severity, and causes in stroke high-dependency unit (HDU) patients, and its association with short-term clinical outcomes, offering insights for improved patient care.

AIMS/OBJECTIVES:

Our study had three main aims:

1. To determine the incidence and severity of hyponatremia in acute ischemic stroke patients in a stroke high-dependency unit (HDU).
2. To identify the underlying causes of post-stroke hyponatremia.
3. To assess the association between hyponatremia (and other electrolyte imbalances) and short-term clinical outcomes like HDU stay duration, early neurological deterioration, and discharge functional status.

To achieve these, we aimed to: quantify hyponatremia incidence and severity; identify the mean serum sodium in affected patients; determine common age groups and infarct types linked to hyponatremia; analyze causes (SIADH, CSW, others); assess the link between hyponatremia/other electrolyte imbalances and HDU stay length; compare baseline vs. discharge mRS; and note diuretic use.

MATERIALS & METHODS:

Study Design and Participants

This was an observational study of 287 consecutive acute ischemic stroke patients admitted to a stroke HDU at between January and May 2025.

Data Collection

We collected data from medical records on demographics, stroke characteristics (infarct type, NIHSS score), and laboratory parameters including serum sodium, potassium, calcium, and magnesium. We also recorded medication history, specifically diuretic use, and clinical outcomes such as HDU length of stay, neurological deterioration, and modified Rankin Scale at discharge.

Definitions

Hyponatremia was defined as serum sodium <135 mmol/L, categorized as mild (130–134 mmol/L), moderate (125–129 mmol/L), or severe (<125 mmol/L). Etiology (SIADH, CSW, or other) was determined clinically/biochemically.

Statistical Analysis

Descriptive statistics summarized patient data and hyponatremia incidence. We used chi-square for categorical variables to analyze associations. Functional outcomes were analyzed using appropriate statistical methods. A p-value of <0.05 indicated statistical significance.

RESULTS:

Patient Profile (n=287): Mostly male (64.1%), age 61–70 years (40.1%), with high comorbidity (87.1%).

Electrolyte Disturbances: Hyponatremia was highly prevalent (55.4%), mostly mild (35.9%). Other common issues: hypomagnesemia (27.2%) and hypokalemia (21.3%).

Key Associations:

Low sodium significantly associated with greater functional decline (mRS change; p=0.015).

Moderate/Severe hyponatremia correlated with significantly prolonged hospital stays (p=0.005).

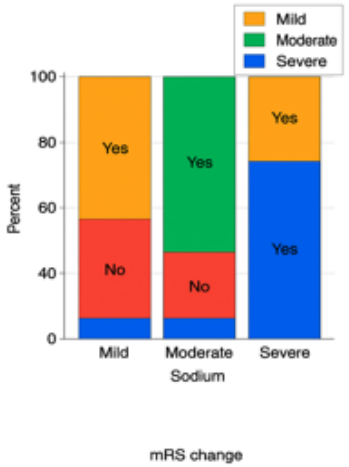
SIADH was the primary cause (38%) and accounted for all moderate/severe cases (p<0.0001).

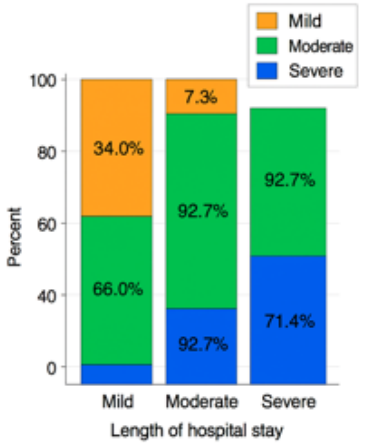
DISCUSSION:

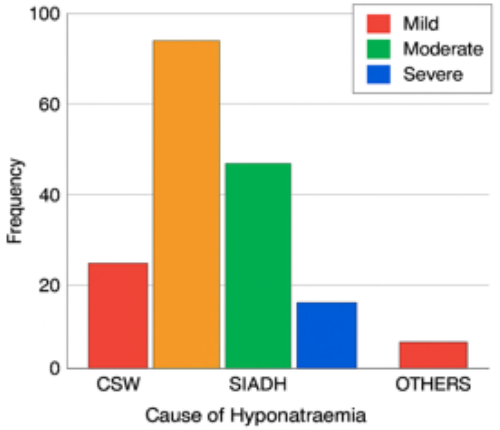
Hyponatremia (**55.4%** prevalence) is a critical complication in acute ischemic stroke.

Impact on Outcomes: The disturbance is associated with poorer neurological outcomes (mRS) and longer hospitalization, especially in its moderate/severe forms.

Etiology: SIADH drives the most severe sodium derangements, underscoring the role of stroke-specific neuroendocrine dysfunction rather than general patient factors.







CONCLUSION:

Hyponatremia is frequent in acute ischemic stroke patients in the HDU, with SIADH being the most common cause. Moderate to severe hyponatremia is linked to longer HDU stays and worse early neurological outcomes. Other electrolyte imbalances like hypokalemia are also common. These findings underscore the critical need for early detection, accurate diagnosis, and targeted management of electrolyte disturbances to optimize stroke care, potentially reducing hospital stay and improving functional recovery.

Atherosclerotic vascular disease in patients undergoing transcatheter aortic valve implantation: A meta-analysis of prevalence and clinical impact

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*[1]Athens Naval Hospital; [2]Cambridge University Hospitals NHS Foundation Trust; [3]National and Kapodistrian University of Athens, Greece; [4]Aristotle University of Thessaloniki; [5]AHEPA University Hospital of Thessaloniki; [6]Hippokrateion Hospital of Thessaloniki; *The authors contributed equally and serve as co-first authors.*

Introduction

Degenerative aortic stenosis (AS) frequently coexists with atherosclerotic vascular disease (ASCVD), including coronary artery disease (CAD), peripheral artery disease (PAD), and cerebrovascular events (CVE), owing to shared risk factors.[1] This overlap complicates transcatheter aortic valve implantation (TAVI) planning and outcomes. The prognostic role of ASCVD remains uncertain, as reflected in current guidelines, where recommendations on CAD assessment and revascularisation before TAVI are based on limited, low-level evidence.[2] We aimed to systematically quantify the prevalence and prognostic significance of ASCVD in TAVI patients.

Materials and Methods

-Systematic review and meta-analysis (PROSPERO CRD42024597919) with records from Medline and Scopus (to 12/2024).
-Random-effects models were used to pool prevalence and adjusted hazard ratios (HR) for mortality, with subgroup analyses to detect group-specific differences.
-Meta-regression performed to investigate sources of heterogeneity and explore relationship of confounding variables.

Figure 1: ASCVD prevalence in patients undergoing TAVI

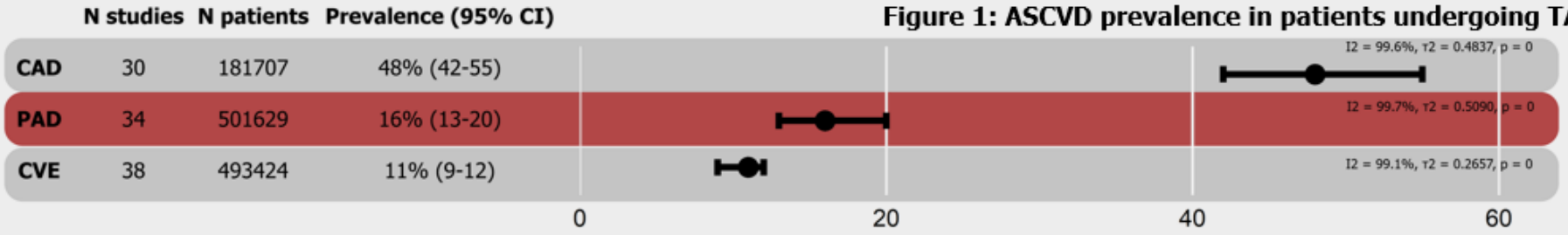
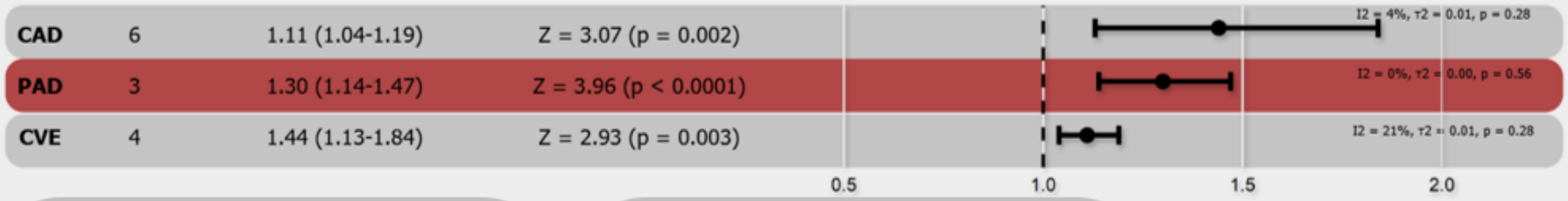


Figure 2: ASCVD and mortality in patients undergoing TAVI



Results

Study and patient characteristics:
-13540 records screened: 43 studies (14 randomized, 29 observational/mixed) included.
-732,895 patients: mean age = 81.2, 51% male, Society of Thoracic Surgeons (STS) score = 5.3

Pooled ASCVD prevalence (Figure 1):
-CAD: 48% (42–55) → ↑ in North American cohorts (p<0.01)
-PAD: 16% (13–20)
-prior CVE: 11% (9–12) → ↑ in studies with <10,000 participants (p = 0.04)

Meta-regression analyses for confounding variables:
-Hypertension
-Diabetes → ↑ CAD (including myocardial infarction-MI and coronary bypass grafting-CABG)

-Smoking
-↑ Ejection fraction → ↓ CAD (including MI and CABG)

-Older age
-↑STS score → ↑ ASCVD prevalence across all components

Analysis of ASCVD prognosis:
-Higher risk of all - cause mortality with all ASCVD components (Figure 2).

Conclusion

-ASCVD prevalence among TAVI patients is high and predicts worse outcomes.
-Our findings inform tailored risk stratification and MDT strategies.
-Optimisation of medical therapy is critical, including intensive lipid and blood pressure control for comprehensive cardiovascular risk management.

