

Abstracts

Annual Trainee Doctors' Prize Evening, Thursday 20th November 2014.

North Lecture Theatre, Medical Biology Centre,
Queens University Belfast.



ORAL PRESENTATIONS

In the Name of God

Rona Anderson, Bill McCallion

Introduction: Circumcision is an operation performed worldwide. Indications are either therapeutic such as phimosis or non-therapeutic, that is; in the name of culture or in the name of God. The BMA has recommended that circumcision only be performed where therapeutic indications are present and as such Primary Care Trusts in both England and Wales make independent decisions about whether to provide a circumcision service when it is requested on cultural grounds. Here in Northern Ireland these continue to be conducted in the NHS. The aims of this study were two-fold. Firstly: to determine the indication with which circumcision was performed on boys in Northern Ireland in a 16 month period. Secondly: to estimate the cost of cultural circumcision to the NHS.

Method: Data was collected for a 16 month period (03/01/12-24/05/13) from the Ulster hospital and the Royal Belfast Hospital for Sick Children (RBHSC) theatre lists. A retrospective analysis was conducted regarding the indication for circumcision-therapeutic or non-therapeutic.

Results: In a 16 month period (03/01/12-24/05/13) within the Ulster hospital and the RBHSC 134 circumcisions were performed; 47% (63) were performed for cultural or religious reasons. A further 12 were sent to private hospitals as NHS cases. The cost of cultural circumcisions to the NHS in this period: £100,000.

Conclusions: Performing circumcision for non-therapeutic reasons is an issue consistently raised within HSCB. Suggestion to remove it from the NHS using the EUR policy as it was classified as a low value procedure (Plastic surgery and cosmetic non-therapeutic procedures) has aided its removal in England and Wales however is more complicated for us in Northern Ireland due to Section 75 of the Northern Ireland Act 1998 which places more restraints on us with issues such as these due to our strict laws regarding discrimination. Within the current economic climate can the NHS really afford this elective procedure in its budget?

Monitoring Patients at High Risk of Developing Type 2 Diabetes

Virginia Christodoulou

Introduction: HbA1c is now the recommended test for diagnosing diabetes in the UK. The cut off level for diagnosis of type 2 diabetes is 48 mmol/mol. Patients with a level between 42-47 are categorised as high risk of developing Type 2 diabetes. WHO guidelines

recommend that these patients have an annual HbA1c to monitor for progression to diabetes.

Aims: To identify all patients within 2 GP practices over 1 year who had a HbA1c level between 42-47 and to ensure they were coded as high risk, informed of this, advice given and annual HbA1c performed.

Methods: We identified these patients using Population Manager Audit tool and found 61 patients who had a HbA1c within this range.

Results: Of these, 32 were not coded and 31 were due repeat HbA1c in 2014. These patients were contacted via telephone to arrange review and coded. Of the 31 who needed a repeat in 2014, 100% were contacted and reviews made resulting in 68% having their HbA1c repeated within 1 month.

Discussion: This project highlights the importance of coding patients at high risk of developing diabetes to ensure they are adequately followed up.

Clinical Ethics Reasoning Through Simulation (CERTS): Exploring the Authenticity of Undergraduate Experience

Gareth Lewis, Peter Maxwell, Margaret Sterling, Melissa McCullough, Gerry Gormley

Introduction: Students transitioning into professional practice feel underprepared to deal with the emotional complexities of real-life ethical situations. The few published attempts at authentic ethics simulation have not generated sufficiently deep accounts of student experience to inform pedagogy.

Aims: To study the lived experiences of medical undergraduates as they engage with a complex ward-based simulated ethics scenario and to explore how students handle stress, complexity, uncertainty and negotiate professional hierarchies.

Methods: Eight 4th year medical students at Queen's University Belfast participated in the realistic CERTS environment. They wore headcams that recorded footage during the simulation. Whilst performing a clinical task a series of ethically challenging encounters with multiple parties unfolded. Students were interviewed immediately after the scenario and headcam footage played back to them. An interpretative phenomenological analysis was conducted on verbatim interview transcripts.

Results: Six main themes emerged: i) Simulation, ii) Emotions, iii) Ethical Boundaries, iv) Role and Identity, v) Prior Experiences, vi) Balancing. Students described a wide range of emotion, they felt



CERTS was true to life and beneficial in developing ethics reasoning and navigating interprofessional hierarchies.

