

2023

# **Clinical posters** October 2023





#### A Vivid Reminder That Extremely Elevated D Dimer In A Patient With Respiratory Failure Is Not Necessarily Secondary To Pulmonary Embolism Adewale Ilori, Russells Hall Hospital, Dudley, UK

#### Abstract

D dimer, a fibrin degradation product<sup>1</sup>, is widely used in clinical practice for its negative predictive value. values below reference range indicate venous thromboembolism is less likely<sup>2</sup>, while in patients with a Wells score  $\geq$ 4, a positive D dimer usually suggests the need for anticoagulation until imaging evidence is obtained<sup>3</sup>.

However, the interpretation of D dimer has to be in clinical context, considering it has a high false positive value<sup>3</sup> and could be elevated in other conditions like malignancy, sepsis, trauma, massive bleeding and even pregnancy<sup>4</sup>.

This case report of a patient with **D dimer 125000ng/mL** (negative cut-off value for pulmonary embolism (PE) is 500ng/ml), underscores the importance of considering other possible causes of respiratory failure, apart from PE, even in patients with extremely elevated D dimer



Fig1- D dimer formation: Courtesy of M Gibson, wikidoc

#### **Case Description**

82 year old woman, admitted confused and pyrexial with symptoms of UTI. Confusion first noticed 7 weeks prior. Lived with family. Limited mobility with zimmer frame

#### BG: HTN

**Examination:** not remarkable apart from some expressive dysphasia. **Investigations:** Bloods unremarkable. CT head (on admission)- right subacute MCA infarct.

Treated for UTI and subacute stroke. **Day 14**- Became medically optimized for discharge.

Day 29- dropped GCS, new O2 requirement (80% FiO2), low BP. Raised CRP (386mg/L), Creatinine (282umol/L) (figure 2).

Repeat CT head- no acute abnormalities. **D dimer 125000ng/mL**, COVID negative. Therapeutic enoxaparin started for

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suspected PE along with treatment for hospital acquired pneumonia (HAP) and acute kidney injury (AKI). Planned for V/Q scan as CTPA delayed due to AKI.

**Day 31**- GI bleed. Enoxaparin suspended for 48 hours. AKI improves.

**CTPA done**- no PE, features of HAP **Endoscopy**- erosive gastritis, gastric ulcer

**Day 36**- became medically optimized and was discharged.





#### Discussion

In our patient, there was a corresponding increase in CRP at the same time D dimer was super elevated due to hospital acquired pneumonia and AKI showing that even with a suggestive Wells score and at very high levels, D dimer elevation does not necessarily indicate thromboembolism and should still be taken in clinical context.

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#### Incidence, Clinical Features, Management And Outcomes Of ANCA-associated Vasculitis In Pregnancy- A Systematic Literature Review