Scan to see expanded figures with individual studies.

[1] Milin AC *et al.* Insights into aortic sclerosis and its relationship with CAD. *J Am Heart Assoc.* 2025;3:e001111. [2] Vahanian A *et al.* 2021 ESC/EACTS guidelines for valvular heart disease. *EuroIntervention.* 2022;17:e1126–96.

Improving TAVI Referrals

Quality & Consistency Audit

Dr. Hilda Akinrinade – University Hospitals Dorset NHS

21 Oct 2025

Background & Aim

TAVI treats severe symptomatic AS when surgery isn't suitable, requiring multidisciplinary care. At UHD, referrals lacked structure: missing essential tests, unnecessary investigations & inconsistent documentation. The aim was to evaluate the quality and consistency of TAVI referrals, by introducing a structured referral checklist with a re-audit to measure improvements.

Methods

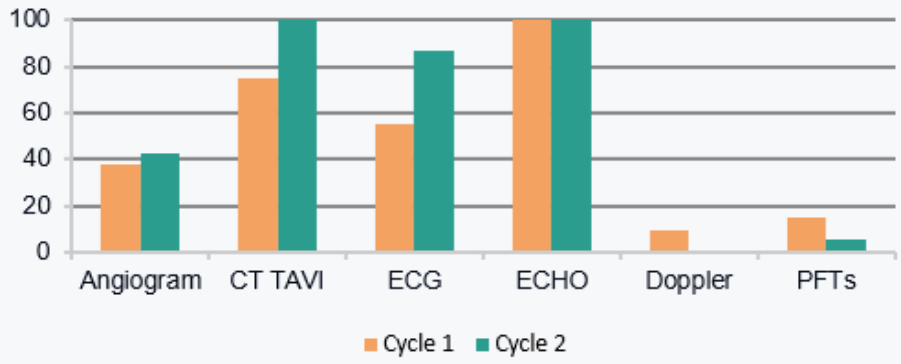
Cycle 1 (baseline): Retrospective review of 30 consecutive referrals.
Investigations checked: echocardiogram, CT TAVI, ECG, angiogram, carotid Doppler, pulmonary function tests.
Intervention: Introduction of a structured referral checklist with targeted departmental teaching.
Cycle 2: Re-audit following intervention.

Results & Conclusion

Work-up improved: CT 75→100%, ECG 55→87%, Angiogram 38→43%, Doppler 10→0%, PFTs 15→6%, ECHO 100%; checklist boosted documentation, reduced unnecessary tests & facilitated smoother MDT triage; future: more data & trainee involvement.

Over a 9-month period, 30 baseline and 16 re-audit referrals were reviewed. Future cycles could include a larger sample size and longer data collection period to provide more statistically robust results and allow comparisons between elective and acute referrals. A bigger dataset would strengthen conclusions on the checklist's impact on referral quality, efficiency, MDT decision-making, and time to treatment

Fig. 1: *Checklist illustration*



Graph 1: *Referral work-up compliance by audit cycle*

[1] [2]

Improving Pneumonia Practice: From Guidelines to Bedside

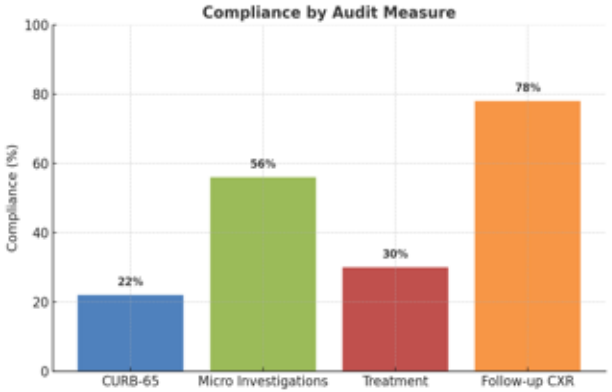
Dr.Hina Zamir Registrar , Dr.Daniel Wilkins IMT 3 , Dr.James Dunbar Consultant Infectious disease

South Tees Hospitals
NHS Foundation Trust

Introduction:

- Pneumonia is a leading cause of hospital admission in the UK and in-hospital mortality rates reported as high as 14%.
- Management was not consistent with national and local guidelines according to our audit.
- Need interventions for improved practice and patient safety.

Methodology:



Inclusion Criteria

Radiological evidence of consolidation on chest X-ray

Exclusion Criteria

Cases of hospital-acquired pneumonia, aspiration pneumonia, or infections originating from other sources (e.g., urinary tract, gastrointestinal tract, or biliary system)

QI Project: Improving Pneumonia Care

Retrospective Data Collection (6 months)

PDSA Cycle 1
- Knowledge Q.
- Teaching Sess.

PDSA Cycle 2
- 1-page Pneumonia Care Bundle Created

COMMUNITY ACQUIRED PNEUMONIA INITIAL MANAGEMENT BUNDLE

1. Make the diagnosis

Signs and symptoms of respiratory tract infection plus new consolidation on chest imaging
In 12% of patients there are no typical features of CAP at presentation

2. Assess severity

Calculate the **CURB-65 score** to predict mortality and guide further management:
- Confusion (AMTS ≤8 or new disorientation)
- Urea >7mmol/L (excluding patients with CKD)
- Respiratory rate ≥30/min
- Blood pressure Systolics90mmHg or Diastolics60mmHg
- Age ≥65 years

If the patient presents more unwell/severe than suggested by CURB-65, clinical judgement should be used to assess severity. If sepsis is present, treat as severe pneumonia

3. Severity guided investigation and management*

	Mild CURB-65= 0-1	Moderate CURB-65= 2	Severe CURB-65= 3-5
Mortality	Less than 3%	3-15%	>15%
Microbiological investigation	None routinely	✓ Blood culture (before antibiotics) and sputum culture ✓ Consider atypical tests ✓ Consider respiratory virus PCR swab	
Treatment: 1st line	Amoxicillin PO 500mg TDS	Amoxicillin PO 1g TDS **AND** *if atypical cover needed** Clarithromycin PO 500mg BD	Co-amoxiclav IV 1.2g TDS **AND** Clarithromycin PO/IV 500mg BD**
Treatment: penicillin allergy	Clarithromycin PO 500mg BD **OR** Doxycycline 200mg STAT then 100mg OD		Levofloxacin IV 500mg BD** (Aim for early oral switch to doxycycline)
Duration	Usually 5 days Atypical causes may need longer: discuss with a microbiologist		
Notes	*Scan QR code for further guidance in South Tees Antimicrobial Policy. **If recent MRSA in sputum add Linezolid PO/IV 600mg BD.		

4. Follow-up

- Arrange clinical review (GP or outpatient) after 6 weeks.
- Arrange follow-up CXR after 6 weeks if persistent signs or symptoms AND/OR if high risk for malignancy (eg smokers, age >50)

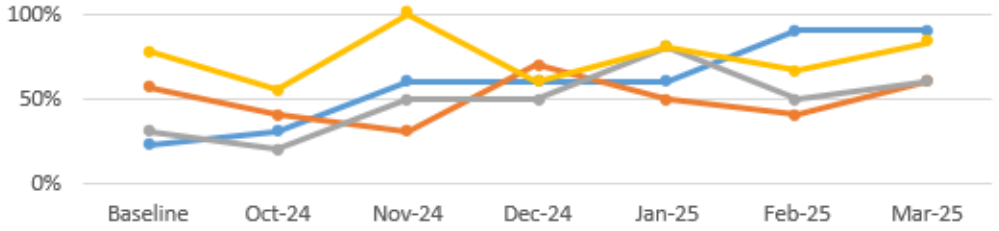
References

NICE CG191: Pneumonia in adults: diagnosis and management
NCEPOD: Consolidation Required (Review of care of CAP in hospital)
South Tees Antimicrobial Policy

South Tees Antimicrobial Policy

Results:

After 2 PDSA cycles, there was a significant increase in CURB-65 documentation, rising from 22% to 90%. Antimicrobial prescribing also improved, with compliance increasing from 30% to 60%. While microbiological investigations and follow-up imaging showed progress, they still fell short of the desired targets.



Conclusion:

Through knowledge questionnaire ,teaching session and implementation of one page pneumonia care bundle , we noticed significant improvement in our practice but there are few recommendations for future work to get desirable results.

RECOMMENDATIONS

- Micro-teaching sessions into the induction program for resident doctors
- Ongoing feedback and review of pneumonia care bundle posters
- Development of severity-based investigation request
- Implementation of a 6-week chest X-ray follow-up reminder

REFERENCES

- NICE: Pneumonia in adults' diagnosis and management
- BTS: Guidelines for the Management of Community Acquired Pneumonia in Adults Update 2009
- NCEPOD: Consolidation Required (Review of care of CAP in hospital)
- South Tees Antimicrobial Policy

A rare case of Carbimazole induced Lupus

Ibrahim Basar, Arooj Zulfiqar, Paulina Gronczewska, Hafiz Javed, Jayamalee Jayaweera, Haris Marath, Amna Zeeshan, Joohi Majeed

Introduction

Grave's Disease and Systemic Lupus Erythematosus (SLE) are autoimmune disorders that predominantly affect young females. While Grave's Disease has its manifestation in the thyroid, its systemic effects are well-recognized; SLE is a classic multisystem disease[1-4]. Drug-induced lupus is a lupus-like syndrome typically occurring months to years after exposure to certain medications. Classic culprits include hydralazine, procainamide, and isoniazid[1] . We present a case of a 45-year-old female who developed drug-induced lupus secondary to carbimazole.

Case presentation

A 45-year-old female presented to the hospital with new-onset rapid atrial fibrillation that proved resistant to standard rate control measures. She was also experiencing fever and exhibited classic symptoms of thyrotoxicosis, including a two-month history of palpitations, unintentional weight loss of 3 kg over one month, and a four-month history of a fine tremor.