Discussion: CERTS provides an authentic environment, acceptable to students, that has potential to assist undergraduates in exploring the impact of emotion and stress on ethical decision making.

A pilot study to determine the feasibility of using a three-dimensional scaffold to deliver endothelial progenitor cells (EPCs) to a wound

Sandra McAllister, James Bojdo, Christina O'Neill, Emma Reid, Jasenka Guduric-Fuchs, Reinhold Medina, Alan W Stitt

Introduction: Chronic wounds, such as decubitus and diabetic ulcers, affect some 200,000 people in the UK, at an estimated annual cost of over £3 billion. Although the aetiology is multifactorial, ischaemia of the wound microenvironment is a central factor.

Aim: To determine the feasibility of using dermal scaffolds to deliver pro-angiogenic stem cells to wounds.

Methods: Two fully characterised endothelial progenitor cell subpopulations were isolated from human adult peripheral blood and umbilical cord blood. Outgrowth endothelial cells (OECs) and myeloid angiogenic cells (MACs) were seeded alone or in combination onto a commercially-available dermal substitute (Glyaderm® or Matriderm®), or a collagen control scaffold (Optimaix). Scaffolds were implanted subcutaneously into an immunocompromised murine model.

Results: OECs formed three-dimensional microtubular structures in scaffolds; formation was potentiated by co-culture with MACs, but MACs did not incorporate into tubules. Cells persisted in vivo and formed functional vessels.

Discussion: Personalised pro-angiogenic cells could provide cell-based therapies for wounds, but using the optimum method to deliver cells to the wound is central to the potential efficacy of treatment. Dermal scaffold-cell constructs demonstrate great promise.

Biodegradable oesophageal stents for benign and malignant oesophageal strictures.

Stephen McCain, Scott McCain, Barry Quinn, Ronan Gray, Paul Rice

Introduction: Oesophageal strictures have a benign or malignant aetiology. Benign oesophageal strictures refractory to pneumatic dilatation may benefit from biodegradable stent insertion. Biodegradable stents may also have a role in management of malignant strictures to facilitate enteral nutrition while staging or neo-adjuvant treatment is completed.

Aims: To review the safety and efficacy of biodegradable stents in the management of benign or malignant oesophageal strictures.

Methods: All patients who had biodegradable stent insertion attempted were included for analysis. Data gathered included patient demographics, indication, pathology, pre and post-stent dysphagia scores and 30-day morbidity and mortality.

Results: Stents were deployed in 28 patients (17 benign, 11 malignant). There was one failure of deployment. There were no serious complications or 30-day mortality. Mean dysphagia scores improved significantly (benign- 2.65 to 1.00, $p < 0.001$, malignant 3.27 to 1.36, $p < 0.001$). Surgical resection was not compromised following stent insertion in the malignant group.

Conclusions: Biodegradable stent insertion is a safe and efficacious adjunct in the treatment of both benign and malignant oesophageal strictures. In malignant disease, biodegradable stent insertion can maintain enteral nutrition while staging or neo-adjuvant therapy is completed without adversely impacting on surgical resection.

POSTER PRESENTATIONS

Clinical Research

What Happens to Patients with Colorectal Cancer who do not undergo Resectional Surgery?

Stephen McCain

Introduction: Management of colorectal cancer depends on the stage of disease at presentation, fitness for surgery and personal choice.

Aim: The aim of this study was to follow a cohort of patients in the colorectal multi-disciplinary team recommended non-resectional management of the primary tumour.

Methods: Between January 2006 and January 2014, 975 patients were discussed at the colorectal multi-disciplinary meeting in the Belfast Trust. Data was collected prospectively by a research nurse but reviewed retrospectively and patients were followed until the 01/08/2014. Data collected included the reason for non-resection and other treatment received. The cause of death was categorised.

Results: 136 patients were included. The median age was 84 (range 69-94). Reasons for non-resection included; 94 patients had advanced disease, 31 were deemed unfit for surgery, 10 refused surgery and 1 had a synchronous ENT malignancy. Of the 94 patients with advanced incurable disease 28 patients required a surgical procedure and 14 had colonic stenting. 58 patients received palliative radiotherapy, chemotherapy or a combination. Of the 31 patients that were unfit for surgery, 1 required a palliative procedure. 9 died due to their colorectal cancer and 22 died secondary to medical conditions. None of these patients developed obstruction.