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Introduction	Figure 1: Chapel Hill	Results	Table 1: Features & outcomes of AAV	n
• ANCA-associated vasculitides (AAV) are rare multisystem conditions comprising: eosinophilic granulomatosis with polyangiitis (EGPA), granulomatosis with polyangiitis (GPA), microscopic polyangiitis	Classification of Vasculitis Cryoglobulinemic Vasculitis IgA Vasculitis (Hacoid-Schönlein) Hypocomplementemic Urticarial Vasculitis (Anti-C1q Vasculitis) Medium Vessel Vasculitis Polyarteritis Nodosa Kawasaki Disease	<ul> <li>8 studies with 82 pregnancies in 64 women (Table 1).</li> <li>No maternal deaths or AAV symptoms in newborns.</li> <li>Induction treatments:</li> </ul>	Subset of AAV GPA eGPA MPA Unspecified	<b>64</b> 38 5 4 17
<ul> <li>(MPA) (Fig 1).</li> <li>Higher prevalence in patients &gt;50 yrs.</li> <li>Average increase of childbearing age; few studies on AAV in pregnancy.</li> </ul>	ANCA-Associated Small Vessel Vasculitis Microscopic Polyangiitis Granulomatosis with Polyangiitis (Wegener's)	cyclophosphamide, prednisolone, methotrexate, azathioprine, ciclosporin & mycophenolate mofetil for induction (Table 1).	<b>Organ involvement</b> Sinus, ear or nose Kidney Lung Trachea	38 27 15 16 2
Aim	Large Vessel Vasculitis Takayasu Arteritis Giant Cell Arteritis Churg-Strauss)	azathioprine and prednisolone.	Induction treatment CYC only	24
<ul> <li>To evaluate the incidence, clinical features, management &amp; maternal/foetal outcomes</li> </ul>	Jennette JC et al. 2012 Revised International Chapel Hill Consensus Conference Nomenclature of Vasculitides. Arthritis Rheum. 2013 Jan;65:1–11.		AZA and PRED MTX and PRED Co-trimoxazole	17 3 4
of AAV in pregnancy.	Strengths & Limitations	Other combinations	16	
Methods <ul> <li>Inclusion criteria: articles discussing</li> </ul>	<ul> <li>Strengths: Limitations:</li> <li>Inclusion of mothers with multiple AAV subtypes and treatment regimens.</li> <li>Limitations:</li> <li>Generalisable only to developed countries (due to type of studies included).</li> <li>Lack of BMI, ethnicity and comorbidity data.</li> </ul>		Flares during pregnancy Mild/ moderate Severe	<b>16</b> 9 7
<ul> <li>maternal/foetal management &amp; outcomes of AAV in pregnancy.</li> <li>Exclusion criteria: single case reports, reviews, conference abstracts.</li> <li>Databases: Medline, Embase, Cochran.</li> <li>Data extracted: demographic: treatment;</li> </ul>			Maternal outcomes Pre-eclampsia HELLP syndrome Transaminitis Postpartum thyroiditis	10
	Conclusions			3 2
	Positive maternal and foetal outcomes are possible following strong induction therapy, vigorous monitoring and prompt treatment of flares during pregnancy.		Worsening tracheal stenosis 1	
clinical features; flares in pregnancy; maternal & foetal outcomes.			Foetal outcomes Miscarriages Preterm birth	4 10



Operative vs Non-operative management of Type 2a Supracondylar fractures of the humerus : A Literature Review

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Introduction

There persists to be controversy surrounding the management of Gartland type 2a supracondylar humerus fractures as to whether they should be managed operatively or non-operatively. Much of the literature does not differentiate between type 2a and type 2b fractures. The aim of this study is to review the literature on management of type 2a as a separate entity

Aims

Methods

The aim of this study is to review the literature on management of type 2a SCHF as a separate entity.

- A systematic search was applied to PubMed central and Scopus to retrieve all studies published from inception until January 2023. Studies which specifically differentiated patients being managed for type 2a fractures were included. Studies that did not differentiate between type 2a and 2b fractures were then excluded.
- A total of 5 suitable studies were found including a total of 233 patients. 2 studies compared operatively and non-operatively managed cohorts, whereas 3 studies measured outcomes for a single treatment modality. The outcomes assessed varied with radiological, clinical, and functional outcomes all being looked at.

Results

Carrying Angle
Carrying angle showed no significant difference

noted a significant difference.



#### Conversion to operative management

between operative and non-operative groups. Range

of motion was generally adequate, and no studies

In one of the studies 8% of the cases treated non-operatively required conversion to operative treatment due to radiographic loss of reduction at a mean of 10.5 days.

#### Radiological Outcomes

Radiological outcomes at final follow-up again did not reveal a significant difference, and functional outcomes were comparable between both groups.



#### **Complications**

Complication rates were fairly low in all patients, with one study demonstrating a similar rate of avascular necrosis and refracture in both groups

Conclusion

Both operative and non-operative management have shown comparable outcomes in Gartland 2A fractures. The combined cohort of our study is limited and further studies specifically looking at this subtype in isolation are needed to confirm that there isn't a superior treatment modality.