Initial investigations revealed profoundly suppressed thyroid-stimulating hormone (TSH 0.02 mIU/L) and markedly elevated free thyroxine (fT4 69.6 pmol/L). Her Burch-Wartofsky score of 55 was highly suggestive of Thyroid Storm. She was subsequently started on intravenous metoprolol, oral propylthiouracil (PTU), Lugol's iodine and hydrocortisone. This treatment resulted in significant clinical improvement, allowing discharge with a diagnosis of Graves' disease and treatment consisting of carbimazole, a tapering course of prednisolone, and a proton pump inhibitor (PPI). Four weeks following discharge, she re-presented with flu-like symptoms and was diagnosed with Influenza A infection.

Despite appropriate antiviral treatment with oseltamivir and broad-spectrum antibiotics to cover for super-added bacterial infection, she continued to experience persistent fever and had an elevated C-reactive protein (CRP). This prompted an extensive workup for pyrexia of unknown origin (PUO). Extensive infection screens and radiological investigations yielded no definitive source. Rheumatological evaluation revealed positive antinuclear antibodies (ANA), anti-double-stranded DNA (dsDNA), and anti-Ro antibodies, leading to a diagnosis of drug-induced systemic lupus erythematosus (SLE)

This was supported by positive anti-histone antibodies, a characteristic serological marker of drug-induced lupus.

Management

Management involved immediate discontinuation of carbimazole (replaced with PTU) and initiation of prednisolone 20mg daily, which resulted in complete resolution of her fever and arthralgia. At follow-up in the rheumatology clinic, hydroxychloroquine was introduced as long-term immunomodulatory therapy for SLE, with good symptomatic control achieved.

Later rheumatology clinic review demonstrated significant proteinuria prompting review by the renal team, who organized a renal biopsy. The biopsy showed findings consistent with class 3 lupus nephritis. She was subsequently commenced on mycophenolate.

Discussion

Systemic lupus erythematosus (SLE) is a multi-system autoimmune disease predominantly affecting women aged 15–45. Common symptoms include fever, weight loss, fatigue, lymphadenopathy, oral/nasal ulcers, arthritis, serositis, and cytopaenias. Complications may involve lupus nephritis (presenting as nephrotic or nephritic syndrome) and rare cases of lupus cerebritis. Whilst commonly it is idiopathic in aetiology, it is crucial to remember that medications may lead to a presentation that mimics idiopathic lupus[1-3].

There are less than 10 case reports highlighting carbimazole as a potential trigger for drug-induced lupus, emphasizing the importance of considering autoimmune aetiologies in patients with persistent unexplained symptoms following medication initiation. Early recognition and appropriate management, including discontinuation of the offending drug and immunosuppressive therapy, can lead to favourable outcomes.

References

1.Haq I, Sosin MD, Wharton S, Gupta A. Carbimazole-induced lupus. BMJ Case Reports. 2013 Feb 7;2013:bcr2012007596–6.
2.Dyall-Smith DD. Drug-induced lupus erythematosus | DermNet [Internet]. dermnetnz.org. 2010. Available from: https://dermnetnz.org/topics/drug-induced-lupus-erythematosus
3.Solhjoo M, Bansal P, Goyal A, Chauhan K. Drug-Induced Lupus Erythematosus [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2020. Available from: https://www.ncbi.nlm.nih.gov/books/NBK441889/
4.Lane LC, Wood CL, Cheetham T. Graves' disease: moving forwards. Archives of Disease in Childhood. 2022 Jul 13;108(4):archdischild2022-323905.

Improving Documentation of Treatment Escalation Plans in the Infectious Diseases Department of Sheffield Teaching Hospitals NHS Foundation Trust

Dr Joseph Delahunty, Dr Patrick Copley, Dr Vivak Parkash

BACKGROUND

This quality improvement project aimed to increase the proportion of patients with a documented Treatment Escalation Plan (TEP) within our department. Our goal in doing this was to support clear communication between healthcare workers and patients and facilitate advanced decision-making.

Previous quality improvement work has shown that the addition of a TEP to a DNAR reduced harm, non-beneficial interventions and "problems" for patients (1).

METHODS

PDSA cycles were used to review the current levels of documented TEPs and following two interventions to improve completion rates for documentation of escalation plans from September-October 2024.

Our results were generated by reviewing the clinical notes for all patients on the ID wards for that day in a snapshot data collection and answering:

1. Was there a decision regarding escalation made within 48 hours of admission?
2. What was the overall time taken to make a decision regarding escalation following admission under ID?

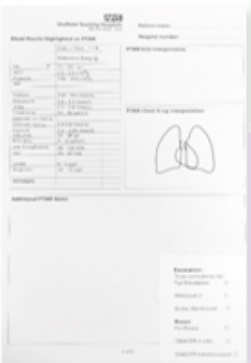
Results were recorded using an excel workbook and then analysed using a standard statistical approach.

Repeat cycles were measured having allowed several days for the interventions to take effect.

Two interventions were implemented:

1. Daily Safety Huddle Reminders led by the senior nurse (Cycle 2).
2. Sticker Prompt in PTWR Notes to remind clinicians to document TEPs (Cycle 3) (Figure 1).

Figure 1



RESULTS

Table 1

	% of patients with TEP completed <48 h	Overall TEP Completion rate	Mean average time to complete TEP	Median time to complete TEP	Longest TEP completion duration at time of data collection (days)
Cycle 1	26.1%	82.6%	114.9 hours (4.8 days)	61 hours (2.5 days)	16
Cycle 2	38.9%	88.9%	66.1 hours (2.8 days)	56.5 hours (2.4 days)	6.6
Cycle 3	59.3%	84.4%	66.9 hours (2.8 days)	29.5 hours (1.2 days)	12.8

Results indicated a significant improvement in TEP documentation rates within 48 hours—from 26.1% at baseline (cycle 1) to 59.3% after both interventions. The first intervention (daily safety huddle reminders) improved overall completion rates, while the sticker prompt led to more timely documentation.

A QIP by the Royal United Hospital, Bath showed an increase in documentation rates from 30% to 90% with the addition of a ceiling of treatment proforma to the existing DNAR paperwork (2). Whilst our study didn't have this degree of success, it did show an increased adherence with a similar intervention.

CONCLUSION

Although limited by factors such as the use of a snapshot data collection due to patient medical record availability, the interventions showed that simple, targeted strategies can effectively increase TEP documentation. Future improvements could focus on implementing digital tools to ensure more consistent documentation practices following the implementation of the new IT system within the trust.

REFERENCES:

1. Lightbody, et al. Impact of a treatment escalation/limitation plan on non-beneficial interventions and harms in patients during their last admission before in-hospital death, using the Structured Judgment Review Method. *BMJ Open*. 2018;8(10):e024264. Published 2018 Oct 31. doi:10.1136/bmjopen-2018-024264
2. Dahill, et al. Improving documentation of treatment escalation decisions in acute care. *BMJ Qual Improv Rep*. 2013;2(1):u200617.w1077. Published 2013 Aug 21. doi:10.1136/bmjquality.u200617.w1077

McKittrick-Wheelock Syndrome Presenting With Severe Electrolyte Imbalance and Acute Kidney Injury

Authors: Dr Jun Kai Terry Tan*, Dr Richard Lloyd*

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NHS
East Suffolk and North Essex
NHS Foundation Trust

- 50M presented with acute-on-chronic diarrhoea, worsening lethargy, and poor oral intake
- Severe hyponatraemia (Na^+ 106 mmol/L), hypokalaemia (K^+ 2.2 mmol/L), hypochloraemia (Cl^- 71 mmol/L) and low ionised calcium (0.95 mmol/L). AKI with metabolic compensation.
- Serum osmolality 256 mOsm/kg, 9am cortisol normal
- Gut hormone panel negative, stool MCS negative
- Urinary Na^+ and Cl^- <20 mmol/L, trialled octreotide
- PMH: chronic diarrhoea secondary to pancreatic insufficiency.
- Third admission in 3 months for similar episodes.
- Previous CT: Rectosigmoid thickening [Figure 1] and flexi sig: 10 cm laterally spreading tumour [Figure 2]. Histology: tubulovillous adenoma with low-grade dysplasia.
- Repeat flexible sigmoidoscopy showed extensive circumferential carpet adenoma. A pelvic MRI Large mucinous rectal lesion; no extra-mural invasion or lymphadenopathy
- Underwent robotic ultra-low anterior resection with a loop ileostomy

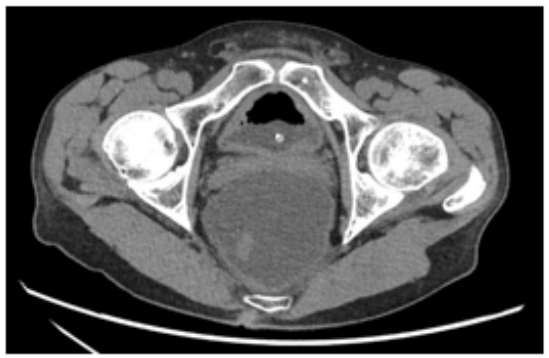


Figure 1

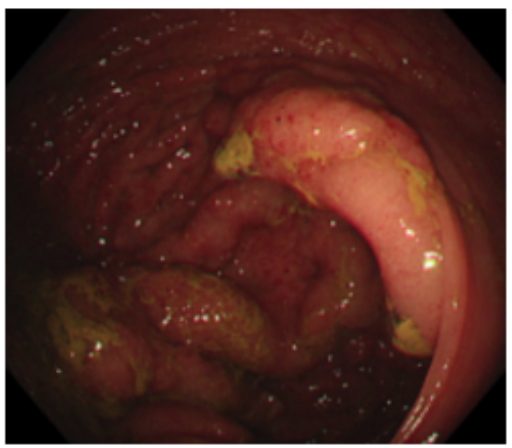


Figure 2

- **McKittrick-Wheelock Syndrome** is rare but causes severe chronic fluid and electrolyte loss. Diagnosis is often delayed due to non-specific symptoms resembling common gastrointestinal disorders.[1]
- **Pathophysiology**: Overexpression of COX-2 in adenomatous tissue → ↑ prostaglandin E2 production → Cl^- secretion & inhibition of Na^+ reabsorption → mucin production → secretory diarrhoea and electrolyte depletion.[2]
- **Management** focuses on aggressive fluid and electrolyte correction, followed by surgical resection of the adenoma. Surgical excision is curative and minimises risk of malignant transformation and symptom recurrence.

