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Abstracts

Annual Trainee Doctors' Prize Day, Thursday 2nd November 2018.

Postgraduate Medical Centre, Belfast City Hospital.

ORAL PRESENTATION

Enhancing anti-S spike antibody testing in COVID-19 inpatients

Shaza Elamin, Caroline Lavery, Thelma Craig

Problem: Department of Health guidelines advise anti-S Spike antibody testing at the point of admission of community-acquired COVID-19 cases, facilitating timely monoclonal antibody therapy (mAB). Baseline data at a tertiary centre for COVID-19 revealed a range of 14-187 hours from admission to testing (mean 72 hours, median 43 hours), with potential for delayed mAB administration and adverse patient outcomes.

Strategy for change: Antibody testing > 50% COVID-19 inpatients within 24 hours of admission; implementation of 3-cycle QIP; staff email reminder, amending medical take sheet and creating electronic blood form.

Measurement of Improvement: Time (hours) from admission to testing. Records reviewed from a random sample of 20 patients- baseline and following each cycle.

Effects of change: 70% tested within 24 hours of admission, median time 16 hours (previously 5% and 43 hours respectively).

Discussion: Within a short time we demonstrated substantial improvement, enhancing alignment of clinical practice with regional guidelines. The final cycle was implemented post-trainee feedback- notably a cycle encompassing greatest degree of improvement. COVID-19's virulence has evolved, as has the direct applicability of this study. However, the concepts of dynamic initiative meeting an evolving clinical challenge and trainee-led ideas fostering trainee-implemented improvements are broadly applicable to healthcare as a whole.

Ectopic breast malignancy

Shreya Sengupta

Introduction: Ectopic breast tissue is found in 2–6% of women and most commonly in axilla (72%) and least commonly in vulva (4%). They bear similar physiological and pathological variations affecting the normal breast tissue. Ectopic breast cancer has been reported in only 0.3% of all breast malignancies in literature.

Description: Here, we present a case of a 78 year old lady who presented with a right groin lymphadenopathy associated with a vulvavaginal lesion. A biopsy of the lesion revealed mammary adenocarcinoma of the vagina with nodal involvement. Triple assessment of the breast ruled out a primary breast malignancy in its anatomical position. After further investigations,the gynaecology and breast MDT agreed on a diagnosis of ectopic breast malignancy of the vulva. She underwent wide local excision of vulval lesion, and received chemoradiotherapy with no complications in 5 months follow-up so far.

Discussion: There is no definite treatment plan for ectopic breast cancer due to paucity of cases. Ectopic breast cancer was first described in 1861, and fewer than 200 cases have been reported in the literature. Hence, this case makes a rare diagnosis of primary ectopic breast malignancy of vulva with successful treatment.

Virtual Reality Simulation During The COVID-19 Pandemic

Nawaz S, Mohamed T, Vinoo A, Fraser A, Ebubedike J, Imtiaz S

Introduction: Due to the COVID-19 pandemic, redeployment of foundation doctors resulted in most of their protected teaching hours being postponed. This had significant implications for their ARCP. With the advent of Clinical Teaching Fellows (CTF) novel methods could be utilised to provide additional teaching hours encompassing Virtual Reality (VR) Simulation.

Aims & Methods: 86 foundation doctors within our district general hospital were provided with five sessions of VR per week. This was facilitated using online booking forms. After the scenario, the CTF would debrief with the doctor and end with a feedback form being provided. This program ran for three months in total.

Results: Most of the feedback was positive. Results showed that they felt more confident and comfortable in their management of unwell patients. They also responded positively when asked about their experience in booking the VR sessions.

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Discussions: VR simulation offered an opportunity for self-directed learning along with gaining additional teaching hours, aiding the doctors in achieving their learning goals.

Debriefing and giving the doctors an opportunity to reflect on how they performed in the VR session has been beneficial in building their clinical knowledge and non-technical skills, while allowing for COVID restrictions.

Challenges facing ED referral practice in Northern Ireland (NI)

Mohamed Shirazy, Michael Perry, Daniel McAleese, Muhamed Salar, Katie Whan, Grace Collins, Ellen McCullagh, Emma Kelly, Eoghen Roger, Adeel Akhtar

Introduction: ED referral practice to other specialities is a critical function; It directly impacts patient flow and safety. There are no existing frameworks or guidelines on the referral process.

Aims: Identify the challenges facing referral practice.

Compare the current practice to the available NICE Guidance On Handover.

Explore doctors' views from ED and receiving specialities on the referrals.

Develop ideas for improvement.

Methods: A quantitative/qualitative methodology via a descriptive cross-sectional online survey.

Inference population: ED doctors and advanced nurse practitioners (ANPs).

Doctors and ANPs from all receiving specialities.

Place: Regional across NI (Belfast, Northern, Southern, South-eastern, & Western trusts)

Time: 1st of May 2022 until 1st of June 2022

Results: 427 completed the survey, of which 148 worked in the ED and 279 were from the receiving specialities. Regarding ED respondents, 46.4% did not use a structured referral system, 72.9% faced difficulties in making referrals, 64.9% did not receive referral training, 56.8% had no clear admission guidelines, and 75.7% felt resistance from the receiving specialities. Regarding respondents from receiving specialities, 78.5% rated the referral quality as low, 80.2% got missing information in the referrals, and 88.1% felt the need to improve the referral process. Qualitative analysis showed that most referrals are done immaturely before investigation results are back.

Discussion: This is the first wide-scale study to be done. The NICE recommend the use of SBAR as a handover tool. However, this study warrants the need to formulate a framework. Clear admission guidelines and referral training programs are highly recommended to improve the referral process.

POSTER PRESENTATIONS

"Never Event, Never Again" - Improving the Documentation of Nasogastric Tube Position Following X-Ray Confirmation

Chin Han Tan

Problem: Nasogastric feeding is common among ENT patients in Royal Victoria Hospital. X-rays are routinely performed before feeding. However, miscommunication due to poor documentation of nasogastric tube position potentially leads to misfeeding into the lungs which is a "Never Event".

Strategy for Change: To improve documentation, doctors were taught on utilising the documentation sticker available in each nasogastric tube pack and information posters were placed on the ward.

Measurement of Improvement: A 4-week study evaluating the quality of documentation of nasogastric tube position for ENT patients was performed in June 2022. Following interventions, another comparative study was conducted in August 2022.

Effects of Change: Documentation sticker usage rose from 42.1% to 85%, leading to verification of patient identity increasing from 39.5% to 100% and confirmation of the correct x-ray from 44.7% to 100%. 85% of x-rays had time and date verified compared to 34.2% previously. Documentation of the tube position and instructions for feeding improved from 63.1% to 75% and 65.8% to 75% respectively.

Discussion: Use of the documentation sticker has increased, resulting in better confirmation and documentation of nasogastric tube position, thereby improving patient safety.

Faster Pathways; Red Flag or One-Stop

James Mooney

Problem: The well-known Red Flag pathway is the current gold-standard referral pathway for malignancy. The ENT One-Stop clinic for neck lumps was piloted in Antrim Area Hospital in August 2021.

Strategy of Change: The introduction of this clinic allows patients to be seen within 2 weeks; have a clinical history, examination, ultrasound sonography which, if warranted, can proceed to same-day Fine Needle Aspiration (FNA).

Measurement of Improvement: This Audit aims to compare the current times from referral to FNA report between the current stand red flag pathway and the one stop clinic.

Effects of Change: The average time between referral and FNA result for the red flag pathway was 55.1 Days Vs 30.0 Days for the One-Stop clinic; a reduction of 15.1 days. Notably, in 26% (15/58) of red flag patients, FNA was performed prior to referral and in these cases the time between FNA and referral was 37.9 days. Two patients waited 98 days and 115 days from FNA report to red flag referral.

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Discussion: Errors such as delayed referral after FNA result & Referral to wrong speciality can be reduced through a standardised and centralised pathway. Further work is needed to conclude that shorter time to FNA correlates to better outcomes

Improving excision margins in high-risk basal cell carcinomas

Jo-Yve Wong

Problem: Basal cell carcinomas (BCCs) are commonest type of skin cancer. The British Association of Dermatologists (BAD) updated guidelines in 2021 on its management, requiring high-risk lesions excised with 5mm clinical margins based on increased probability for local recurrence and metastasis. We conducted a quality improvement project to assess and increase compliance to updated recommendations.

Strategy for change: To improve awareness, a teaching session was organised to all staff involved in surgery. Following this, visual aid reminders were placed in all clinical areas including theatres.

Measurement of Improvement: Baseline margin of high-risk BCC excision was collected from twenty randomly-selected patients. After each change, ten patients were randomly-selected using the same process to assess improvement.