Miliary TB in East London (2014-2022): a retrospective review of microbiology, imaging and outcomes

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#### Background

- Miliary TB, characterised by <4mm nodules diffusely spread through the lung fields, makes up a minority of TB cases (3.9% in 2020) but has a treated mortality of up to 30%<sup>1</sup> - Classic imaging findings are highly variable (29-88%) in case series<sup>2,3</sup>, as are culture

rates with sputum positivity reported from 5-81% of cases<sup>1,2,3</sup>

- We present a large series of patients from East London, an ethnically diverse area with some of the highest incidence of TB in the UK<sup>4</sup>

#### **Methods**

We used the London TB register to identify all notified cases of miliary TB (≥12 years old) in inner East London (under Barts Health NHS Trust) from 2014-2022. Electronic health record lookup supplemented registry data. For patients with CT chest imaging available within 1 month of the treatment start date, this was reviewed and classified by radiologists.

#### Results

Of 84 cases included: the median age was 42.5 (IQR 19.5), 36% women, 69% South Asian ethnicity. Other data are presented in the panels that follow:





Logistic regression showed positive cultures were more likely with increasing age in years (p=0.03), male sex (p=0.001) and those with any CNS disease (p<0.001).

Of those with CT available within 1 month of starting treatment, 31% had classical miliary imaging, 24% had primary/post-primary changes, 2% had sarcoid-like changes, and 20% were classified as 'other' on radiology review. 55% of those with a completion CXR had a clear film. Patients who had classical miliary appearance on initial CT imaging were more likely to have a clear CXR at the end of treatment (76% vs 38%, p=0.025).

80% were admitted to hospital (median length of stay 14 days) and 14% died during treatment. 11 received an alternative or dual diagnosis, of which the two patients with cancer died. Death was more likely with increasing age (OR 1.49, 95% CI 1.19-2.37) and less likely with any positive culture (OR 0.00, 95% CI 0.00-0.07, p = 0.02).

Conclusion Miliary TB mortality was high, with low culture positivity. CNS disease was associated with having a positive culture, and having a classical CT appearance at the start of treatment was associated with a clear chest x-ray at the end of treatment.

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Odds Ratio



20

Duration of Therapy by Death



#### The effects of lifestyle Interventions In Type 2 Diabetes on Ectopic Fat, Fibro Inflammatory Biomarkers and Cardiovascular Structure and Function in Obese adults with type 2 Diabetes

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#### **BACKGROUND & OBJECTIVES**

Type 2 Diabetes (T2D) affects approximately 10% of individuals aged 20 to 79 worldwide.<sup>1</sup>

- Obese adults with T2D exhibit a higher prevalence of ectopic fat deposition, fibroinflammatory disorders such as non-alcoholic fatty liver diseases, and cardiac dysfunction, namely diabetic cardiomyopathy, compared to individuals with T2D and lower Body Mass Index (BMI).<sup>2</sup>
- This study aims to explore the effects of lifestyle interventions on ectopic fat distribution, fibro-inflammatory markers, and cardiac structure and function in obese adults with T2D.

#### METHODS

- We conducted a secondary analysis of data from the Diabetes Interventional Assessment Of Slimming Or Training To Lessen Inconspicuous Cardiovascular Dysfunction (DIASTOLIC) trial (ClinicalTrials.gov Identifier: NCT02590822).<sup>3</sup>
- The trial comprised three arms with a follow-up period of 12 weeks: a) standard care, b) a lowenergy meal replacement plan (MRP) providing ≈810 kcal/day with 30% protein, 50% carbohydrate, 20% fat, and c) an exercise programme of 150 minutes/week. The study included obese adults (BMI >30 or >27 kg/m2 based on ethnicity) with established T2D diagnosis (≥3 months) but without cardiovascular disease. Participants were randomised in a 1:1:1 ratio.
- The study utilised MRI scans of the liver, pancreas, and heart carried out for participants, as well as the following fibro-inflammatory biomarkers (NGAL, VEGFa, CHI3L1, FABP4, IL-8, Adiponectin, and Galectin3), baseline demographic and medical history data, and anthropometric measurements.
- Statistical analyses were performed using STATA V.16 software, with statistical significance defined as p < 0.05.