Take-Home Messages

- Consider MWS in patients with chronic diarrhoea, AKI, and severe electrolyte imbalance.
- Delayed diagnosis of MWS is common due to overlap with more common gastrointestinal conditions; timely imaging and endoscopy are essential for accurate diagnosis.
- Benign-appearing lesions can still cause profound systemic effects.

References

1. *de Sousa Miranda I, Ferreira JR, Rocha S, Monteiro M, Guillerme J, Domingos R. McKittrick-Wheelock Syndrome: A Neoplastic Cause of Electrolyte Imbalance. DOAJ (DOAJ: Directory of Open Access Journals). 2022 Mar 24;9(3):003231–1.*
2. *Einspahr JG, Krouse RS, Yochim JM, Danenberg PV, Danenberg KD, Bhattacharyya AK, et al. Association between Cyclooxygenase expression and colorectal adenoma characteristics. PubMed. 2003 Jul 15;63(14):3891–3.*

EVALUATION OF THE GASTROINTESTINAL TRACT IN PATIENTS WITH ISOLATED HYPOFERRITINAEMIA

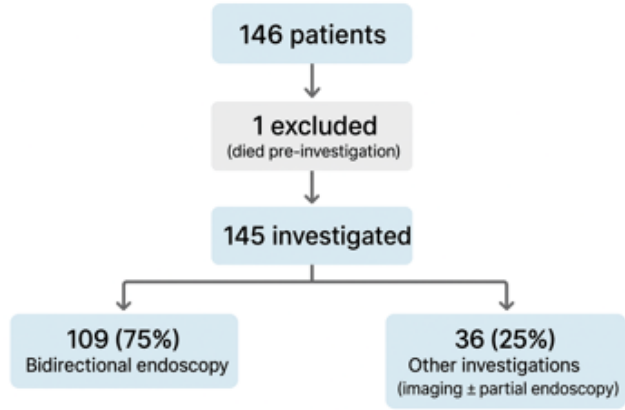
Hebden LA and Hebden JM. University Hospitals Bristol and Weston NHS Foundation Trust and Sheffield Teaching Hospitals NHS Foundation Trust

Introduction

Bidirectional endoscopy is standard practice in the investigation of iron deficiency anaemia patients, revealing colonic carcinoma in 5-10%. However, the value of investigating isolated hypoferritinaemia is unclear. The BSG guidelines on iron deficiency suggest consideration of endoscopic investigation in those aged >50 after discussing the risk and potential benefit.

Methods

We prospectively evaluated 146 consecutive patients seen by a single consultant gastroenterologist who had been referred from primary care with isolated hypoferritinaemia. All patients were offered investigation as per iron deficiency anaemia (IDA) guidelines following clinic consultation. Data was collected from the initial consultant consultation letter and from Infoflex (endoscopy) and Sunquest ICE system (blood results, radiology and histology). Lesions judged to be sources of significant blood loss were as defined by Rockey et al[1] (carcinomas, adenomatous polyps >15mm, vascular ectasia ≥5 or >8mm, duodenal / gastric / colonic ulcers >1cm, oesophagitis [LA grade D], erosive gastritis and active colitis).



Diagnostic yield in isolated hypoferritinaemia

Pathology	Frequency (percentage)
Normal/non-significant	135 (93.1%)
Colonic polyps	3 (2.1%)
Extra GI cancers (HCC, lung, ovarian)	3 (2.1%)
Erosive/haemorrhagic gastritis	2 (1.4%)
Hyperplastic/regenerative polyp	2 (1.4%)
Coeliac disease	1 (0.7%)
Colonic cancer	1 (0.7%)
Complex renal cyst	1 (0.7%)
Oozing gastric polyp	1(0.7%)

Results and discussion

One-hundred-and-forty-six patients (median age 68 {30-93}; 108 females) were seen over an 11-year period (2014-2025). One patient was excluded (died before investigations from new glioma). Fifty-nine patients (40%) were asymptomatic (no symptoms or lethargy only). One-hundred-and-nine patients (75%) had bidirectional endoscopies, with the remaining a combination of endoscopic and radiological imaging, or imaging alone. Colonic carcinoma was discovered in 1 patient (0.7%). This was significantly less than in a group of patients with IDA previously described from the same clinic (1/145 versus 17/261, $p<0.04$)[2]. No gastric carcinomas were found. Other significant findings were: colonic polyps in 3 (2%); erosive/haemorrhagic gastritis in 2 (1.4%); hyperplastic/regenerative gastric polyps in 2 (1.4%); coeliac disease (serology negative, Marsh 3a) in 1 (0.7%); complex renal cyst resulting in nephrectomy in 1 (0.7%) and an oozing gastric polyp in 1 (0.7%). There were no significant gastric or duodenal ulcers or angiodysplasias. Investigations were normal or non-significant in 135 (92%) patients. Lung carcinoma was discovered in 1 patient who had a CT for associated weight loss, and ovarian carcinoma in 1 patient who had a CT for associated abdominal pain. Hepatocellular carcinoma was identified in 1 patient on renal tract ultrasound.

Conclusions

Gastrointestinal malignancy is rarely found in the investigation of isolated hypoferritinaemia

References
1. Rockey DC and Cello JP. Evaluation of the gastrointestinal tract in patients with iron deficiency anaemia. N Engl J Med 1993; 329: 1691-5
2. Lau M, Schembri J, Sanders D, et al. The Yield of Bidirectional Investigations in Iron Deficiency Anaemia – Are Gastroscopies Redundant? Gut 2016; **65:** A65.

SPORADIC CREUTZFELDT-JAKOB DISEASE: WORKUP AND CHALLENGES TO REACH PREMORTEM DIAGNOSIS WITH THE HIGHEST LEVEL OF CONFIDENCE

AUTHOR: MAHMOUD TEAMA

CO-AUTHORS: KOMOLAFE OLUTOPE, ALEXANDER OGUNWUSI, SHYAMALA MANIBALAN

AFFILIATIONS:

Princess Royal University Hospital, King's College NHS Foundation Trust

INTRODUCTION

Creutzfeldt-Jakob disease (CJD) is a very rare, rapidly progressing, and fatal neurodegenerative disorder. CJD can prove to be very difficult to diagnose in the early stages due to the non-specific nature of its symptoms, which include visual changes, behavioral changes, ataxia, pyramidal/extrapyramidal signs, and rapidly progressive dementia

CASE PRESENTATION

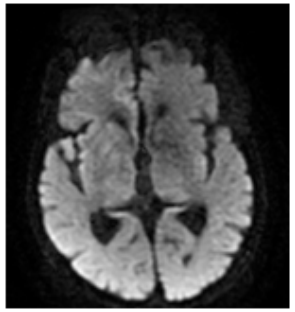
We are presenting a 76-year-old man who presented with a 4-month history of symptoms, which started with dizziness and progressed to progressive confusion. Gradually, the patient started to develop twitchy movements, dysarthria, and a rapid decline in cognitive functions. A series of extensive workup of investigations, and treatment, including a trial of IV steroids for autoimmune encephalitis, to which the patient did not respond. Subsequently, the patient was diagnosed as a case of sporadic CJD by the National CJD Research and Surveillance Unit in Edinburgh, with the highest confidence we have in life following the abnormal hyperintensity signals in his diffusion weight MRI, and positive RT-QUIC in his CSF

DISCUSSION

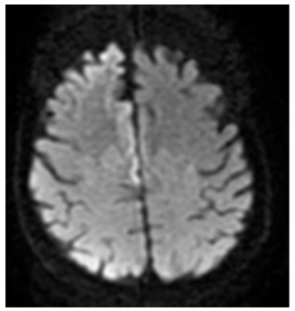
The early presentation of CJD is non-specific as patients typically present with rapidly progressive cognitive impairment, myoclonus, cerebellar ataxia, pyramidal/extra-pyramidal signs, behavioral changes, and visual disturbances. The variety of these symptoms and signs poses a real challenge in reaching a premortem diagnosis of CJD. A high index of clinical suspicion for CJD in patients with rapidly progressive dementia, exclusion of differential diagnoses of cognitive decline, and appropriate use of MRI, EEG, and CSF analysis are crucial in reaching the diagnosis. MRI with DWI and FLAIR should be ordered as soon as a rapidly progressive dementia is suspected, as it classically demonstrates hyperintense signal on DWI and FLAIR in the regions of the cerebral grey matter, striatum, and thalamus. The real-time quaking-induced conversion (RT-QuIC) assays of the CSF have made a considerable impact on the clinical diagnosis of CJD in recent years. Current sensitivity of CSF RT-QuIC undertaken at the UK National CJD Research & Surveillance Unit is 92% and the specificity is 100%. Unfortunately, there is no cure for CJD. Management is focused on symptom management and palliative care. The prognosis of CJD is extremely poor, with death expected in 70% of cases within 1 year.

IMAGING

MRI Head with DWI and FLAIR was requested which demonstrated a high DWI signal in the right cingulate gyrus extending into the frontal lobe, as well as within the right anterior insula and the medial right temporal lobe. There was a mild FLAIR high signal, although less prominent, in the corresponding regions



High DWI signal in the right anterior insula



High DWI signal in the right cingulate gyrus

CONCLUSION

Many diseases may mimic sCJD's early picture, including Alzheimer's disease, fronto-temporal dementia, paraneoplastic encephalitis, and autoimmune encephalitis, which makes the diagnosis of sCJD really challenging. This case illustrates the challenging and heavy workup done to rule out other disorders and confirm the diagnosis of sCJD with specificity approaching 100%

REFERENCE: UTTLEY L, CARROLL C, WONG R, HILTON DA, STEVENSON M. CREUTZFELDT-JAKOB DISEASE: A SYSTEMATIC REVIEW OF GLOBAL INCIDENCE, PREVALENCE, INFECTIVITY, AND INCUBATION. THE LANCET INFECTIOUS DISEASES. 2020 JAN 1;20(1):E2-10.