Conclusion: This study demonstrates the importance of careful MDT assessment of patients with a new diagnosis of colorectal cancer. Non-resectional management is acceptable in patients with advanced incurable disease and severe co-morbidities. Palliative surgical procedures were required in 1 in 5 cases.

Colonoscopy Associated Morbidity: A One Year Retrospective Study

Aaron McCloskey

Introduction: Colonoscopy is considered to be a reliable way of diagnosing a range of bowel conditions. Recognised complications include perforation (0.04%) and significant bleeding (0.25%). Around 0.25% require surgical intervention following colonoscopy.

Aims: To perform a retrospective study of colonoscopy associated morbidity in Belfast City Hospital (BCH) over a 1-year period.

Methods: The trust's Surgical Command software was used to obtain a list of patients who had undergone colonoscopy in the Endoscopy Suite from 01/08/2013 to 31/07/2014. Patients' unique identifying numbers were entered into the Electronic Care Record, emergency admissions within 2 weeks of the procedure were recorded.

Results: Data on 1,678 colonoscopies was collected. 3 patients were admitted with significant bleeding (0.18%). 3 patients were admitted with abdominal pain with no significant pathology found (0.18%).



2 patients were admitted with medication omission associated morbidity (0.12%). 1 patient was admitted with a reaction to the sedative midazolam (0.06%). 1 patient was admitted following a vasovagal episode (0.06%). There were no perforations. No patients required surgical intervention.

Discussion: Colonoscopy is a safe procedure. Complication rates in BCH are in line with national figures.

Review of Mortality and Long-term Effects on Renal Function in Patients that Received Continuous Renal Replacement Therapy in the Intensive Care Unit at Antrim Area Hospital

Ryan Murray

Introduction and Aims: Acute Kidney Injury long-term effects are understudied. We reviewed the outcomes of patients with AKI admitted to an ICU to assess their overall mortality and effects this had on their subsequent kidney function.

Methods: All patients requiring Renal Replacement Therapy (RRT) In Antrim Area Hospital ICU over 1-year were obtained via the Intensive Care National Audit and Research Centre system (64 patients). eGFR and creatinine measurements were obtained before their ICU admission and again at 30-days, 90-days and 1-year post-RRT commencement. Primary reason for ICU admission, mortality rates and requirement for ongoing RRT were also analysed after 1-year.

Results: The average age for patients receiving RRT in ICU was 63.8 years (66 % male, 34% female). Their baseline eGFR was 51.6mls/min. The most common cause for admission to ICU was septic shock (22%). The average eGFR at time of RRT commencement was 23.8mls/min. At 30-days, 90-days and 1-year post-RRT their average eGFR was 40.5mls/min, 42.0mls/min, and 42.6mls/min respectively. At 1-year post RRT 36% patients who had received RRT in ICU had died and 1 patient had established renal failure requiring maintenance dialysis therapy.

Discussion: Our review strongly emphasizes the poor outcomes associated with this condition, particularly high mortality rates and overall reduction in renal function.

Quality improvement / Patient safety

Screening for Alcohol Misuse Disorders in our Emergency Departments

Richard Cherry

Introduction: Screening for alcohol misuse disorders with the delivery of brief interventions in the emergency department (ED) has been shown to reduce rates of alcohol consumption, re-attendance rates, hospitalisation and overall alcohol-related morbidity and mortality. This is currently not standard practice in Northern Ireland.

Aims: To establish the point prevalence of alcohol misuse disorders amongst individuals attending Belfast's two EDs, over a one-week period, in order to drive service development with respect to the introduction of routine alcohol screening with brief interventions.

Method: As far as possible, all individuals over 18 years, attending the EDs were screened using the Audit-C at the time of triage. Patients who were medically unfit, intoxicated or refused were counted but not screened.

Results: 1114 (77.2%) of attendees completed the Audit- C. 49%

(547) of those met the criteria for an alcohol misuse disorder. 28% (312) met the criteria for harmful drinking while 235 (21%) were drinking at potentially dependent levels.

Discussion: All individuals attending the ED should be routinely screened for an alcohol misuse disorder at the time of triage. For those screening positive appropriate interventions should be offered.

Fluid Balance Chart Record Keeping and Prescribing'

Laura Davis

Aim: Examine whether record keeping is adequate and prescribing appropriate.

Methods: 34 charts were assessed against the hospital policy. We noted whether the correct chart was used, identification, ward, weight, date, previous days total I/O/B, cumulative totals on previous days charts, prescription indication, date, time, prescriber's signature and checks were recorded . Date last U&E taken was noted and whether an appropriate fluid +/- electrolyte prescribed.