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#### RESULTS

• Among the 87 participants recruited, 51 had high-quality MRI scans and were included in analysis. Only participants

in the exercise and meal replacement plan arms were considered. Baseline characteristics are presented in Table 1.



Table 1: Baseline demographics of the study's participants. Continuous variables were reported as either mean ± standard deviation or as median (interquartile range). Paired t-test //Vilcoxon signed-rank test used, assessing for changes in variables within each group (MRP / Exercise) over weeks 0, 4 and 12. Only the fibro inflammatory biomarkers, ectopic fat and CMR variables, with a significant change were reported in these tables. Significant changes in p values at 95% Cl are in bold (p values<0.05). Variables at each week reported as Mean ± S.D. or Median(IQR), based on normality. 
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Fig.1: Both scatter plots are demonstrating a statistically significant, positive correlation, between the baseline % of pancreatic fat, with the NGAL and VEGFa biomarkers, respectively.

- Both MRP and exercise groups experienced significant reductions in liver fat percentage (at all timepoints for MRP, and from week 0 to 4 for exercise). The MRP group showed a significant reduction in pancreatic fat percentage (Table 1).
- In the MRP group, three fibro-inflammatory plasma biomarkers exhibited significant overall changes, while only one biomarker changed significantly in the exercise group (Table 1). Improvements in Left Ventricular Ejection Fraction (EF) and Cardiac Output (CO) were observed in both groups, with the exercise group displaying the most substantial improvements in these variables measured on cardiac MRI (Table 1).

#### **DISCUSSION & CONCLUSIONS**

The anticipated decrease in liver fat percentage was observed in both lifestyle intervention groups, but the reduction in pancreatic fat percentage was exclusive to the MRP group. Both MRP and exercise interventions elicited temporal responses in four fibro-inflammatory biomarkers (IL-8, CHI3L1, FABP4, and NGAL) associated with fibro-inflammatory pathways. Additionally, moderate enhancements in cardiovascular structure indices were noted for both groups. Limitations of this study include the small sample size, lack of intervention blinding, and the short follow-up duration. We conclude that subsequent research should investigate whether changes in fibro-inflammatory biomarkers and cardiovascular magnetic resonance variables independently correlate with alterations in ectopic fat distribution within different organs, such as liver and pancreas.





Baseline pancreatic fat correlated with

NGAL and VEGFa fibro-inflammatory

biomarkers are shown in (figure 1).

#### Incidence, management and prognosis of new-onset sarcoidosis post COVID-19 infection

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#### Use of 18F-FDG PET in Assessing Response to Treatment in Adults with Pulmonary Sarcoidosis: A systematic literature review