A Quality Improvement Project: A Clinical Audit and Re-Audit on the Documentation of Laparoscopic Cholecystectomy in Accordance with International Guidelines

BAHRIA TOWN INTERNATIONAL HOSPITALS
A PROJECT OF BEGUM AKHTAR RUKHSANA MEMORIAL TRUST

INTRODUCTION

Laparoscopic cholecystectomy is among the most common surgeries worldwide. Proper documentation ensures patient safety, continuity of care, and compliance with Royal College of Surgeons (RCS) standards. Previous audits have shown frequent omissions in operative notes, highlighting the need for structured documentation and regular quality improvement.

DISCUSSION

The audit revealed poor initial compliance with RCS guidelines due to lack of awareness and absence of a standardized format. Implementation of workshops and a structured proforma resulted in marked improvement. Similar studies (Hassan 2023; Thomson 2016) confirm that standardized documentation enhances quality, continuity of care, and medico-legal safety.

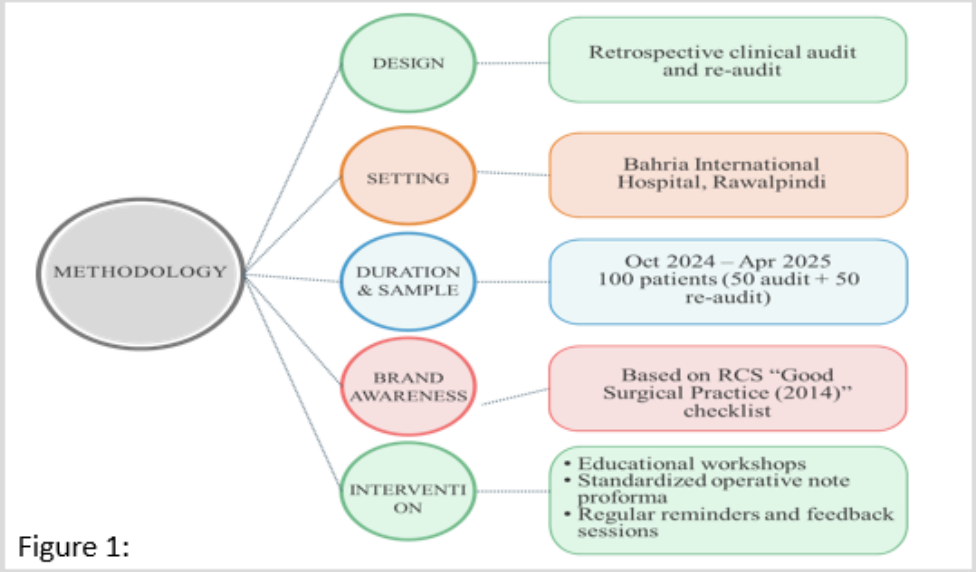


Figure 1:

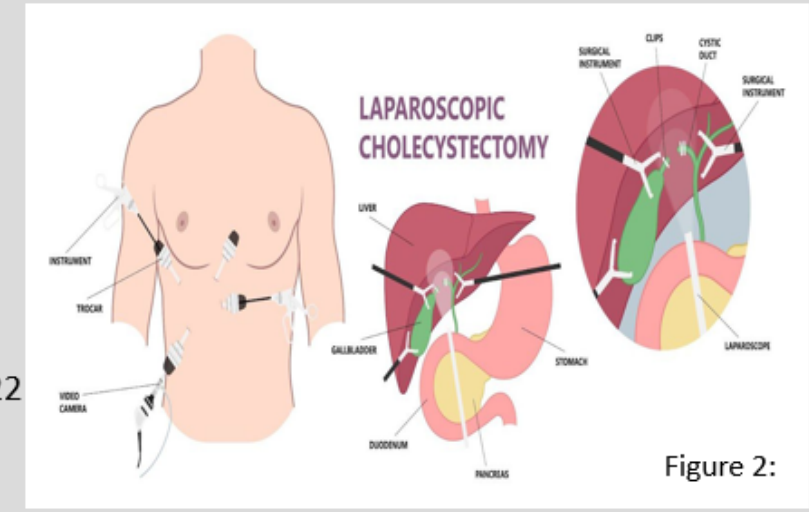
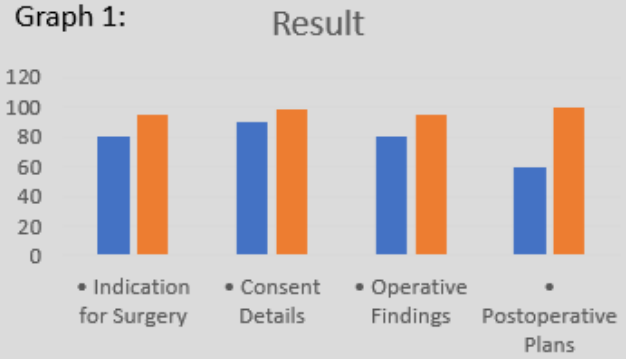


Figure 2:

Graph 1:



RESULT

Documentation compliance improved from **65% to 95%** after implementing staff training and a standardized proforma, with key areas like postoperative plans and procedure classification reaching **100% completion** in the re-audit.

CONCLUSION

Structured documentation and staff education significantly improve surgical record-keeping quality. Regular re-audits and sustained training are essential to maintain compliance with international standards.

AUTHORS :

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Co Author: Dr. Natasha

SUPERVISOR: Dr. Aimel Munir (MBBS, FCPS General Surgery)

REFERENCES

Hassan R et al., Cureus, 2023

Thomson DR et al., Int J Surg, 2016

Ebbers TK et al., Springer Nature, 2022

RCS England, Good Surgical Practice, 2025

Predicting outcomes in patients hospitalised with community acquired pneumonia: Is NEWS2 better than CURB-65 and DECAF?

Nayyar M, Lanka S, Khan M, Ur Rahman S, Liaquat A

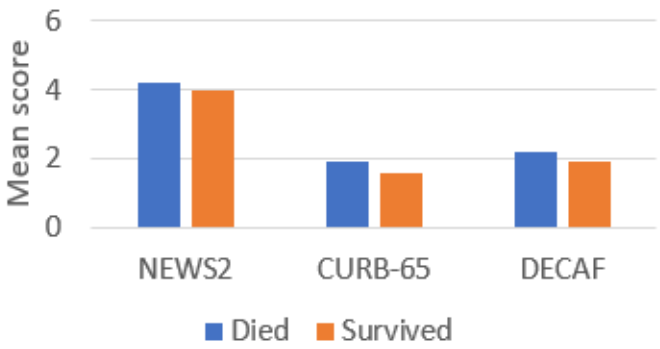
Calderdale & Huddersfield NHS Foundation Trust

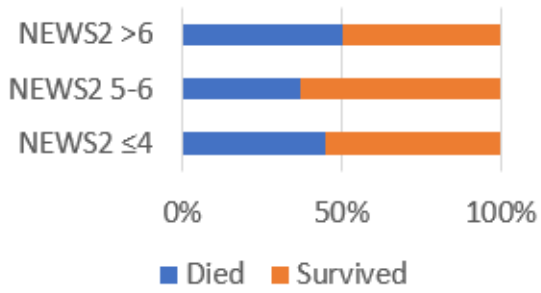
Introduction:

- Community acquired pneumonia affects 10 in 1000 people every year. 42% of these require hospital admission.
- CURB-65 score is used to predict the 30-day mortality in patients with CAP.
- DECAF score is used to predict mortality in patients with exacerbation of COPD.
- NEWS2 score was developed by RCP to standardise the recognition and management of acutely unwell patients
- We elected to compare these scoring systems to establish if one is superior to others in predicting deterioration in patients hospitalised with CAP (1,2).

Methods:

- We retrospectively reviewed the case notes of all patients aged 18 and over admitted to our hospital with a diagnosis of CAP over a 2 week period.
- Data such as demographics, observations, NEWS2, CURB-65, DECAF, radiology, laboratory tests and antibiotics were collected.
- The outcome measures were need for intensive care and death.





Results:

- 98 patients were included, 43 (44%) died.
- Patients that died were more likely to have high NEWS2 (4.2 vs 4), CURB-65 (1.9 vs 1.6) and DECAF (2.2 vs 1.9) scores
- Raised NEWS2 score was associated with a raised CURB-65 score (average 1.5 in NEWS2 ≤4 and 2.44 in NEWS2 >6)
- NEWS2 ≤4 was associated with 45% mortality, NEWS2 5-6 with 37% and NEWS2 >6 with 50%.
- Patients with NEWS2 >4 were most likely to be reviewed by ICU compared with NEWS2 <4 (7.5% vs 5%)
- Those with CURB65 ≥3 were more likely to be reviewed by ICU than CURB-65 ≤1 (14% vs 9%). They also had a higher mortality (52% vs 34%)

Conclusion:

- CURB-65 and NEWS2 scores are equally effective in predicting acute deterioration and mortality in patients hospitalised with CAP.
- In patients with COPD, DECAF score is as effective as NEWS2 and CURB-65 in predicting adverse outcomes. Therefore, NEWS2 is an appropriate tool to utilise in risk-stratifying all in-patients with CAP.

References:

1. National Institute for Health and Care Excellence. Chest infections-adult. URL: https://cks.nice.org.uk/topics/chest-infections-adult
2. National Institute for Health and Care Excellence. Pneumonia in adults: diagnosis and management (CG191). Published 03/12/2014. URL: https://www.nice.org.uk/guidance/cg191

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VARICELLA-INDUCED HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS IN AN IMMUNOCOMPETENT YOUNG MALE: A RARE CLINICAL CHALLENGE

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INTRODUCTION

Hemophagocytic lymphohistiocytosis (HLH) is a rare but life-threatening hyperinflammatory syndrome triggered by infections, malignancy, or autoimmune conditions.
Varicella zoster virus (VZV) is an uncommon precipitant, with only a few adult cases reported.

CASE SUMMARY

A 23-year-old male with recent history of road traffic accident presented with acute low back pain of one day duration
On examination, he had fever - 101°F, tachycardia -115/min, tenderness over the L3–L5 region. Systemic examination was unremarkable.
Initially, local causes were ruled out (CT spine was normal)
He subsequently developed fever and headache—started on IV antibiotics, analgesics, and supportive care.
Lab findings: Deranged liver function tests —SGOT 431 U/L , SGPT 484 U/L → USG abdomen normal; Hepatitis A, B, C, E & HIV negative.