Effects of change: Initial data showed only 10% of high-risk BCCs were excised with 5mm clinical margins. This improved to 30% after teaching, and 70% after poster placements.

Discussion: It is essential that high risk BCCs are treated adequately to prevent recurrence and associated morbidity. Our project proved to be effective in increasing compliance as per updated recommendations. These are simple tools to aid increasing awareness that can be rolled into other departments, helping overall patient care.

A Point of Care Ultrasound (PoCUS) Champion in Emergency Medicine (EM)

Matthew Macartney

Problem: The updated RCEM curriculum places an increased emphasis on PoCUS, with trainees required to showcase evidence of 100 scans.

The COVID pandemic has reduced formal training opportunities resulting in trainees not feeling confident using PoCUS.

Strategy for change: To highlight how an EM PoCUS champion could coordinate training to help meet the RCEM PoCUS requirements.

To create a Faculty of PoCUS providers, with representatives from every Trust to provide a sustainable approach to training.

Measurement of improvement: We surveyed all EM consultants and trainees to assess the current PoCUS "state of play".

Repeat survey sent out to trainees after training days & introduction of a new logbook.

Effects of change: We ran successful training days which collectively comprised of 10 Faculty, over 40 EM trainees, 500 logged scans resulting in an increased trainee confidence level in each modality.

Following the creation of a regional EM logbook, 100% trainees are logging their scans with 85% using the local logbook

At least 2 consultants from each Trust identified to teach as Faculty.

Discussion: A PoCUS champion has has shown benefit both locally and regionally.

The Faculty of PoCUS trainers will provide a platform for sustainable training for EM trainees in NI.

Improving Chest X-ray reporting in the ICU-A quality improvement project-Internal audit

Mohamed Shirazy

Problem: Poor compliance of the ICU Drs on reporting chest X-rays (CXR) in the ICU is vital for patient safety and medicolegally.

Strategy for change: An internal audit was conducted in the ICU in the Ulster Hospital on ICU Drs' compliance with reporting CXRs. The SHEEP MODEL was used to analyse the underlying contributing factors. The quality improvement framework was designed using the FOCUS-PDCA tool. Accordingly, interventions and changes were implemented in the form of education and training of the medical staff, upgrading and fixing the ICU computers, and altering the software of the ICU electronic medical system.

Measurement of Improvement: CXR reporting compliance was audited before and after implementing the proposed changes.

Effects of change: The CXR reporting compliance significantly improved from 42% to 67%. Additionally, the reporting quality significantly improved.

Discussion: FOCUS-PDCA model is an efficient model for improving healthcare performance. Since CXR reporting is a pure human factor, the SHEEP MODEL was selected. This model highlights multiple contributing factors and links between various issues such as process, technical, and social issues. Improved compliance on CXR reporting in the ICU mandated holding and keeping up the last changes with a plan to re-audit quarterly to ensure the persistence of compliance.

Enhanced Recovery After Surgery- A Trainee Approach To Consistent Perioperative Colorectal Care.

Rachel Nelson

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Problem: Re-establishing Colorectal elective surgery within COVID-19 recovery has been challenging. The publication of updated Enhanced Recovery After Surgery (ERAS) guidelines following colorectal resection (2018) identifies key evidence-based domains for perioperative optimisation which involve all members of the multidisciplinary team. However, experience and confidence in ERAS varies amongst junior staff.

Strategy for change: Introduce a didactic educational session on ERAS with the aim to promote awareness, increase adherence to ERAS guidelines and ultimately improve patient outcomes.

Measurement of Improvement: Fulfilment of ERAS peri-operative recommendations was recorded pre and post introduction of a didactic teaching intervention, with key areas to increase adherence highlighted by a multidisciplinary focus group. A pre and post questionnaire explored effect on ERAS knowledge and confidence.

Effects of change: Eleven of 24 ERAS domains were completed upon initial audit, increasing to 19 domains post intervention, across 24 patients (December 2021 - February 2022). Mean self-reported knowledge increased from 2.8/5 to 4.3/5. 3 months post intervention, 80% of doctors reported a positive impact on their confidence and management of ERAS patients.

Discussion: By embracing a multidisciplinary evidence-based ERAS approach through educational sessions to increase stakeholder confidence and knowledge, we can deliver standardised, equitable and optimised patient care.

Delay in Ankle Fracture Operations

Rawan Hassan

Problem: There were some cases with surgical site infection following ankle fracture operations, so we undertook an audit to assess the timing of surgical fixation against BOAST guidelines for ankle fractures (which states that they should be fixed within 48 hours of the injury) and the relationship of complications to it.

First cycle results: (3 months) only 11% had their ankles fixed within 48 hours: none of them had infection. with 65.2 % had their operations over a week: Infection rate: 10.6%

Strategy for change: Results were discussed in the departmental meeting with the attendance of all ankle surgeons and most of senior and junior staff and a recommendation was made to prioritise ankle fractures where possible to be operated on within 48 hours to follow the standards and minimise complications.

Measurement of improvement: Number of patients operated on within 48 hours and those operated on over a week. In addition, infection rate among the two groups.

Effects of change: Second cycle results: (3 months later)

19% had their ankles fixed within 48 hours with none had an infection.

47.6 % had their ankles fixed over a week. Infection rate: 4.8%/

Discussion: Results of the second cycle – although not yet perfect- but they do reflect an improvement in following BOAST guidelines for ankle fractures and they indeed show improvement in the infection rate.

Results of the second cycle were presented in another departmental meeting and another recommendation was made to carry on and spread the guidelines to the new trainees.

An Early Provision of Buccal Colostrum to Promote Oral Care In Premature Babies, in Neonatal Intensive Care Unit.

Kanwal Altaf Malik

Problem: We identified the gaps in practice in relation to a framework for oral care and early provision of buccal colostrum to the premature babies admitted in NICU.

Strategy for change: Assessment of existing practice ☐ quality improvement project ☐ best practice of provision of early buccal colostrum to all babies less than 34weeks within 6hrs of birth. Education tools video, poster and information leaflets were provided at all levels of team and to parents.

Measurement of Improvement: Collected data from feedback of parents and staff with informed consent and analysed the outcomes including safety, cross daily compliance with target and PDSA (Plan, Do, Study, Act).

Effects of change: Positive outcomes were noted as 11% babies received buccal colostrum within 6hrs, while 25% within 24hrs.First taste of colostrum improved from day 18 to day 4, cost saving of €204,876 through reducing length of stay from 43 to 36 days. 75% parental and 100% staff satisfaction achieved.

Discussion: Oral care is crucial in premature babies as it helps oral hygiene, develop oral coordination skill enhancement of sensory development, immunity against infections, active role in growth and development. It is achievable by establishing an effective framework across healthcare institutes, by providing compassionate family cantered care.

AstraZeneca/ Oxford COVID-19 Vaccine Induced Thrombotic Thrombocytopenia (VITT)-

Caitlin Rice

Two case reports

Vaccine Induced Thrombotic Thrombocytopenia (VITT) is a newly recognised syndrome comprising venous thromboembolism (VTE), thrombocytopenia, markedly raised d-dimer and presence of platelet factor 4 (PF4) antibodies within 28 days post first dose of the COVID-19 vaccination. The syndrome has been linked with both the AstraZeneca and Johnston & Johnston vaccines. It has been identified in younger adult patients, more frequently in the age group 18-55 years. The syndrome is also known as

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vaccine-induced prothrombotic immune thrombocytopenia (VIPIT).

Two recent cases identified in Northern Ireland are discussed below:

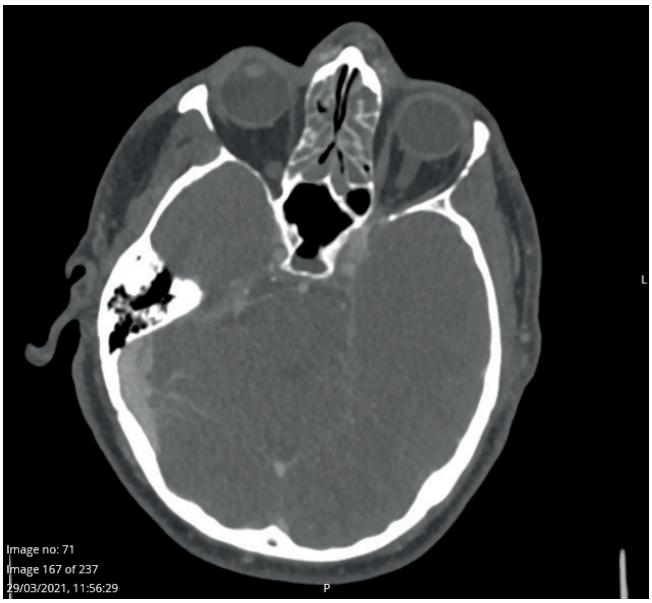
Case 1

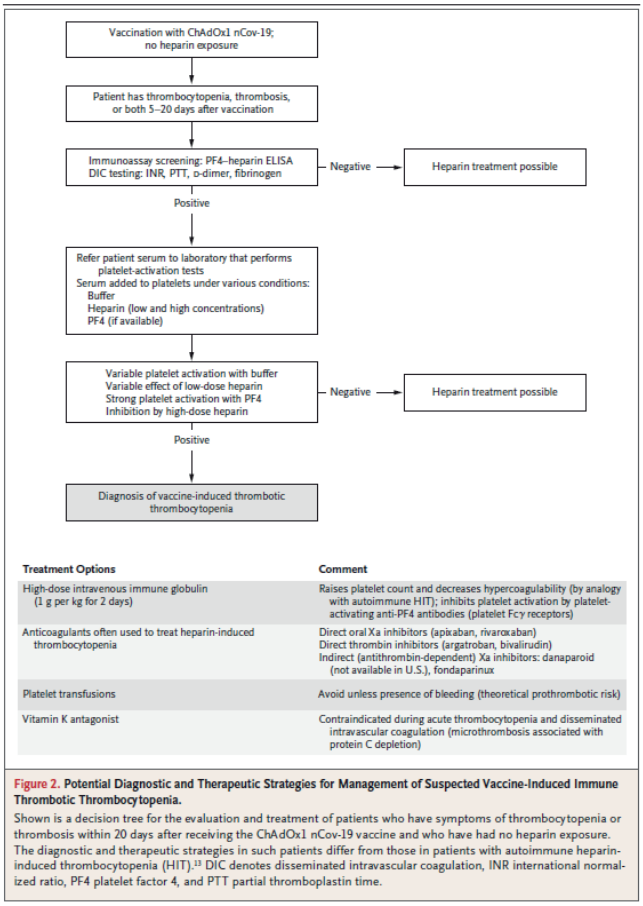
A 22 year old woman with no previous medical history presented 8 days post first dose of the AstraZeneca COVID-19 vaccine with headache, later developing associated vomiting. Within hours her GCS reduced from 15/15 to 8/15 with extensor posturing and right sided up going plantar reflex. Full blood count identified thrombocytopenia with platelet count 107 e9/l, HB 138 g/L and WCC 18.4 e9/l. Coagulation testing showed PT 11.1 secs, APTT 26.2 secs and fibrinogen 2.7 g/L with d-dimer markedly raised at >10 ug/ml. Imaging with CT brain revealed large volume cerebral venous sinus thrombosis (CVST) with associated brain swelling, subarachnoid haemorrhage and evidence of caudal migration of brainstem. The newly associated syndrome of venous thromboembolism post COVID-19 vaccination with associated thrombocytopenia and hyperfibrinolysis was suspected. Thus, the PF4 antibody ELISA was performed which was positive with antibody concentration of 1.4nm. This is the assay associated with Heparin induced thrombocytopenia (HIT). ADAMTS13 level was normal at 75.1%. The patient was managed as per British Society of Haematology (BSH) heparin induced thrombocytopenia (HIT) guidelines, with avoidance of heparin containing anticoagulation and platelet transfusion. Argatroban infusion was commenced with platelet nadir of 2 e9/l. This patient developed cranial diabetes insipidus and unfortunately passed away in intensive care.

Case 2

A 62 year old man was admitted with dense right hemiparesis due to superior sagittal sinus thrombosis with surrounding intraparenchymal haemorrhage of the left parietal lobe. His admission platelet count was 67 e9/l. There was no previous history of thrombocytopenia, previous heparin exposure, or recent infection. He had COVID-19 vaccination with his first dose 18 days previously. Hb was 149 g/L with WCC 7.1 e9/l, D-dimer was markedly elevated at >10nm and PF4 antibodies were detected by ELISA at a level of 2.3 nm. The interventional radiology team achieved vessel recanalization by mechanical thrombectomy. A diagnosis of vaccine induced thrombotic thrombocytopenia (VITT) was made. The patient was treated with argatroban 1 microgram/ kg/ min IV infusion (dose 80micrograms), prednisolone 30mg for 5/7 and IV immunoglobulin at a dose of 0.5g/kg per day for 2 days (dose- 40grams) as per recently updated VITT treatment guidance from BSH.

CT venogram demonstrating an extensive filling defect within the superior sagittal sinus consistent with thrombus. There is a large focus of intraparenchymal haemorrhage centred upon the left parietal lobe with surrounding low attenuation change consistent with oedema.





Treatment Options	Comment
High-dose intravenous immune globulin (1 g per kg for 2 days)	Raises platelet count and decreases hypercoagulability (by analogy with autoimmune HIT); inhibits platelet activation by platelet-activating anti-PF4 antibodies (platelet Fcγ receptors)
Anticoagulants often used to treat heparin-induced thrombocytopenia	Direct oral Xa inhibitors (apixaban, rivaroxaban) Direct thrombin inhibitors (argatroban, bivalirudin) Indirect (antithrombin-dependent) Xa inhibitors: danaparoid (not available in U.S.), fondaparinux
Platelet transfusions	Avoid unless presence of bleeding (theoretical prothrombotic risk)
Vitamin K antagonist	Contraindicated during acute thrombocytopenia and disseminated intravascular coagulation (microthrombosis associated with protein C depletion)

Figure 2. Potential Diagnostic and Therapeutic Strategies for Management of Suspected Vaccine-Induced Immune Thrombotic Thrombocytopenia.
Shown is a decision tree for the evaluation and treatment of patients who have symptoms of thrombocytopenia or thrombosis within 20 days after receiving the ChAdOx1 nCov-19 vaccine and who have had no heparin exposure. The diagnostic and therapeutic strategies in such patients differ from those in patients with autoimmune heparin-induced thrombocytopenia (HIT).[13] DIC denotes disseminated intravascular coagulation, INR international normalized ratio, PF4 platelet factor 4, and PTT partial thromboplastin time.

Discussion In both cases the VITT syndrome was diagnosed following the first dose of the AstraZeneca COVID-19 vaccination. Neither patient had a history of previous VTE. The site of the embolus is most unusual with an apparent predisposition for CVST. Treatment of the condition is similar to that of the pro-thrombotic condition heparin induced thrombocytopenia (HIT) and so argatroban anticoagulation is used with the avoidance of heparin containing products. Additionally immunosuppression in the form of steroids

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and intravenous immunoglobulins are administered. A hyperfibrinolysis type process has been suggested. Morbidity and mortality have been high. As this is a newly identified syndrome, investigation and treatment guidance is being regularly updated as new information becomes available.

The overall benefit of the vaccination in prevention of COVID 19 infection and resultant complications is currently felt to outweigh the relatively lower risk of this newly identified phenomenon. Currently two cases have been identified in Northern Ireland following vaccination of large numbers of patients. This is in contrast to the relatively more common venous thromboembolic events that were noted in association with the COVID 19 infection in hospital inpatients and especially those requiring Intensive Care ventilator support.

References Oldenburg, J et al. 2021. Diagnosis and Management of Vaccine-Related

Thrombosis following AstraZeneca COVID-19 Vaccination: Guidance Statement from the GTH. Thieme.

Greinacher, A et al. 2021. Thrombotic Thrombocytopenia after ChAdOx1 nCov-19 Vaccination. New England Journal of Medicine

A 36-year-old male presented to ED with acute shortness of breath, back pain and haemoptysis.

Adam Gowdy

Examination revealed respiratory distress with hypoxia and hypertension. PoCUS revealed a hypokinetic left ventricle, ECG showed some non-specific ischaemic changes.

Initially treated with oxygen and diuretics, imaging of his aorta was arranged, at this point considering aortic dissection, acute MI or PE, a CT aorta would be most beneficial.

Imaging revealed an adrenal mass and a diagnosis of phaeochromocytoma was made. He was intubated and ventilated for pulmonary oedema and taken to ICU and commenced on phenoxybenzamine alpha blockade and has had surgery electively and made a full recovery.

Typically benign tumour of the chromaffin cells of the adrenal medulla which produce catecholamines. Symptoms vary but typically include palpitations, sweating, severe headaches and abdominal pain. 'The great mimic' is often misdiagnosed as more common conditions (1).

Emergency presentation of phaemochromcytoma is widespread and can include cardiovascular, abdominal and neurological emergencies (1, 2).

Initial management is alpha blockade, alongside general resuscitation, beta blockade should be avoided initially. Definitive management is surgical excision (1, 2).

Learning Points Highlighting initial symptoms and to consider it earlier in the disease, hastening diagnosis and preventing patients presenting in an emergency.

Branchial Cyst in Adults – A Wolf in Sheep's Clothing?