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Introduction	Results	Discussion
<ul> <li>Symptoms, severity and response to treatment of sarcoidosis can follow a heterogenous pattern, presenting a clinical challenge.</li> <li>18F-FDG PET has been recommended by American Thoracic Society guidelines to select appropriate biopsy site [1].</li> <li>Utility of 18F-FDG PET in disease monitoring is uncertain.</li> </ul>	<ul> <li>1759 articles retrieved → 8 included (4 prospective; 3 retrospective; 1 case-control) (Fig 1)</li> <li>Pooled total of 260 patients with pulmonary sarcoidosis, 40.7% male, mean age 47.0yrs (SD 3.4)</li> <li>Countries of study cohorts: France (n=1), China (n=1), The Netherlands (n=1), Turkey (n=1), India (n=2), Serbia (n=2)</li> <li>Compared to clinical response, sensitivity of PET-CT in determining response to treatment ranged from 56% to 100%</li> <li>Pooled sensitivity following meta-analysis: 74.6% (SE 5.4)</li> </ul>	<ul> <li>Overall author conclusions: PET CT correlates with clinical response to treatment and is useful for prognostication.</li> <li>18F-FDG PET is useful in determining response to treatment and prognosis in pulmonary sarcoidosis.</li> <li>Eurther work with greater numbers</li> </ul>
<ul> <li>Inclusion criteria: articles discussing PET CT use in response to treatment in pulmonary sarcoidosis; English-language articles.</li> <li>Exclusion criteria: opinion pieces, case reports, case series ≤10 patients, reviews.</li> <li>Databases: Medline, Embase, Cochrane</li> <li>Data extracted: demographics, Siltzbach chest X-ray classification, treatment, time between baseline and follow-up PET CT.</li> </ul>	Time between baseline PET-CT and follow-up Baseline PET-CT Follow-up PET-CT 2 months 12 months	required.  Limitations  Only 8 studies  Availability and cost of PET-CT scanners  Lack of diagnostic criteria for sarcoidosis  PET-CT not always positive in patients with sarcoidosis
Records excluded (n = 1759)	Management of Sarcoidosis	Take-home messages
By the sought for retrieval (n = 16)       Reports not retrieved (n = 0)         Reports assessed for aligibility       Reports associated: (n = 16)         Buddes included in review (n = 8)         Cohort studies (n=7)         Cohort studies (n=7)         Case control (n=1)	Unknown 4 Systemic corticosteroids 3	18F-FDG PET could be considered in monitoring response to immunosuppression in patient with pulmonary sarcoidosis.

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#### •World Health Organization. A clinical case definition of post COVID-19 condition by a Delphi consensus, 6 October 2021. WHO, 2021

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of Physicians

Long Covid-19 Syndrome: Who is at more risk? Insights from a major tertiary center in the UK

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#### BACKGROUND

Long COVID is defined as the continuation or development of new symptoms 3 months after the initial SARS-CoV-2 infection, with these symptoms lasting for at least 2 months with no other explanation (1).

The present study aims to uncover potential correlations between long COVID symptoms and various patient characteristics, including age, sex, smoking habits, vaccination status, and severity of the disease.

#### METHODS

A retrospective analysis of electronic health records from 2020 to 2023 was conducted. Participants aged 18 and above with

confirmed COVID-19 diagnoses, and under follow-up at Long COVID-19 specialist clinics were included in the study. A structured questionnaire was used to collect demographic data, medical conditions, vaccination history, disease severity, hospitalization, treatments, and post-COVID symptoms.

#### **SEVERITY OF COVID-19 CRITERIA**

Mild: Patients who did not require hospital admission for COVID-19-related symptoms

Moderate: Patients who required hospital admission but did not receive invasive or noninvasive ventilation, nor did they need any other organ support, and were not admitted to the critical care unit or High Dependency Unit.

Severe: Patients who received mechanical or noninvasive ventilation or were admitted to critical care or High Dependency Unit for other organ support.

#### Severity of COVID-19 Infection



Variable	N = 289 (%)
Gender N (%)	
Male	108 (37.37)
Female	181 (62.63)
Smoking Habits N (%)	
Smoker	28 (9.68)
Ex-smoker	54 (18.68)
Non-smoker	207 (71.62)
Vaccination status N (%)	
Vaccinated for COVID-19	269 (93.07)
Non-vaccinated for COVID-19	20 (6.92)
Co-morbidities N (%)	
Hypertension	65 (22.49)
Diabetes Mellites Type 2	40 (13.84)
Ischemic Heart Disease	20 (6.92)
Chronic Kidney Disease	18 (6.22)
Asthma	64 (22.14)
Immunosuppressive Medicine	10 (3.4%)
Severity of COVID-19 Infection N (%)	
Mild	217 (75.1%)
Moderate	43 (14.9%)
Severe	29 (10%)

Symptoms	Frequency (N = 289)	Mild	Moderate	Severe
Fatigue	261	197	40	25
Myalgia	100	72	21	8
Brain Fog	135	113	15	8
Shortness of Breath with	225	166	37	29
Exertion				
Anxiety	159	120	21	19
Anosmia	57	46	6	6
Hair loss	13	7	5	2
GI disturbance	21	19	3	0
Migraine	34	25	8	1
Loss of Appetite	29	20	5	4
Loss of Libido	3	2	1	0
Persistent Body aches	78	51	17	9
Recurrent Respiratory Tract Infections	25	16	6	3

#### Post COVID-19 Symptoms



■ Fatigue ■ SOB ■ Anxiety ■ Brain Fog ■ Myalgia ■ Other

RESULTS

Among 289 participants, the average age was 51.51 years. 62.6% were females. 93% received COVID-19 vaccination.