-Day 2: Severe chest pain requiring ICU monitoring—cardiac enzymes, ECG, ECHO normal; CT aortogram was done (aortic dissection was ruled out).

-Day 3: Developed vesiculopapular rashes over face, neck, torso → clinically diagnosed with varicella zoster infection—started on IV antivirals.

-Day 4: Persisting fever. Lab findings: Elevated liver enzymes (SGOT-3109 U/L and SGPT-1932 U/L), Severe thrombocytopenia (20K/uL), elevated ferritin (41260ng/mL), low fibrinogen (135mg/dl) → suggestive of early HLH. Urgent Hematology consult → Started on Intravenous Immunoglobulin (2gm/kg over 48 hours) and IV steroids.

-Day 6: Lab parameters showed improving trend (SGOT-1908 U/L and SGPT-1082U/L), Platelet count (45K/uL), Ferritin (23371ng/mL. Fever spikes associated with headache and vomiting persisted → blood/urine cultures repeated, IV antibiotics escalated.CT Brain with venogram → cerebral venous thrombosis ruled out.

-Day 8: Patient clinically better., Platelet count (70K/uL) → continued antivirals & antibiotics and supportive care.

-Day 16: 14-days of IV acyclovir completed.Symptomatically improved and discharged.

DISCUSSION

Varicella is rarely associated with HLH in immunocompetent young adults.Our case underscores the importance of early recognition and intervention with antivirals and immunomodulatory therapy. Recent adult HLH guidelines highlight the need for prompt initiation of therapy, even before full diagnostic criteria are met, due to the high risk of mortality.This case highlights the diagnostic challenges, the importance of a multidisciplinary approach, and the need to consider HLH in severe or atypical varicella presentations.

DIAGNOSTIC CRITERIA OF HLH

The diagnosis of HLH can be established if either A or B is fulfilled:
A.A molecular diagnosis consistent with HLH
B. Any 5 of the 8 following clinical and laboratory criteria for HLH:
1.Fever >38.5° C
2.Splenomegaly
3.Cytopenia (affecting ≥2 of 3 lineages in peripheral blood):
—Hemoglobin <9 g/dL (in infants <4 weeks: Hb <100 g/L)
—Platelets <100×109/L
—Neutrophils <1.0×109/L
4.Hypertriglyceridemia and/or hypofibrinogenemia: fasting triglycerides >3.0 mmol/L (>265 mg/dL) or fibrinogen ≤1.5 g/L
5.Hemophagocytosis in bone marrow, spleen, liver, lymph nodes, or other tissues
6.Low or absent natural killer (NK) cell activity
7.Serum ferritin concentration ≥500 µg/L
8.Soluble CD25 (soluble IL-2 receptor) ≥2400 U/mL

CONCLUSION

Varicella-induced HLH is rare but potentially fatal. Prompt diagnosis and combined antiviral and immunomodulatory therapy can significantly improve outcomes.

Colchicine for cardiovascular risk reduction in coronary artery disease: An updated meta-analysis

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BACKGROUND

Inflammation contributes to a higher risk of adverse cardiovascular events in individuals with coronary artery disease (CAD). Colchicine, an anti-inflammatory agent, may help enhance clinical outcomes in these patients.

METHODS

A systematic literature search was conducted across main databases to identify randomized controlled trials (RCTs) that reported clinical outcomes with the use of colchicine in CAD. Data for outcomes were extracted and summary estimates were generated using a random effects model.

RESULTS

A total of 16 RCTs involving 20,601 patients were included. The pooled analysis showed no significant difference between colchicine and control groups in reducing all-cause mortality (RR 0.97; 95% CI, 0.78–1.22), cardiovascular mortality (RR 0.98; 95% CI, 0.79–1.21), or stroke (RR 0.67; 95% CI, 0.39–1.15). However, colchicine was associated with a significantly lower risk of myocardial infarction (RR 0.74; 95% CI, 0.59–0.93) and ischemia-driven revascularization (RR 0.72; 95% CI, 0.53–0.99), albeit with a higher incidence of gastrointestinal adverse events (RR 1.83; 95% CI, 1.38–2.43) compared with control.

Figure 1. Forest plots for all-cause and cardiovascular death

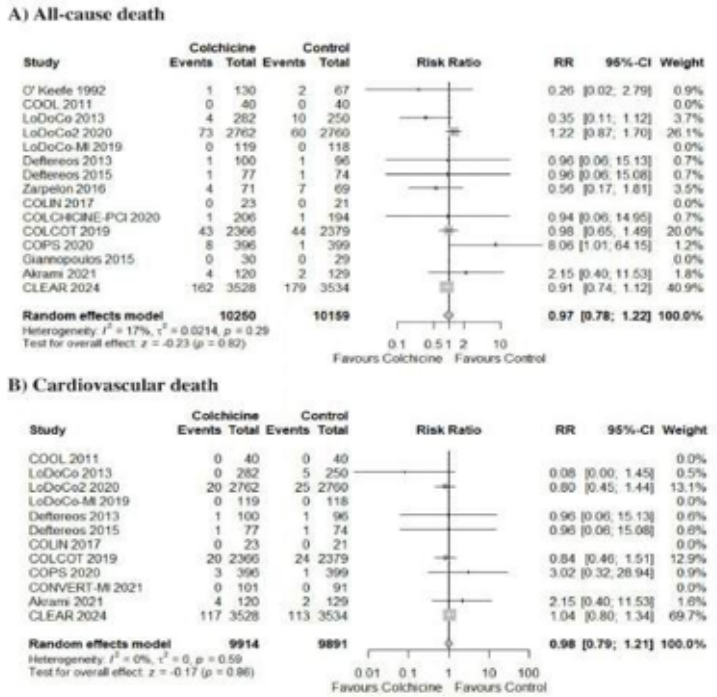
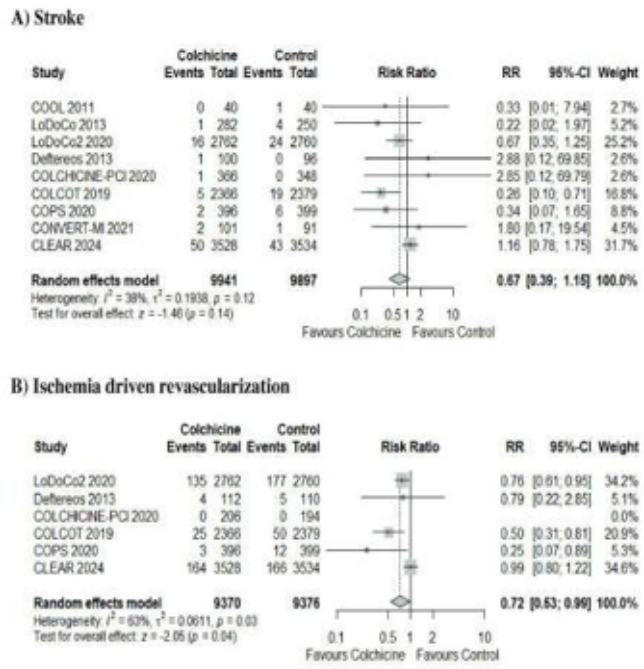


Figure 2. Forest plots for stroke and ischemia driven revascularization



CONCLUSIONS

Colchicine does not reduce the relative risk of all-cause and cardiovascular death in patients with CAD. However, it can reduce the risk of myocardial infarction and ischemia drive revascularization. Additional trial data are required to confirm these findings.

Improving Adherence to Inpatient Hyperglycaemia Protocols: A Qualitative and Quantitative, Multidisciplinary QIP

Authors: Sherin Thambu; Mohammed Anas Mohiuddin; Syed Shezal Hussain; Syed Saad Karim; Ramandeep Kaur; Aditi Verma. Supervised by Dr Shujah Dar.

BACKGROUND AND GUIDELINES

Hyperglycemia is common in hospital inpatients and is linked to adverse outcomes including prolonged hospital stays and higher morbidity and mortality rates.

Our hospital guidelines outline the recognition and management of hyperglycaemia, with focus on:

I. Appropriate ketone testing
II. Administration of insulin correction, dosed according to capillary blood glucose (CBG) levels
III. Follow-up CBG monitoring

Proper management of inpatient hyperglycaemia plays a crucial role in ensuring glycaemic control and improving overall patient outcomes.

AIMS AND METHODS

Aim: to evaluate and improve adherence to local inpatient hyperglycemia management guidelines.

Quantitative data was collected across two cycles, from four wards, at an acute general hospital. Data was collected from electronic records, of all patients present on the ward.

Hyperglycaemia was defined as **CBG levels requiring further action:**

>11mmol/L in non-diabetic patients
>14mmol/L in type 1 diabetes
>20mmol/L in type 2 diabetes

Qualitative analysis in the form of a digital questionnaire, was completed between cycle 1 and 2. It assessed resident doctors' knowledge on hyperglycaemia management guidelines.