Chin Han Tan

Introduction: Historically, textbooks describe that patients above 50-years-old with a cystic neck mass should be biopsied for possible metastatic squamous cell carcinoma (SCC). However, the rising incidence of human papillomavirus (HPV) related SCC disguising as cystic neck mass in young patients warrants a revisit of this paradigm. We present two cases to illustrate why conventional wisdom regarding investigations for these patients is changing.

Cases: 38-year-old female presented with 6-week history of a cystic neck mass. Ultrasound and biopsy were suggestive of a squamous lined cyst with mild atypia. Due to tonsillar asymmetry, the mass was excised with the tonsil to reveal a HPV-related SCC.

28-year-old female presented with 2-month history of a 4cm cystic neck swelling associated with dysphagia and pain. Ultrasound scan suggested an infected branchial cyst and biopsy was negative for malignancy. Repeat ultrasound-guided drainage was again negative. The symptomatic cyst was removed to reveal a metastatic papillary thyroid carcinoma.

Discussion: Due to more cases of HPV-driven cancers among young people and the danger of occult thyroid malignancy, perhaps there is justification for PET-CT scan for all adults presenting with a cystic neck mass for prompt diagnosis and treatment.

Bilateral Peritonsillar Abscess – A Diagnostic Challenge

Donál McKeever

Introduction: Unilateral peritonsillar abscess (PTA) is a common complication of tonsillitis. Bilateral abscesses are rare.

Description of case/case series: A 30-year-old female presented to the emergency department with a 4-day history of sore throat, odynophagia, and fevers. She was pyrexic, tachycardic and had a muffled voice. There was no evidence of airway compromise. She had marked trismus and enlarged exudative tonsils bilaterally. There was pooling of saliva, and her soft palate was congested and swollen bilaterally with a midline uvula. There was tender submandibular lymphadenopathy. Inflammatory markers were raised. A CT scan of her neck was performed, showing bilateral PTA. The lumen of the parynx was narrowed. Pus was aspirated on both sides, growing Group A streptococcus. She was commenced on intravenous antibiotics, steroids and analgesia and made a good recovery to be discharged home after 24 hours.

Discussion:

- Bilateral PTA represents a diagnostic challenge in that it does not present with the typical clinical features as unilateral PTA, including asymmetry of tonsils and palate, and deviated uvula. Bilateral PTA imposes a higher

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risk of upper airway obstruction so prompt, accurate diagnosis is crucial. Treatment is drainage of pus and systemic antibiotics.

Case Presentation Of Pharyngeal-Cervical-Brachial Variant Of Guillain–Barré Syndrome Following Covid-19: A Rare Syndrome With Rare Association

Hina But

Introduction: Coronavirus disease -2019 has been shown to be associated with a lot of neurological complications, of whom Guillain-Barre syndrome (GBS) is an important post-infectious consequentiality.GBS has an annual incidence rate ranging from 0.4 to 1.7 cases per 1,00,000 population. Pharyngeal-cervical-brachial (PCB) variant is an extremely rare variant that presents with muscle weakness initially involving the neck, oropharynx, and upper extremities.

Case description: A 55-year-old female presented with a history of worsening weakness, right-sided facial weakness, dysarthria, dysphagia symmetrical motor and sensory neuropathy following a history of cough, and sore throat 3 weeks ago tested positive for COVID-19 by the lateral flow. Pharyngeal-cervical-brachial variant (PCB) or "acute bulbar palsy" constitute about 1-2% of GBS in a matter of days is exceptional. The preceding infection and clinical findings in association with generalised areflexia made the GBS variant the most likely. Subsequent CSF was acellular CSF with CSF protein 4.77 g/L which is quite something even for GBS but confirms the diagnosis ("albuminocytologic dissociation") and was commenced on intravenous immunoglobulin. She deteriorated acutely with Type 2 respiratory failure which is the big risk with bulbar onset cases and needed intubation and mechanical ventilation. This is a rare neurological complication of COVID-19 in the UK, but it adds to a small but growing body of international evidence to suggest a significant association between these two conditions.

Discussion: There has been an increase in the incidence of GBS during the COVID-19 pandemic, and several case studies have shown an association between the development of GBS and COVID-19 infection. Increasing appreciation of this by clinicians will ensure earlier diagnosis, monitoring and treatment of patients presenting with this.

Diagnosis and management of postpartum ovarian vein thrombophlebitis

Laeticia Ngozi Ezeilo

Introduction Postpartum ovarian vein thrombophlebitis (POVT) is an uncommon, but potentially serious puerperal complication associated with maternal morbidity and mortality. Symptomatic POVT is seen in 0.01% to 0.05% cases. Diagnosis can be difficult as the clinical presentation is often non-specific.

Case Presentation We report a case of a 29-year-old para 1 who presented 3 days after a normal vaginal birth with right pelvic pain, lower back pain and right leg weakness. She had tachycardia and right iliac fossa tenderness. Differential diagnoses of acute appendicitis, endometritis, ovarian cyst accident and an epidural complication were considered. Her C-reactive protein was elevated (60.5mg/L). Urgent CT abdomen/pelvis showed an unexpected diagnosis of right acute OVT. She was treated with analgesia, broad spectrum antibiotics and anticoagulation (heparin) with haematologist input.

Discussion POVT classic clinical triad of fever, pelvic pain and right pelvic mass are not reliable as evidenced in our case. Hence high index of suspicion is therefore needed. This is more so because an untreated POVT is associated with 25% incidence of pulmonary embolism and 4% mortality. Other life-threatening complications include ovarian infarction, sepsis and ovarian abscess.

Ramping position to aid non-invasive ventilation (NIV) in obese patients in the ICU

Mohamed Shirazy

Introduction: Obesity is prevalent in the ICU and is associated with difficult mask ventilation and intubation. NIV is the first-line therapy for treating type 2 respiratory failure. The ramping position is recommended to facilitate pre-oxygenation and mask ventilation of obese patients in anaesthetics via improving airway alignment.

Presentation of case series: Two cases of obese patients were admitted to the intensive care unit (ICU) with type 2 respiratory failure. Both cases showed obstructive breathing patterns on NIV and failed resolution of hypercapnia despite high ventilatory pressure and aggressive pharmacological treatment. The ramping position was applied using an Oxford pillow, immediately alleviating the obstructive breathing pattern, and the hypercapnia was resolved.

Discussion: In severe hypercapnia, obese patients lose the airway anatomical balance, making NIV difficult. Ramping elevates the upper body, head at 25°, and neck by placing blankets or an elevation pillow under the upper back and shoulders to achieve horizontal alignment of the external auditory meatus and the sternal notch; thus, it maintains an open airway and facilitates NIV. No available studies exist on the effectiveness of ramping during NIV in the ICU. This case series highlights the efficacy of ramping and warrants the need for further studies.

Temporal Artery Arteritis

Prince Soneill Iqbal

Introduction: Temporal arteritis is one of the most common vascular disorders, but is a relatively rare condition, affecting about 5 out of 10,000 people. It usually occurs in people who are over 50 years old

Description of case: 75yr/M, presented with reduce appetite, weight loss & night sweats for 4/52, and denied temporal headache/jaw claudication, CRP 381, ESR 124, WBC 10.93 and Hb 118

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While in-Hospital had multiple episodes of loss of vision left eye lasted for 2-5min that resolved spontaneously

Examination was unremarkable apart from low degree temp 37.5C, no ocular involvement of GCA confirmed by ophthalmologist.

CT Brain nil acute, CT CAP no significant finding and CTCA: left ICA 70-80% narrowing.

Started on high dose steroid.

Temporal artery biopsy showed chronic inflammation with disruption of the elastic lamina, while no granulomatosis inflammation is seen, could be altered secondary to steroids

Discussed in multi head meeting and diagnosed temporal artery arteritis with chronic inflammation.

Patient responded to steroids, CRP, ESR and appetite normalised.

Discussion: The onset of symptoms in GCA tends to be subacute, but abrupt presentations with atypical features occur in some patients. Timely diagnosis and treatment of TAA prevent complications including blindness.

Sialolithiasis of submandibular gland of unusual size

Shreya Sengupta

Introduction: Sialolithiasis is the most common cause (66%) of obstructive salivary diseases and accounts for about 50% of major salivary gland diseases. It has a clinical prevalence of 0.45% and higher in males. Incidence peaks between the age of 30 and 60 years. Submandibular gland is the most commonly affected and the majority of calculi are located in the distal third of the duct or at the hilum of the gland. Sialolithiasis affects the submandibular gland in 80–90% of cases because of the curved course of submandibular duct and the secretions being more mucous. Pain is the most common presenting feature during mastication and surgical removal of the sialolithiasis is the treatment of choice.