Disease severity varied, with 75% having mild, 15% moderate, and 10% severe infections. Thirteen distinct post-COVID symptoms were reported. Fatigue, shortness of breath upon exertion, and brain fog emerged as the most prevalent symptoms. Notably, females exhibited higher symptom prevalence. Significant correlations were established between higher BMI and smoking with augmented symptomatology.

Conversely, a link between booster doses and symptom reduction was discerned. Using multinomial regression analysis, gender and smoking was identified as a predictor of post-

COVID-19 symptoms.

#### CONCLUSION

Long COVID symptoms are strongly predicted by factors like obesity, smoking history, and female sex. Long COVID symptoms were more prevalent in patients with persistent radiological abnormalities and abnormal spirometry values, suggesting that respiratory pathology may play a role. Findings contribute to risk stratification, intervention strategies, and further research.

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A Systematic Review on Non-steroidal antiinflammatory drugs and Tanezumab efficacy in Chronic Lower Back Pain

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#### Abstract:

**Introduction:** Chronic back pain is a condition that impacts people of all ages and lasts longer than 12 weeks. 7.41% of all years lost to disability (YLD) are 4 attributed to low back pain, which makes it the pathology responsible for the most YLD, surpassing other chronic conditions such as diabetes and depression. Despite the prevalence of drugs such as opioids, nonsteroidal anti-inflammatory drugs (NSAIDs), and biologics, the types of drugs administered to individuals differ greatly.

**Methdology:** We collected data from the PubMed database of the National Library of Medicine, PubMed Central, and Google Scholar. Randomized controlled trials (RCTs) that explicitly evaluate the efficacy of various NSAIDs in adult patients with chronic back pain were selected for this study. After an exhaustive search and examination of numerous publications, only 8 articles met the inclusion criteria.

**Results:** In 9 recent studies that included NSAIDs, they were among the most frequently prescribed medications for the treatment of chronic low back pain. In comparison to placebo, selective COX-II inhibitors such as celecoxib and etoricoxib were found to be efficacious, while valdecoxib was associated with serious side effects. In addition to reducing back pain, COX-II inhibitors with a preference for COX-II, such as aceclofenac and diclofenac, were associated with gastrointestinal side effects. Despite the risk of joint degeneration and accelerated osteoarthritis, intravenous tanezumab may be superior to naproxen and placebo in treating chronic low back pain 1. University Hospital Leicester, Leicester, United Kingdom
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**Objective:** The purpose of this research is to assess how PET-CT compares to other imaging modalities in terms of predicting the prognosis of Hodgkin's Lymphoma.

**Data Sources:** We screened for papers published in English between 2019 and 2023 in the MEDLINE, PubMed, Embase databases.

**Study Design:** To enhance clinical decision-making, we discovered studies comparing the imaging modalities

#### Methodology:

We included prospective, observational studies along with control trials due to the distinctive features of the study and the ultimate need of determination of PET scan for diagnostic procedure for Hodgkins's lymphoma. The Medical Subject Headings (MeSH) terms and keywords utilized for the search were PET-CT imaging, Tomography, Treatment Outcome OR treatment response, survival analysis, overall survival and Hodgkin lymphoma among numerous other research terms were employed in an electronic search on National Library of Medicine (Pubmed), Cochrane Central Register of Controlled Trials (CENTRAL) of Cochrane Library along with Pubmed Central (PMC), Wiley, Frontier, and google scholar Elsevier, PubMed Online, NIH, EBSCO and Scopus along with google scholar. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), which are frequently utilized to conduct successful research, were followed in the conduct of this study. To determine if every component met the criteria for inclusion, it was thoroughly reviewed and analyzed. It was evaluated and examined. If they satisfied all inclusion criteria, they were simply included in the research.