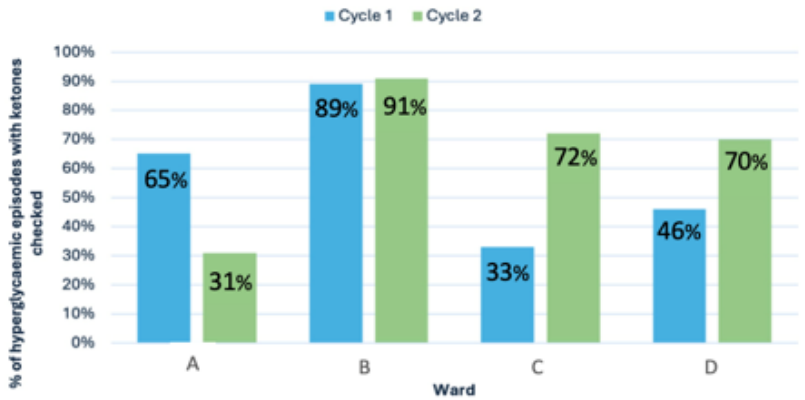
Interventions implemented between cycle 1 and 2

- **Educational presentations at each assessed ward**
- **Informative posters displayed in hot-spot areas of wards**
- **Presentation of findings at resident doctors' induction**

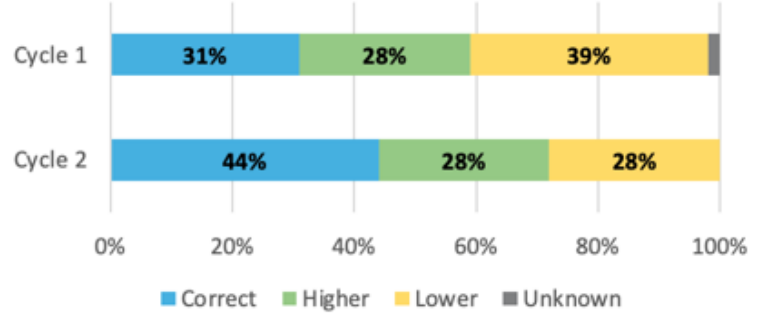
RESULTS

	Number of patients with hyperglycaemia	Number of hyperglycaemic episodes	Prevalence of hyperglycaemia
Cycle 1	31 patients	121 episodes	12%
Cycle 2	28 patients	124 episodes	11%

Graph 1 below: Ketone checking compliance in hyperglycaemic episodes



Graph 2 below: Percentage of cases where, if correction dose was given, it was correct, higher or lower



Rechecking of CBG following insulin administration was consistently high (98%-100%) across both cycles.

RESULTS

Key findings from resident doctors' questionnaire (n=34):

74% were aware of trust guideline → **62%** actively used trust guidelines → **Lack of knowledge** on CBG checking protocols

Diabetes training; completion rates amongst nursing staff

- 22% had completed the "Essential Diabetes" course
- 44% had not completed any diabetes-related training

DISCUSSION

Qualitative data showed that although doctors were aware that guidelines were available, they were not used to the same extent- which was evident through the lack of knowledge on key protocols. Our interventions therefore focused on education through presentations and making the guidelines more accessible, through ward posters.

Ketone testing rates remained stable overall (64% in cycle 1, 65% in cycle 2), however we saw improvement across three wards (graph 1). This enhances patient safety through the prompt recognition of diabetic emergencies such as DKA.

More correct doses of insulin correction were administered during hyperglycemic episodes (graph 2). Safe and accurate insulin prescribing, in line with trust guidelines, prevent hypoglycemia as a complication of overcorrection of blood glucose.

CONCLUSION AND RECOMMENDATIONS

Overall, our interventions were successful in improving adherence to local inpatient hyperglycaemia management guidelines.

- **Future efforts will address nursing staff training competencies.**
- **We will also investigate the consequences of a delay in hyperglycaemia management on length of stay.**

Exploring the Lived Experiences of Informal Caregivers in Hyderabad, Pakistan: A Qualitative Study.

AUTHORS

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01.INTRODUCTION

Pakistan's elderly population is projected to exceed 12% by 2050, yet formal elderly care services are scarce. Especially in urban centres like Hyderabad. Informal caregivers primarily family members bear the physical, emotional, and financial burden of care.

02.OBJECTIVE

This study explores the lived experiences of informal caregivers in Hyderabad, identifies caregiving challenges, and examines how gender and health-system limitations shape those experiences.

03. METHODOLOGY

- Design: Qualitative, exploratory.
- Sampling: Purposive sampling of informal family caregivers.
- Setting: Civil Hospital Hyderabad (Liaquat University Hospital).
- Data collection: In-depth, semi-structured interviews caregivers providing unpaid support to elderly.
- n = 11 adult 7F/4M; Age 20-45, informal caregivers (unpaid).
- Procedure: Interviews audio-recorded and transcribed verbatim.
- Inclusion/Exclusion: Primary unpaid caregivers of relatives with chronic illness/disability; excluded non-caregivers or those unwilling/unable to consent.
- Analysis: Manual thematic analysis to code data and identify recurring patterns across interviews.
- Saturation & rigour: Sample size guided by thematic saturation; standard steps for credibility and confidentiality.

04. RESULTS

Six major themes emerged:

1. Physical & Emotional Exhaustion
2. Psychological distress & personal sacrifices.
3. Limited involvement & family help
4. Decision-making challenges with minimal medical support
5. Financial strain
6. System gaps: Poor access to elder-specific healthcare services.

Equity note: Female caregivers were disproportionately affected due to entrenched gender norms.

05. CONCLUSION

The study highlights significant unmet needs among informal caregivers in Pakistan. There is an urgent need for policy interventions such as caregiver training, community-based support, elder-specific healthcare infrastructure, and financial subsidies to reduce caregiver burden.

06. IMPLICATIONS

- Respite care + counselling
- Caregiver allowance / paid leave
- Elder-care clinics (geriatrics, OT/PT)
- Telehealth follow-ups Home-care/community nurses
- Brief caregiver training at hospitals.

Carotid Sinus Syndrome Unmasked by Eating: A case report and review of literature

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Introduction

Symptomatic hypotension following a meal in older people is common but poorly recognised and frequently underdiagnosed. Mildly symptomatic cases are often overlooked, while those with more severe symptoms may present after they have resolved. Post-prandial hypotension (PPH) may also potentiate an underlying asymptomatic hypersensitive carotid sinus, amplifying cardiovascular changes and leading to syncope or collapse. .We describe an older patient in whom dizziness was ultimately diagnosed as carotid sinus syndrome (CSS) only after post-prandial tilt-testing and carotid massage.

Case Presentation

An 88-year-old woman was referred to our geriatric's clinic with a 7-month history of a "muzzy" head and dizziness. Symptoms were unrelated to posture, activity, or rising from bed, and differed from her earlier benign positional vertigo. Examination revealed no orthostatic hypotension, and blood tests, 24-hour ECG, CT, and MRI brain were largely unremarkable aside from small vessel disease and an old thalamic infarct.

Ambulatory BP monitoring demonstrated mild systolic drops coinciding with meals, raising suspicion of PPH. Tilt-testing and carotid sinus massage were therefore undertaken pre- and post-prandially. The pre-prandial tilt-test showed **(Fig A)** only mild asymptomatic BP fall with carotid massage in the upright position producing a vasodepressor response but no symptoms.

After eating **(Fig B)** , baseline BP and heart rate were lower, and carotid massage provoked marked hypotension and bradycardia with dizziness. On head-up tilt, these changes were magnified, with BP falling to 85/48 mm Hg, significant dizziness, and near collapse

Discussion

PPH, orthostatic hypotension (OH), and CSS are recognised causes of dizziness, falls, and blackouts in older adults. Though distinct, they often overlap and augment symptoms. PPH is defined as a systolic BP fall ≥20 mmHg within two hours of eating, or to <90 mmHg. OH is defined as a systolic drop ≥20 mmHg or diastolic drop ≥10 mmHg within three minutes of standing. CSS is characterised by symptomatic BP fall or asystole >3 seconds on carotid massage, with cardioinhibitory and vasodepressor forms. PPH occurs in up to a third of healthy older adults and is particularly common in frailty, Parkinson's disease, heart failure, and geriatric inpatients. OH may affect up to 81% of older patients, and CSS is reported in around 40% of those over 80 referred to syncope clinics. Despite this, PPH underdiagnosed. Our case highlights that asymptomatic CSS may be unmasked by eating, producing syncope or falls

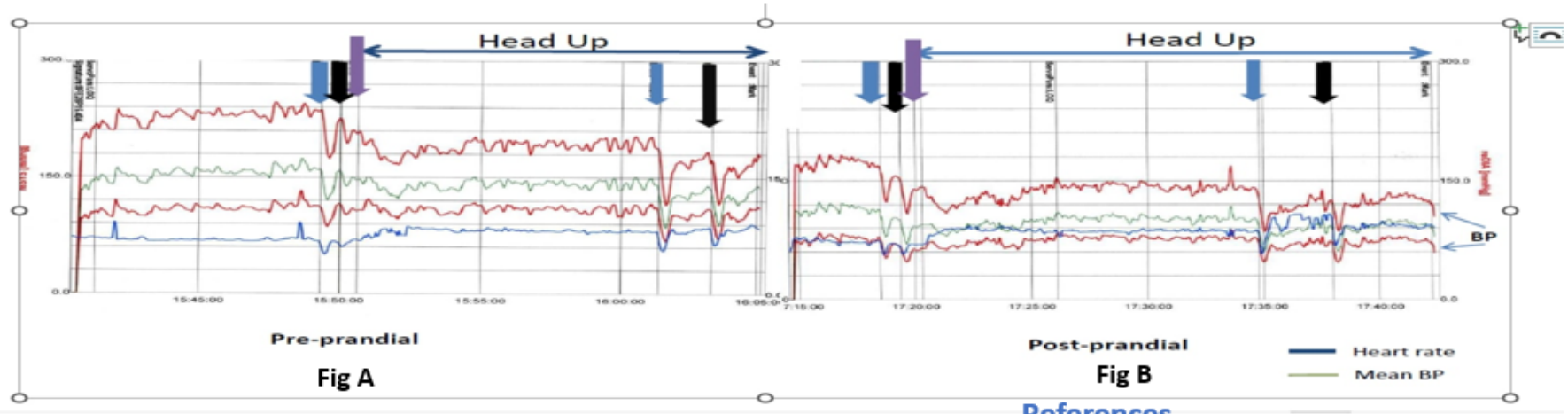

Fig A Fig B

Conclusion

This is the first reported case of CSS triggered by meals. It demonstrates that asymptomatic hypersensitive carotid sinus may become symptomatic following eating. Clinicians should enquire about post-meal symptoms and consider post-prandial tilt-testing with carotid massage when standard evaluation is unrevealing. Awareness of this association is essential, as timely recognition may guide management. Treatment remains speculative, and further studies are needed to explore effective interventions

References

1. Jansen RWAMM & Lipsitz LA. Postprandial hypotension : epidemiology , pathophysiology , and clinical management . Ann Intern Med. 1995;(March).

2. Jansen RWMM. Postprandial hypotension: Simple treatment but difficulties with the diagnosis. Journals Gerontol - Ser A Biol Sci Med Sci. 2005;60(10):1268–70.