Description: Here I present a case of a 35-year-old gentleman with a submandibular duct stone measuring 12 × 6 mm. This gentleman had typical symptoms of chronic sialadenitis, who was clinically diagnosed to have sialolithiasis, which was later confirmed by imaging studies. He was operated upon to remove the stone along with the submandibular gland.

Discussion: Considering the literature, most stones are less than 5 mm, and stones more than 10 mm are quite unusual should be reported as a sialolith of unusual size as in our case.

Unusual case of necrotising fasciitis involving all four limbs and trunk salvaged by newer modalities

Shreya Sengupta

Introduction: Necrotising fasciitis (NEF), commonly known as flesh eating bacteria, is a near fatal soft tissue infection that poses a challenge to surgeons all over the world, making it a medical and surgical emergency. Despite radical initial surgical debridement and a limb amputation, surgical control of the infectious source is often not achieved resulting into high mortality.

Description: I present a case of NEC of a young lady, known IVDU, who presented with high qSOFA score and rapidly spreading oedema and haemorrhagic blisters involving all four limbs, groin and abdomen. After serial debridements and Lisfranc amputation, she was successfully stepped down from ICU using newer modalities of treatment.

Discussion: It is very rare and unfortunate to get simultaneous infections in all four limb and trunk which poses a great challenge in deciding the depth and breadth of the sequential debridement and clinical decision of limb reconstruction with tissue coverage v/s amputation. From our case here, I would like to highlight the urgency of early debridement and use newer treatment modalities specially honey and VAC with which we could save her life.

Delayed unusual presentation of Peutz-Jeghers syndrome

Shreya Sengupta

Introduction: Peutz-Jeghers syndrome belongs among the most important familial hamartomatous polyposis syndromes associated with significant morbidity. It is an autosomal dominant disorder characterised by pigmented macules and polyps in the small intestine followed by colon, stomach. The majority of individuals with PJS have been found to have genetic alterations in LKB1/ STK11 mutations on chromosome 19 which works as tumour suppressor and is hence associated with a progressively increasing lifetime risk of developing various malignancies. The most common symptom is an intermittent colicky abdominal pain followed by bleeding.

Description: Here I present a case of a 45 year old gentleman who presented with acute intestinal obstruction who had both of his sons diagnosed with PJS due to similar presentation when they were in their teens. He also had extensive mucocutaneous melanosis. Imaging revealed intussusception and he underwent exploratory laparotomy and resection, revealing extensive jejunal polyps. He was then followed up for gastrointestinal malignancies.

Discussion: Intussusception may be the first lead for PJS during teens, but can be suspected with help of family history or pigmentation and hence should be screened early to prevent complications later. This case thus shows a delayed presentation of PJS with intussusception in mid forties.

Scabbard Trachea In Retrosternal Goitre

Shreya Sengupta

Introduction: Terms such as retrosternal, substernal, intrathoracic or mediastinal goitre have been used to describe a goitre that extends beyond the thoracic inlet, or has more than 50% of its volume below this level. The most common symptoms are related to compressions of airway and oesophagus.

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Description: Here I present such a case depicting the radiological findings of a scabbard trachea. A 45-year-old lady presented with a slowly growing mass in the neck for the last 15 years and progressive dyspnoea and dysphagia for the last 3 months. Examination revealed grade II diffuse goitre with left lobe predominance. Pemberton's sign was positive as evident by facial redness and respiratory distress within 15 s of straight hand raising above the head. The straight chest X-ray and CT scan of the head and neck revealed a grade I retrosternal goitre with a scabbard trachea and a gross shifting to the right due to the lump.

Discussion: Retrosternal goitres have a reported incidence of 6-11% of all patients undergoing thyroidectomy, and four times higher incidence in females, mostly in their 4th to 5th decade. This lady's scan reveals a compressed trachea resembling a scabbard and she recovered well with no complications making it a striking finding.

Bilateral Charcot Neuropathic Knee Joints due to Diabetes Mellitus: A Case Report

Syed Muhammad Ahsan Nawaz

Introduction: Charcot arthropathy (CA) is a non-infectious, degenerative joint disease. The two most common causes of CA are tertiary syphilis and diabetes mellitus. Since proper screening and management of syphilis at the initial stages has been followed currently, tertiary syphilis has become less common.

Description: 69-year-old South Asian females with poorly controlled diabetes are presented with knee pain and immobile knee joints. On examination, the joint movement was severely restricted. The joint appeared mildly tender to palpation with swelling and warmth. The patient was given a clinical diagnosis of osteoarthritis and the disease was managed conservatively with instructions of limited weight-bearing. At two weeks, a follow-up X-ray showed medial subluxation of knee joints bilaterally. A diagnosis of CA was made after careful exclusion of all other conditions using the evidences.

Discussion: CA of the knee is a rare occurrence. The diagnosis is challenging, and delay is associated with a worsened outcome. The goal of this report is to contribute to the limited pool of cases and improve clinician awareness of knee involvement in CA besides traditional foot involvement. More literature is needed to develop consensus regarding treatment and management options.

Traumatic Catheterisation

Syed Muhammad Ahsan Nawaz

Introduction:

A 71-year-old male was admitted for elective endovascular repair of infra renal abdominal aortic aneurysm.

Description:

- Following the intubation, a Urinary catheter was inserted to monitor urine output but haematuria was noticed.
- Urinary catheter was withdrawn immediately
- On removing the catheter, it was revealed that a female urinary catheter was inserted.
- Urology team was contacted immediately
- Urologist managed to insert a three-way urinary catheter and the planned procedure was completed successfully. Post procedure 3-way urinary catheter irrigation was continued till the urine was clear. Outpatient cystoscopy was performed showing enlarged prostate and urethral trauma with no stricture. Patient failed Trial without catheter but was successful in further on a 3-month follow-up. Patient was placed on EVAR surveillance program as per department protocols.

Discussion:

- Urethral catheterisation is one of the most frequently performed procedures in clinical practice.
- It is reported that the inappropriate use of catheters ranges from 21% to over 50%.
- All in-patients should be catheterised initially with a standard 40cm (male long length catheter) and once discharged this can be changed for females.
- Before starting make sure all the proper equipment is available especially the correct size of the catheter in case of male catheterisation

Broken Spectacles and a Brain Lesion: The Risks of Swollen Discs

Azeem Siddique

Introduction: Optic disc (OD) swelling on fundal examination can be due to papilloedema, potentially indicating neurological pathology, or pseudopapilloedema, caused by various disc abnormalities. The clinical implications of differentiating between potential causes are paramount.

Description of Case: A 43-year-old lady was referred into eye casualty by her optometrist following a routine eye assessment, having broken her glasses, with incidental OD swelling. On questioning, she described a range of abnormal right-sided neurological symptoms: facial and tongue weakness, sensory disturbance, reduced hearing, and occasionally feeling unsteady.

On examination, her optic nerve function was preserved. Fundal examination showed ill-defined OD margins. Her neurological examination demonstrated reduced right-sided cranial nerve function.

Optical coherence tomography and ultrasound B-scan showed OD drusen, which could explain their swollen appearance. Given her other symptoms, however, the clinical picture remained unclear.

Due to the associated neurological anomalies, a CT brain was performed, which showed a right-sided cerebropontine-

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angle mass. She was referred to neurosurgery and discussed in the neuro-oncology multidisciplinary team for a possible meningioma.

Discussion: The importance of clinical correlation of detailed symptomology and examination findings is evident. In this patient, OD appearance could have been explained by the presence of drusen. The consideration of abnormal neurology, however, prompted further investigation through neuro-imaging.

Ocular Firework Injuries in Children during COVID-19 Pandemic.

Edward Pritchard

Introduction: Fireworks are known to cause eye injury typically involving young males, with one in six cases causing serious visual impairment. A spike in paediatric ocular firework injuries occurred during the COVID-19 pandemic in our unit and we performed a case note review of cases over four years, from Jan 2018 to Jan 2022.

Case Series: Ten children presented with firework related injuries, 5 in 2020 and 5 in 2021 compared to zero in the two preceding years. Most cases were male n=9 (90%), two bilateral and eight unilateral. The most common presenting clinical features were facial burns, corneal abrasion, hyphaema and vitreous haemorrhage. Three children required surgery, one an EUA for thorough assessment, second a retinal detachment repair and thirdly an amniotic membrane graft for persisting epithelial defect. Another child sustained a choroidal rupture. Mostly, visual acuity returned to near normal 0.0 to 0.2 LogMAR, however, two children were left with permanent vision loss in the affected eye with acuity of count fingers and 0.975 respectively.

Discussion: We recommend renewed public safety advice and strict non-sale of fireworks to under 18-year-olds to help prevent future injuries.