The role of PET-CT imaging in the assessment of treatment response and its predictive value for survival outcomes in adult patients with newly diagnosed Hodgkin lymphoma: a comparison with conventional imaging techniques

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#### **Principal Findings:**

The study focuses on the use of iPET for early response assessment (ERA) in Hodgkin lymphoma (HL) and its impact on overall survival (OS) and progression-free survival (PFS). The results show that PET-CT-based ERA (81.2%) has significantly higher levels of acceptable responses compared to CECT (64.3%). This is particularly important for children with non-bulky diseases who wouldn't have been given radiation if their condition had been considered a good responder.

The study also found that PET-CT-based ERA (81.2%) had considerably higher levels of acceptable responses compared to CECT (64.3%). This suggests that combining CT and PET radiomics characteristics may be a promising approach for individualized treatment and management of changes in HL patients.

Several studies have reported significant differences in the outcomes of individuals with iPET-CMR, including higher PFS rates and higher overall survival rates. In a retrospective study in Jordan, participants with iPET-nCMR had superior outcomes compared to those with iPET-nCMR, with a significant difference in PFS rates after three years.

In Canada, participants with PET/CT had a higher outcome of HR as 1.67 for PFS. F-FDG PET/CT has shown greater sensitivity, negative predictive value (NPV), and accuracy in Hodgkin lymphoma than Bone Marrow Biopsy (BMB). For preliminary grading of pediatric Hodgkins lymphoma patients, F-FDG PET/CT can potentially be employed.

Recent studies have also explored the use of radiomic properties of basal FDG PET in predicting Hodgkin lymphoma outcomes. A recent study found that long-zone strong gray-level concentration and Dmax showed distinct relationships with 2-year survival without progression despite not assessing any CT-radiomics or including any medical information in their AUC examination.

A radiomics investigation in a more extensive cohort comprised of individuals with recurrent HL was described by Driessen, J. et al. (2021), which found that a radioactive substance and clinical feature combination yields a potent model of prediction for the 3-year time to progression. In conclusion, the study highlights the importance of using iPET for individualized treatment and management of changes in HL patients. Combining CT and PET radiomics characteristics may provide a more accurate and effective approach for predicting outcomes in HL patients.



**Conclusions:** While PET-CT has shown to be the most predominant imaging modality for diagnosing and predicting the prognosis of Hodgkins Lymphoma, further more specific trials may be required in comparison to Bone marrow biopsy and the benefits it provides over PET- CT.

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### Safety And Efficacy Of Therapeutic Percutaneous Pericardial Window Procedures In Patients With Cancer

Suzannah\_Fleming [Leicester,UK]<sup>1</sup>, Squire Gareth <sup>1</sup>, Grant Robert <sup>1</sup>, Roberts Elved <sup>1</sup>;1) University Hospitals of Leicester



450 pericardial procedures over a ten-year period (2013-2023) at a tertiary surgical hospital were reviewed to identify patients with cancer and a pericardial effusion that had a percutaneous pericardial window procedure or more than one pericardiocentesis. Across the two treatment groups we retrospectively collected information from electronic medical records from time of first procedure until 05/05/2023 or death.

27%

	Results	
	Pericardial window (n=17)	Multiple Pericardiocentesis (n=4)
Mean age	65	62
Female	11 (65%)	4 (100%)
Metastases	11 (65%)	4 (100%)
Average follow up (months)	27	6
Failed procedure	1	0
Complications	0	0
Death at point of data collection	13 (76%)	4 (100%)
Number which recurred	2 (12%)	4 (100%)
Average days to recurred)	618	133 Table 1
MALIGNANCY TYPES IN I WINDOW GRO Ovarian 6% 7%	PERICARDIAL MALIGNA DUP PERICA Breast 27%	ANCY TYPES IN MULTIPLE ARDIOCENTESIS GROUP
Mesothelioma	ung	Breast 100%

33% Figure 2.