3. Vloet LCM, Pel-Little RE, Jansen PAF, Jansen RWMM. High prevalence of postprandial and orthostatic hypotension among geriatric patients admitted to Dutch hospitals. Journals Gerontol - Ser A Biol Sci Med Sci [Internet]. 2005 [cited 2020 Nov 30];60(10):1271–7. Available from https://academic.oup.com/biomedgerontology/article/60/10/1271/553135

Impact of Postprocedural Anticoagulation on Clinical Outcomes After PCI in Acute Myocardial Infarction: Meta-Analysis

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BACKGROUND

Acute myocardial infarction (AMI) treated with PCI continues to cause substantial morbidity and mortality due to thrombotic complications such as stent thrombosis and recurrent ischemia. Postprocedural anticoagulation (PPAC) has been proposed to mitigate these risks, but guideline support remains limited because of inconsistent evidence.

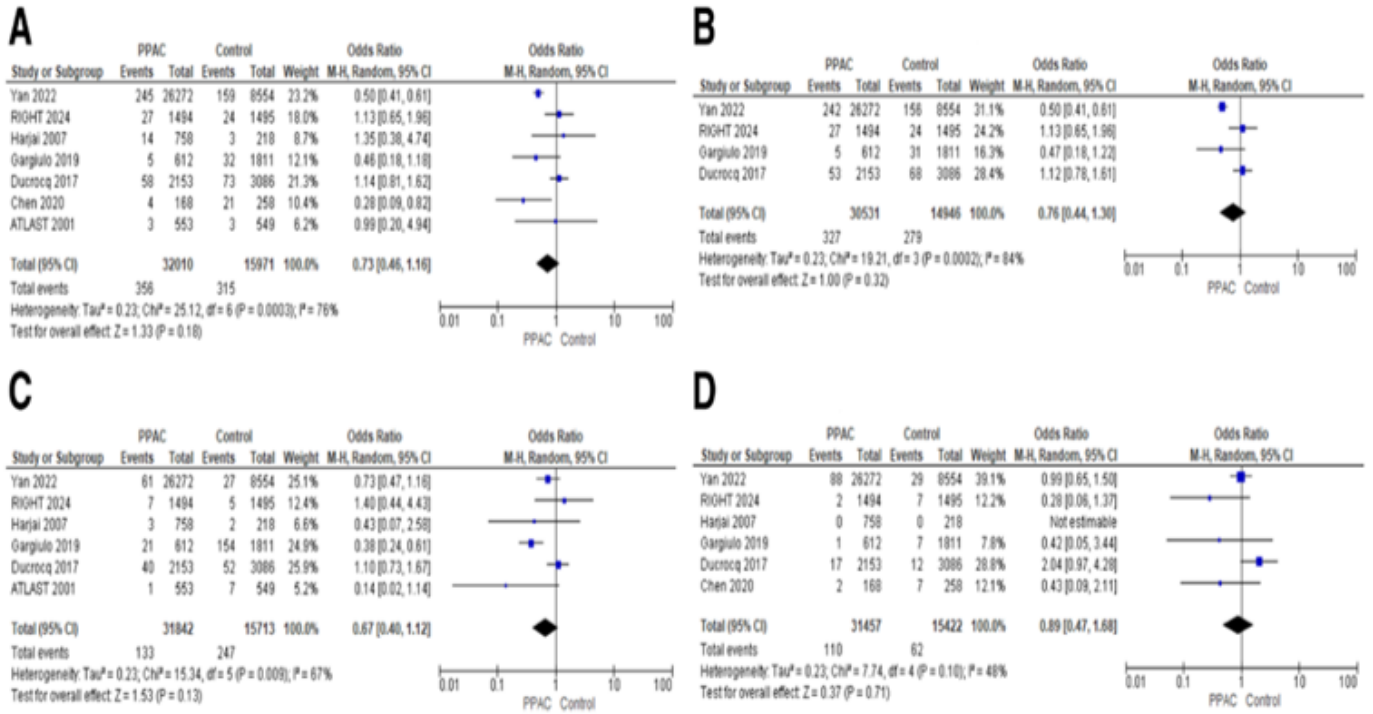
METHODS

A comprehensive literature search identified randomized and observational studies comparing PPAC versus no anticoagulation after PCI in AMI patients. Eligible studies reported 30-day outcomes, including mortality, recurrent MI, stroke, stent thrombosis, revascularization, and bleeding.

RESULTS

Seven studies, encompassing a total of 47,981 patients were included in the analysis. The pooled results demonstrated no significant difference between PPAC and no AC in reducing 30-day all-cause mortality [RR: 0.73; 95% CI, 0.47–1.16], cardiovascular mortality [RR: 0.76; 95% CI, 0.45–1.30], recurrent myocardial infarction [RR: 0.68; 95% CI, 0.41–1.12], stroke [RR: 0.89; 95% CI, 0.47–1.67], target vessel revascularization [RR: 0.74; 95% CI, 0.37–1.47], or stent thrombosis [RR: 1.08; 95% CI, 0.75–1.57]. Similarly, no significant difference was observed in bleeding risk [RR: 1.25; 95% CI, 0.83–1.88].

Figure 1. Individual and pooled analyses comparing postprocedural anticoagulation to no anticoagulation after percutaneous coronary intervention for acute myocardial infarction. A, 30-day all-cause mortality. B, 30-day cardiovascular mortality. C, 30- day myocardial infarction. D, 30-day stroke



CONCLUSIONS

This meta-analysis of seven studies involving nearly 48,000 patients found that routine PPAC after PCI in AMI does not significantly reduce mortality or ischemic complications and does not markedly increase bleeding risk. The findings do not support routine PPAC use, emphasizing individualized decision-making based on patient risk profiles. Further large-scale randomized trials are needed to identify potential subgroups that may benefit.

ECTOPIC HYPERPARATHYROIDISM: DIAGNOSTIC CHALLENGES AND MULTIDISCIPLINARY MANAGEMENT

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INTRODUCTION

•Ectopic hyperparathyroidism occurs when parathyroid tissue is located outside its normal anatomical site — commonly in the thymus, mediastinum, or retroesophageal space.

•It arises from abnormal embryological migration and affects approximately 16% of patients with primary hyperparathyroidism.[1]

•Thorough investigation of patients presenting with symptoms is vital in ensuring they are treated appropriately, as incomplete excision can lead to persistent disease.

OBJECTIVES

•We are presenting three cases which demonstrate the different manifestation, investigative findings and management of ectopic hyperparathyroidism.

•We aim to highlight the diagnostic diversity and multidisciplinary management of ectopic hyperparathyroidism, in order to optimise patient care.

CASE 1: EARLY LOCALISATION

• 41 year old female suffering from night sweats, brain fog and mood swings, as well as hypercalcaemia identified by her GP.

•Further investigations revealed primary hyperparathyroidism. A nuclear medicine parathyroid scan was carried out to identify whether there was a focal localised parathyroid adenoma present.

•A radioiodine uptake scan found homogenous uptake by the thyroid gland, as well as additional uptake in the superior mediastinum by a 12mm ectopic parathyroid gland.

•A single, curative procedure using Video-Assisted Thoracoscopic Surgery (VATS) was carried out.

•This patient was fortunate as unlike many reported cases where ectopic parathyroid tissue is only discovered after failed initial surgery, this lesion was localised at the outset.

CASE 2: MALIGNANT ECTOPIC

• 61 year old asymptomatic male with hypercalcaemia on routine blood tests by GP. Further investigations confirmed primary hyperparathyroidism.

• Initial ultrasound of parathyroid gland showed no evidence of an adenoma.

• A nuclear medicine scan which showed an ectopic parathyroid adenoma in his thorax.

• Consequent surgical intervention occurred through the collaboration of endocrinologists, ENT and cardiothoracic surgeons.

• Surgical excision confirmed a malignant lesion.

• Studies show that the likelihood of carcinoma in ectopic parathyroid tumours is extremely low, one report highlighting that of 84 mediastinal parathyroid tumours, only 1.2% were malignant.[2]

• This demonstrates the importance of considering the risk of malignancy when an ectopic gland has been identified.

CASE 3: ALTERNATIVE MANAGEMENT

• 65 year old female identified as having hypercalcaemia with elevated parathyroid hormone levels.

• Nuclear medicine imaging identified an ectopic parathyroid gland left of the aortic arch.

• Despite explaining the curative potential of surgical management to this patient, she expressed concerns about potential surgical complications. and preferred to proceed with cinacalcet.

• After further discussion in the endocrinology clinic, the patient agreed to re-evaluate her management options once input from the cardiothoracic surgeons was received.

• This case demonstrate the importance of shared decision making with patients, but also the importance of a multidisciplinary approach to ensure patients are informed about all of their management options.

DISCUSSION: WHY IDENTIFYING AN ECTOPIC PARATHYROID GLAND MATTERS

• Allows for a single, curative procedure

• Helps to determine the surgical approach to management

• Detection of rare malignancy

• Facilitates structured multidisciplinary care

FUTURE DIRECTIONS

How can we improve detection of ectopic parathyroid glands?

• Develop regional or national database of ectopic parathyroid cases.

•Foster a collaborative approach with various other specialties depending on the site of the ectopic parathyroid.

CONCLUSION

Ectopic hyperparathyroidism presents unique diagnostic and therapeutic dilemmas. These cases highlight the significance of efficient multidisciplinary team work, and how effective communication and collaboration between endocrinology, radiology and surgery can avoid unnecessary procedures for patients, and enable rapid diagnostic and curative success.

REFERENCES

1. Noussios G, Anagnostis P, Natsis K. Ectopic Parathyroid Glands and their Anatomical, Clinical and Surgical Implications. Experimental and Clinical Endocrinology & Diabetes. 2012 Nov 22;120(10):604–10.

2. Ruizhi Jiajue, Song A, Wang O, Li W. Persistent Hypercalcemia Crisis and Recurrent Acute Pancreatitis Due to Multiple Ectopic Parathyroid Carcinomas: Case Report and Literature Review of Mediastinal Parathyroid Carcinoma. Frontiers in Endocrinology. 2020 Sep 10;11.