Paediatrics and Neonatology

Kanwal Altaf Malik

Introduction: The non-specific and overlapping presentation of rare genetic mutations imposes a diagnostic challenge. A mutation in the MSL complex Male Specific Lethal is responsible for bulk Histone 4 Lysine 16 acetylation (H4K16ac) in mammals and flies, linked to X-Linked syndrome in humans affecting both sexes. Identified in fifteen families across US, Europe, Australia and a de novo variant in MSL3. It presents as intellectual disabilities, global delay, feeding difficulties and hypotonia.

Case Summary: A term male infant, born through emergency C-section due to foetal bradycardia with APGARS of 61 75 910 . The antenatal course was uneventful. At birth he had pronounced head lag, hypotonia, and abdominal distension. Treated as presumed sepsis (BLCS negative). CRUSS, metabolic work up, CGH array and Karyotyping were normal. He was followed by Multidisciplinary team. During infancy he had multiple admissions with LRTI and feeding difficulties. He had developmental delay and right eye squint. Serum CK (mildly raised). At 17 months of age, some subtle dysmorphic features were noted i.e. long philtrum, narrow upper lip with some tenting, narrow chest, pectus carinatum, prominence of right chest wall, less muscle bulk, and a mild head lag. MRI brain was normal. An exome sequencing at cento gene, confirmed his diagnosis at 3 years, as Basilicata-Akhtar syndrome.

Conclusion: It is crucial to identify the ultra-rare genetic defects with nonspecific presentations to tailor further management and identify it's risk in future pregnancies.

Bernard-Soulier Syndrome In Pregnancy With Retinal Detachment: A Rare Phenomenon

Nnadozie Igbokwe

Introduction Bernard-Soulier syndrome (BSS) is a rare congenital bleeding disorder of the platelet, and it is mainly inherited as an autosomal recessive trait. It occurs in less than 1 in 1 000 000 pregnancies. It is caused by both qualitative and quantitative deficiency of the platelet membrane glycoprotein Ib-IX-V receptor complex, thereby causing abnormal platelets adhesion.

Case Presentation We report a 26 year old primigravida diagnosed in childhood with BSS due to family history. Her preconception period was challenging as she suffered from severe menorrhagia with multiple hospital admissions, blood and platelet transfusions.

At 35 weeks gestation, she developed temporal crowded retinal detachment of the left eye and had a successful left scleral buckling surgery under general anaesthesia (GA).

She had a multidisciplinary team care with a successful elective GA caesarean section at 39+3 weeks gestation with peri-delivery platelet transfusion and intravenous recombinant factor VIIa.

Discussion BSS is a high-risk pregnancy associated with significant risk of fetomaternal bleeding. Pregnancy should be managed in a tertiary centre with multidisciplinary team involvement of experienced haematologists, obstetricians and anaesthetists. Invasive procedures including instrumental deliveries and regional anaesthesia are contraindicated.

Successful Management Of Fetal Atrial Flutter At Term Pregnancy With Postnatal Electrocardioversion

Nnadozie Igbokwe

Introduction Fetal atrial flutter (AF) is a lethal tachyarrhythmia accounting for about 30% of all fetal tachyarrhythmias. It is associated with structural heart anomalies and hydrops, with 10% fetal mortality rate. Diagnosis is made with echocardiography, and management should be multidisciplinary with obstetricians, fetal cardiologists, and specialist neonatologists.

Case Presentation We present a 24-year-old low-risk

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pregnancy at 37 weeks gestation who presented with reduced fetal movement. The fetal heart rate was 220 beats/min on bedside ultrasound. She was about to be delivered on account of fetal distress, but transferred urgently to a tertiary unit following a fetal cardiologist input. Fetal echocardiography showed atrial heart rate of 480bpm and ventricular rate of 240bpm. A diagnosis of fetal AF with 2:1 nodal AV block was made. There were no fetal hydrops or associated cardiac disease, and she had an urgent caesarean section. Neonatal sinus rhythm was restored with single electrocardioversion and some course of digitalization

Discussion It is essential that fetal AF is not managed as "fetal distress" by general obstetricians and midwives. Cases should be managed in centres with paediatric cardiologist expertise.

The Impact Of Dyslexia In Medical Education

Dorothy Johnston

Introduction Dyslexia is a common learning difficulty, but little is known about its impact on students and trainees in medical education.

Aims This study aims to explore the impact dyslexia has had on students and junior doctors in training, as well as highlighting areas where solutions can be found to improve the medical education experience for someone with dyslexia.

Methods Scoping review methodology was used to answer the research question. 30 articles were included, containing qualitative and quantitative data. A thematic analysis was used to highlight common findings.

Results 6636 participants were included. The majority of participants came from quantitative studies looking at examination results on a large scale. The articles included were published between 1988 and 2020. Thirteen themes emerged from the studies: discrimination, frustration, hesitancy to declare diagnosis, judgement, accusations of dishonesty, denial of reasonable adjustments, additional study required, feelings of isolation, anxiety and depression, lack of concentration, positive attributes and impact on examinations.

Conclusions The study found that information is lacking on this topic. It shows that students and postgraduates with dyslexia struggle with study and examinations, feel negativity from peers and often don't receive the assistance they require.

The Role Of Simulation Training In Teaching Communication Skills In Medical Education

Huajian Liu

Introduction: Communication skill teaching in medical schools has often been received negatively by students and its translational impact on clinical care is difficult to determine. Simulation based medical education (SBME) has demonstrated effectiveness for technical skills, but less is known about this for communication skills.

Aims: We aim to explore the efficacy of SBME interventions on teaching communication skills in medical education and its translational ability.

Methods: Scoping review methodology was used to address the research question. MEDLINE and EMBASE databases were used to generate relevant articles. Articles were screened against inclusion and exclusion criteria. Both quantitative and qualitative analysis were used on finalised articles to generate results.

Results and Discussion: 51 articles were included from literature search after screening. Most were causal-comparison or randomised controlled trials (RCT). A variety of SBME interventions are utilised, such as roleplay, simulated patients, and virtual reality training. There is consistent data on the effectiveness of SBME programmes in the immediate setting in improving communication skills, however, evidence is lacking in longitudinal maintenance of skills, and its translational ability to real life clinical settings. Future research need to focus on the longitudinal and translational impact of these programmes, in order to maintain a sustainable SBME infrastructure.

Psychiatry

Peter McMurray

Background During Covid-19 many medical school OSCEs and postgraduate membership exams were unable to run face-to-face. Many were converted to run in a new digital format, utilising video-conferencing software. Given this substantial change to how examinations were performed, and potential for future use of this format, it's important to explore the perception of students to this way of sitting an OSCE exam.

Methods A scoping review was carried out (as part of a Masters in Clinical Education) to assess what evidence exists in the literature regarding participant experience of taking part in a digital OSCE exam.

Results After initially finding 336 article, 51 papers were included following literature review and qualitative content analysis was performed

Several themes emerged:

Students had concerns about the technology prior to digital OSCEs – this was eased by allowing students to sit a mock exam first and highlights the need for additional training to ensure familiarity with the technology.

Digital OSCEs were felt to be comparative to in-person OSCEs, and student exam performance supported this.

It was felt that beyond the Covid-19 pandemic there are advantages to digital OSCEs and they should have an ongoing place in medical education.

Key Messages As telemedicine continues to become more prominent it'll be necessary to assess these skills in undergraduate and postgraduate OSCE exams and therefore

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digital OSCEs are now likely to be here to stay.

Telehealth will require many of the skills and technology set-up that have been needed for digital OSCEs during Covid-19 and so it is important for those involved in medical education to be aware of the lessons learnt during this time.

Master Students' Perception and Attitude on Methods of Anatomy Teaching and Assessment, Khartoum, Sudan 2014-2020

Rawan S E E Hassan

Background: Anatomy is the cornerstone of medical education; anatomical knowledge is undoubtedly essential for doctors regardless of their specialty. Teaching and learning anatomy are one of the most important and challenging subjects for both teachers and students. Nevertheless, in the recent past, anatomical teaching has become a remarkably controversial area of medical education.

Aim: This study aimed at improving the postgraduate teaching and assessment methodologies by eliciting the perception and attitude toward anatomy teaching approaches among anatomy master students.

Methods: A descriptive cross-sectional study was conducted among three consecutive batches of anatomy master students. A structured questionnaire was used as a tool of data collection and data was analysed using IBM statistical package for social sciences version 24 (SPSS 24).

Results: 44 candidates responded to the questionnaire. Among them, 90.9% chose dissection room sessions as the best tool in attaining the intended learning outcomes. Practical dissection was the best teaching method with regards to interest 81.1%, enjoyment 70.5%, retention of information 65.9% and satisfaction 59.1%. 72.7% of the respondents think that practical dissection test was the best assessment method in fulfilling the intended learning objectives. Multiple choice questions were the most helpful in learning anatomy effectively and was the best tool for assessing knowledge. Majority of the respondents 86.4% were comfortable with spotter test as the best practical assessment tool in anatomy.