#### Conclusions

- These data suggest that clinicians at our centre prefer pericardial window procedures to repeated pericardiocentesis for patients with advanced cancer and effusion.
- These data suggest that percutaneous pericardial window is safe and provides a longer period of effusion remission that traditional drainage.
- Overall procedural volumes are low, and there is an argument for regional referral pathways so that patients who would benefit are able to access this treatment.

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Figure 3.



NHS Trust



2023

# Health services and policy posters

October 2023





#### Cambridge University Hospitals and Bedfordshire Hospitals NHS Foundation Trusts

#### Patterns of ingested foreign bodies at a tertiary paediatric emergency department: a 5-year time series analysis

Foreign body

Coins

Plastic

Rank

1

2

#### E Wolodimeroff, T Brockwell, A Zabielna, J Price, T Hughes, E Barnard, S Agrawal, A Zabielna

#### Background

- Majority of foreign bodies ingested will not cause injury
- 10-20% require non-surgical intervention, 1% require surgery Louie & Bradin (2009)
- Emergencies include button batteries and neodymium magnets due to chemical injury
- QuadriSEPS Group conducted a 5 year study showing a 56% increase in presentations of children with ingested foreign bodies from 2016 to 2020 Thakkar et al. (2021)

19

18

17

16

#### Methods

#### Inclusion criteria:

- $\leq 16$  years old
- Assessed in A&E, Addenbrooke's Hospital, Cambridge
- January 2016 December 2021
- Presenting complaint: foreign body ingestion or foreign body aspiration Observational study of  $\Sigma$  1283 children.
- Divided into age categories (0-0.9, 1-2.9, 3-5.9, 6-10.9, 11.13.9, 14-16.9 yrs)

## Who presents?

Sex

- 59.1% male
- Age **3.0 years** (SD ± 3.59)
- 77% under 6yo
- Foreign body mostly ingested
- Timing (Graph 1)
- Evening (6pm 9pm)
- Similar attendance across school days and weekends
- Co-morbidities
- Vast majority have **none**
- Psychiatric (28.2%) and neurodevelopmental (15.6%) diagnoses become more common in teenage years



Higher prevalence in younger children due to exploratory phase of development

% cases (n)

Infants ar

Defined as <

Less certainty

 Ingestion or 56.0%

Highest likel

Relatively und

• 39.1% have

We flag this as

68.6%

performed co

unknown (7.

· Children mostly asymptomatic with non-confirmed ingestion suggesting that review and reassurance are most sought for by parents

Conclusions

- Parent education is key to improving the accuracy of the history and minimising the risk to children at home
- Treatment algorithms should seek to distinguish between younger children accidentally ingesting foreign bodies and older children who either do so to cause non-accidental injury or because they have neurodevelopmental delay.
- We suggest a portion of these teenagers require CAMHS input alongside medical treatment

2.1 (283) 5.2 (195) 2.2 (156) • Mos • Cho • Nau • Nor • Strice • Vor	<ul> <li>Mostly asymptomatic</li> <li>Choking</li> <li>Nausea</li> <li>Non-specific abdominal pain</li> <li>Stridor</li> <li>Vomiting</li> </ul>		
e treated differently	Investigations and Outcomes		
yo ly suspected, not certain in hood of foreign body being 3%) <b>er-investigated</b> investigations of any type ompared to all age average of	Of those investigated: 32.5% had chest X-rays 30.7% had a metal detector test 13.6% had abdominal X-rays Of the minority that were admitted, 60% underwent operative management, most commonly via endoscopy.		
n odd mis-match.	Most ingested foreign bodies are eliminated spontaneously within 3 weeks and found by parents in faeces.		

Symptoms of foreign body ingestion:

Graph 1. Showing percentage of patients presenting at each hour of the day by age group.