Conclusions: The results have shown a strong positive perception towards the use of cadaveric dissection in teaching and learning anatomy. However, many did not seem to prefer lectures as a tool in anatomy teaching and learning. In addition, practical dissection test and multiple-choice questions were the best assessment methods in attaining the intended learning objectives and learning anatomy effectively respectively

Learning Style Preferences of Undergraduate Clinical Dental Students at Queen's University, Belfast

Ryan McConville

Introduction: Understanding the learning style of students can be effective in organizing and modifying the learning environment and the teaching and learning process. There are several methods to measure learning styles and the VARK questionnaire is the most widely used.

Aims: The aim of this study was to investigate the learning style preferences of clinical dental students using the VARK questionnaire and to establish whether learning style preferences were influenced by gender.

Methods: Following a favourable review by the Faculty of Medicine, Health and Life Sciences Research Ethics Committee (Faculty REC) in accordance with the Proportionate Review process, the study protocol and a link to the VARK questionnaire was distributed to fourth and fifth year undergraduate dental students at Queen's University via email.

Results: A total of 86 fourth- and fifth-year dental students (72%) completed the questionnaire. 69% preferred multimodal learning styles. The most common learning style was quad modal (VARK) at 41%. There was no relationship between learning style and gender.

Discussion: Multimodal learning style appears to be the preferred learning style in clinical undergraduate dental students. This information could be used to develop effective teaching approaches that could maximize student motivation, learning and performance.

Post-Operative Cardiovascular Complications Following Major Abdominal Surgery

Leanna McGuigan

The CASCADE international, multi-centre audit of cardiovascular complications after major abdominal surgery aims to improve understanding of risk reduction measures for Post-operative Cardiovascular Complications(PCCs). 446 hospitals across 30 countries participated, we are presenting local data from Causeway Hospital.

Aims The StEP COMPAC paper defined clear end-points for PCCs and our primary aim was to audit compliance to pre-, intra- and postoperative standards at reducing risk of PCCs. Secondary aims included identifying risk factors for PCCs and outcomes of post-operative anaemia.

Methods Data was collected prospectively for patients undergoing surgery in Causeway hospital, across five two-week consecutive data collection periods, and followed up 30-days post-operatively. All adult patients undergoing any abdominal incision with major visceral resection or hernia repair in either an elective or emergency approach were included.

Results The PCC rate locally of 65 patients was 2.11% compared to 2.38% in the 24,260 patient international cohort. Peri-operative audit standards including BMI, peri-op ECG, WHO checklist exceeded international average. Management of post-op anaemia could be improved locally.

Our data demonstrates that Causeway Hospital adheres to peri-operative standards and has a low rate of PCCs

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Experiences of Women in Global Health: A Survey Among Women and Men Anaesthesiologists Working Internationally.

Lisa Collins

Introduction: It has been estimated that women comprise 75% of the global health workforce , and female students dominate academic global health programmes. Yet women fill only 25% of senior and 5% of top health organisation positions.

Aims: We wish to examine the perspectives of women and men anaesthesiologists working in global health. We hypothesise that women anaesthesiologists have unique experiences and challenges when working as women in global health.

Methods: We developed a questionnaire with open and closed response questions; covering satisfaction with career opportunities and unique challenges faced by women. We obtained permission from the World Federation of Societies of Anaesthesiologists (WFSA) to administer our survey to the approximately 164 WFSA committee members. Ethical approval was obtained from the Institutional Review Board of Mass General Brigham (Boston).

Results: 66 individuals completed the survey (51.5% male, 45.4% female). 37.9% of respondents agreed that women face unique barriers to advancing to positions of global health leadership when compared to men. When asked about barriers specific to women respondents placed highest importance on challenges balancing work and family, lack of female mentors, and lack of opportunities and experience.

Discussion: Women anaesthesiologists have unique experiences and challenges when working in global health. Not only is it important to address the gender disparity of women working in global health to improve career opportunities, but it is also critical for healthcare leadership to reflect the populations they serve.

The Value Of The Coagulation Screen In Antenatal Patients With Normal Platelets And Liver Function.

Rachael Davis

Introduction: The coagulation screen is routinely sent in antenatal patients with signs/symptoms of Pre-Eclampsia and Obstetric Cholestasis in our unit, despite guideline advice. Evidence suggests if platelets and liver function (LFT) are normal then coagulation screen will also be normal and therefore, not required. This highlights a potential area for departmental cost-savings. The aim of this study was to compare coagulation results with platelet and LFT results for antenatal patients.

Methods: Retrospective cohort study 01/01/15 - 30/04/16. Electronic search of LabCentre identified women attending maternity services who had a coagulation screen sent. Indications were not recorded. Coagulation screens were categorised as normal/abnormal, according to pregnancy specific ranges, and compared to platelets and LFTs. Results were excluded from delivery suite, postnatal wards and where platelets/LFTs were not checked.

Results: n=4766 coagulation screens were sent during the study period. n=3149 results were excluded giving an end number, n=1617. n=1091 had normal platelets/LFTs, of which, n=740 (67.8%) had a normal coagulation screen, and n=351 (32.2%) an abnormal coagulation screen. n=526 had abnormal platelets/LFTs, of which, n=314 (59.7%) had a normal coagulation screen, and n=212 (40.3%) an abnormal coagulation screen. Chi squared analysis determined p=0.0013.

Conclusion: We found normal coagulation when platelets/LFTs were normal in 67.8% results, and when platelets/LFTs were abnormal in 59.7%. It suggests, not sending a coagulation screen in this patient group will at most miss 4 out of 10 abnormal results, of which an abnormal result may not require action in clinical practice.

Effect Of Pulse Methylprednisolone On Blood Glucose For Critically Ill Covid-19 Patients

Rory Cullen

Introduction Steroid therapy is a recognised standard of care in patients with COVID-19 (C-19) pneumonitis.

High dose steroid therapy used in Acute Respiratory Distress Syndrome (ARDS) due to C-19 can result in impaired glycaemic control.

Aim Our aim was to assess the impact of pulse methylprednisolone (PMP) on GM in critically ill C-19 patients.

Methods A retrospective study examining Critical Care (CC) patients who received PMP for ARDS due to C-19, between January 1st and December 31st 2020.

GMs were reviewed for the 12 hours pre and 72 hours post administration of PMP.

Results Twenty-three patients received PMP. Five patients did not meet inclusion criteria.

Of the remaining 18 patients:

16 (88.9%) had steroid therapy prior to receiving PMP.

6 (33.3%) had a GM >10mmol/l twelve hours prior to the first dose.

16 (88.9%) had a GM >10mmol/l at least once in the time period examined.

Discussion This study confirms that PMP causes hyperglycaemia in more CC patients than lower steroid dosing.

As uncontrolled hyperglycaemia is associated with excess morbidity and mortality there should be increased vigilance around monitoring and control of GM in CC.

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General Practice

Sean McKernan

Introduction & Aims: With the rise in technology in medicine the field of connected healthcare characterised by the use of technology in diagnosis and management is an exciting field. One limitation of connected healthcare is the differing fields of expertise between clinicians and technically trained staff requiring 'translation' of clinical problems for the creation of technical solutions. Within the IT sector the rise of low code technology has dramatically lowered the coding requirements for application development.

Methodology: A proof of concept study was enacted whereby the author (with no formal technical skills in IT) created a cardiac resuscitation audit application using commercially available low code software with testing in a simulated environment with comparison against manual data collection. A mixed quantitative & qualitative analysis of the study was undertaken to assess application acceptance and accuracy.

Results: Quantitative analysis of the two performed experiments showed high correlation with Persons >0.99 between application and manually recorded data in both experiments and qualitative analysis of those involved showed excellent acceptance of the new data collection method versus the paper-based alternative.

Conclusion: The success of this application indicates that clinician developed applications could be suitable within the healthcare field for data recording or for guideline following

Colonic Polyps' Surveillance And Outcomes - Are We Using A Magnifying Glass?

Balaji Jayasankar

Introduction: Colonoscopic polypectomy is a well-established screening and surveillance modality for malignant colorectal polyps. Following detection of a malignant polyp, patients are either put on endoscopic surveillance or planned for a surgical procedure. We studied the outcome of colonoscopic excision of malignant polyps and their outcomes.

Materials & Methods: A retrospective analysis of patients over a period of 5 years who underwent colonoscopy and resection of malignant polyps. The main outcome was to look at the percentage of patients who underwent surgical resection, the percentage of patients who were managed conservatively and the percentage of recurrence post excision. We also identified a 5-year outcome of completely removed malignant polyps in accordance with the Maastricht guidelines.

Results: The study was a retrospective analysis of 46 patients from 2015 who underwent colonoscopic resection of malignant polyps. 9% (4/44) of the patients went on to have surgical resection of the malignant part, and another 9% (4/44) had a trans-anal procedure for resection; 82% (36/44) were managed successfully by conservative follow-up with colonoscopy, radiology and tumour markers.

Conclusion: A reduction in the frequency and the battery of surveillance may be considered looking at the number of recurrences and surgical interventions.

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Core Surgical Training

Darren Geoffrey

Introduction Barium swallow is commonly requested by otolaryngology for patients with swallowing difficulties. It is a dedicated test of the pharynx, oesophagus and proximal stomach. We aimed to review barium swallows in our department over a 6 month period to look at the indications for request, results of the tests and overall patient outcomes following this investigation.

Methods A retrospective search was done on the imaging system (NIPACS) between the beginning of July 2021 and end of February 2022 for patients undergoing barium swallows under a named ENT consultant in the Northern trust. 110 patients were included, and data was obtained from both NIPACS and Electronic Care Record (ECR) included age, gender, indication, results of test and final patient outcome.

Results Reasons for requesting a barium swallow included dysphagia (59%), choking (14%), globus sensation (13%), reflux (9%), throat discomfort (9%), hoarseness (7%), regurgitation (5%), weight loss (5%) and food bolus (1%). 44% of the swallow tests were reported as normal, 26% showed dysmotility, 23% showed reflux, 10% showed a pharyngeal structural abnormality and 7% showed a hiatus hernia. The majority of patients (49%) were discharged following the barium swallow. 2% required surgical intervention and 1 patient had a malignancy identified.

Conclusions Barium swallow tests requested by our department most commonly were reported as normal and led to patient discharge from the clinic. They can be useful to reassure patients and identify patients with dysmotility that will require input from other specialties. Careful history taking and examination are still important to identify patients with possible underlying malignancy that require other imaging or relevant endoscopy.

Synthetic Versus Autologous Reconstruction (Syn-Var) Randomised Control Trial (Rct) Of The Medial Patellofemoral Ligament (Mpfl)

Scott Matthews

Introduction The Syn-VAR RCT is the first of its kind

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comparing hamstrings autograft v synthetic neoligament for MPFL reconstruction.

Aims Our aim is to evaluate short and long term patient related outcomes measures (PROMs)

following synthetic / autologous MPFL reconstruction in a heterogenous cohort of patients with recurrent patellar instability.

Method 20 patients meeting inclusion criteria were recruited and randomised. Standardised surgery was performed by a single surgeon in Altnagelvin Hospital with data collected over 3 years from 2016. Kujala score was the primary outcome measure with data captured preoperatively and 12 weeks/2 years postoperatively. Secondary outcomes included four other validated scores and complications.

Results 20 patients with an average age of 19 included 9 females and 11 males. At 12 weeks and 2 years Kujala improvement in the hamstring group was 18 and 32 (both $p<0.05$) compared to the synthetic group where the increase was 2 and 20 ($p<0.05$). All secondary score improvements at 2 years were significant ($p<0.05$) with no difference in any score at all time intervals when comparing both groups ($p<0.05$).

Discussion Our RCT validates the non-inferiority of synthetic MPFL reconstruction as a treatment for restoring patellar stability in a small heterogenous group with positive long-term data and minimal morbidity.

The efficacy of intratympanic dexamethasone as a secondary treatment in the management of sudden sensorineural hearing loss (SSNHL): a systematic review.

Jessica Wauchope

Introduction SSNHL is an acute otolaryngology emergency which, when diagnosed and treated promptly, may lead to improved hearing restoration in patients. Intratympanic dexamethasone is a common second line treatment for patients who fail to respond to initial therapy, however, there has been limited high quality evidence to support its use for this condition.

Aim To establish if the use of intratympanic dexamethasone results in improved hearing outcomes in adults diagnosed with SSNHL who fail to respond to initial therapy.

Methods Randomised control trials (RCTs) were identified by searching three electronic databases including: MEDLINE, Embase and CINALH for papers published from 1st January 1950 to 31st May 2022.

Results Four RCTs were yielded for inclusion. Two RCTs showed statistically significant improvements with a third study showing trends towards improvement.

Discussion There are several heterogenous factors which make comparison of the studies challenging including various treatment protocols and different criteria for measuring hearing gain outcomes. There is some evidence to support the use of intratympanic dexamethasone following failure of initial therapy in the management of SSNHL.

Real World Outcomes In Anthracycline Treated Childhood Cancer Survivors Stratified By Cardiotoxicity Risk

Claire McCune

Introduction: Anthracycline chemotherapy is used in 60% of childhood malignancies. Unfortunately, cardiomyopathy can occur decades later and is associated with high morbidity and mortality. Lifelong echocardiographic screening is recommended with surveillance frequency dependent on chemotherapy-strategy based risk calculations.

Aim: To compare late childhood cancer survivor (CCS) outcomes by risk category using current risk calculators.

Methods: Participants had a 6MWT, QOL questionnaire (SF36), echocardiography (3DEF, 2DEF, right ventricular assessment and global longitudinal strain) and biomarker analysis. Patients were stratified using the ESC 2022 and CCSS risk calculators and outcomes evaluated for each group.

Results: N=58 CCS (mean age 27 years (19-42), mean 19 years (6-35) from treatment were assessed. 9% had a reduced ejection fraction and 41% had abnormal strain.

6MWT, SF36 or echocardiographic variables were not significantly different between risk groups when applying either calculator.

NTproBNP was significantly higher in CCSS stratified high-risk compared to moderate-risk participants ($P=0.01$). No difference was observed between groups using ESC 2022 risk stratification.

Discussion: Lifelong surveillance aims to detect early cardiotoxicity however screening is resource intensive and often identifies cardiotoxicity at a late, irreversible stage. Cardiotoxicity is evident in all risk categories and current stratification methods appear insufficient. The Late Anthracycline Induced Cardiotoxicity- Childhood Cancer Survivors study (NCT04852965) aims to identify markers of early toxicity through novel biomarker, proteomic and transcriptomic analysis.

Phenotypic Variation In Patients With Disease Causing Mutations For Hypertrophic Cardiomyopathy

Katie Linden

Introduction Hypertrophic cardiomyopathy is the most common inherited cardiac condition affecting around 1 in 500 adults. There is known to be a wide phenotypic variation seen within HCM even in groups who have identical disease-causing genetic mutations.

Aims To describe the range in phenotypic expression amongst all patients known to carry the MYH7 c.2389G>A; p.(A797T) mutation in Northern Ireland.

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Methods 32 patients with an age range of 10 to 76. 11 (34.4%) of these patients did not exhibit any phenotype of HCM. The maximal left ventricular wall thickness in the group ranged from 9-29mm with a mean of 14.7mm. 5 (15.6%) of these patients had a history of arrhythmia and 3 (9.4%) of these were ventricular tachycardia which is potentially life-threatening and associated with sudden cardiac death. 2 (6.3%) patients had an implantable cardiac defibrillator (ICD) in situ.

Discussion This data demonstrates a wide phenotypic variation in a group with the same genotype. This work leads into a planned MD research project examining the research question of whether DNA methylation influences the expression of HCM related genes and in turn influences phenotypic expression of the disease in carriers.

Lead, Adapt, Thrive - Re-Invigorating Medical Leadership In Northern Ireland

Sophie Davidson

Introduction The need for strong medical leadership in Northern Ireland (NI) has never been greater than in the midst of the global pandemic. Established in 2011, The Faculty of Medical Leadership and Management (FMLM) is the UK professional home for medical leadership. The last FMLM event held in NI was in 2017.

Aims

- Reflect on leadership experiences in NI.
- Re-establish links with FMLM in NI.

Methods An Advisory Group was formed in September 2021. A programme was composed reflecting the theme of 'Lead, Adapt, Thrive'. Speakers included NI Minster of Health, an NI Paralympian and various healthcare professionals from across NI.

The half-day, online conference took place in June 2022. Attendees provided feedback via a post-conference questionnaire.

Results There were 64 registered attendees, 74% from Northern Ireland. Delegates felt the event 'surpassed' their expectations and enjoyed the 'collaborative' and 'real-life' experiences. The quality of the sessions and speakers were rated 4.44/5 with 'interesting discussions' and 'inspiring stories'. Overall satisfaction score was 4.36/5.

Delegates wanted to see more conferences, webinars and podcasts and opportunities for posters.

Discussion FMLM can provide a platform to provide leadership events in NI which champion, influence and develop excellence in medical leadership and drive continuous improvement in healthcare.

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