Results: Wrong charts were used in 2 cases. 1 chart had no patient identification. Ward, weight and date weren't recorded on 23, 34 and 8 charts respectively. Previous days I/O/B weren't documented in 21, 20 and 27 charts respectively. 3 previous days charts had no cumulative I/O recorded. The previous days total I/O/B weren't calculated correctly in 8,4 and 2 charts respectively. No indication, date, time and prescribers signature in 24, 31, 10 and 32 charts respectively. 25 charts had a U&E taken the same day. A total of 4 prescriptions were not appropriate.

Conclusion: Fluid balance record keeping is not being completed adequately or accurately. In terms of patient safety and accuracy of prescribing can we be sure standards are being met? The results of this audit have highlighted that more training of staff is needed.

The A-Z Guide to Being a FY1 – A Peer-delivered Handbook and Complementing Workshop

Matthew Macartney

Introduction: Transitioning from medical student to FY1 is challenging and covering all the nuances of the FY1 role is beyond the scope of assistantship and induction. This intellectual shortfall has consequences ranging from efficiency of practice to resource utilisation.

Aims: Utilise experiential knowledge from outgoing FY1s to prepare new FY1s for practice.

Objectives: 1. Systematically compile a list of key learning points gleaned during FY1 (presumed intellectual shortfall) to a user friendly guide. 2. Optimise educational impact with FY1-led workshop concurrent to induction.

Methods: 1. Emailed FY1 staff asking for key tips gleaned during FY1. 2. Developed A-Z guide, distributed to new FY1 staff pre-induction. 3. FY1-led workshop systematically covered the guide, reinforcing key information. 4. Compiled feedback on the program to assess relevance, effectiveness and impact on self-reported confidence.

Results: 1. 100% FY1s returned 5/5 rating for every aspect of the workshop and guide. 2. Free text comments included - "practical, helpful, should be trust wide, interactive, feel at ease, relevant, most useful aspect of induction."



Conclusions: Providing practical experiential knowledge alongside a peer-led workshop supports the transition to FY1.

Recommendations: 1. Program should be adopted trust-wide. 2. Core components are regionally applicable, wider role should be explored. 3. Engage outgoing FY1s in annual cyclical program development to embed practice and sustain a vibrant contemporaneous resource.

The Use of Aspirin for Prevention of Pre-Eclampsia in High-Risk Pregnancies

Catherine Malone

Aims: Assess compliance with NICE clinical guidelines (all women with one high/ two moderate risk factors for developing pre-eclampsia should be prescribed aspirin 75 mg once/day from 12 weeks).

Methods: Retrospective chart review of 100 postnatal patients to determine the proportion of patients who fit the criteria above and who received aspirin.

Results: 12% of patients were moderate or high risk for hypertensive disease in pregnancy at booking (33.3% of whom developed hypertension). None were commenced on aspirin. Guidelines were highlighted during multidisciplinary meetings and wall charts of the NICE guidance provided in each consulting room. After re-audit of 100 patients one year later;

10% of patients were moderate or high risk for hypertensive disease in pregnancy at booking (30% of whom developed hypertension), 10% were commenced on aspirin

Discussion: This audit highlights the lack of awareness among health professionals regarding high-risk patients requiring aspirin therapy.

Recommendations: Wall charts of NICE guidance in each consulting room, Further education of staff regarding risk factors for pre-eclampsia requiring aspirin, Incorporation of risk factor assessment into maternity notes as per existing gestational diabetes guidelines.

The Importance of Early AKI Risk Assessment

Serena Martin

Introduction: AKI complicated up to 18% of admission with costs >£15 million a year in Northern Ireland. NCEPOD 2009 highlighted up to 20% of AKI cases are predictable and potentially avoidable. Trust wide audits revealed less than 50% are adequately risk assessed. We felt the design of the AKI tool was contributing to this.

Aims: Stage 1: Initial audit of AKI risk assessment compliance, Stage 2: Peer education and new design of AKI assessment tool, Stage 3: Re-audit AKI compliance

Methods: Initial audit of 50 acute medical patients admitted to DHH. Audit of risk assessment compliance and validation of the risk score attributed to see if we were correctly risk assessing admissions and identifying those at risk.

Results: 42% of assessments were completed and 29% of these were completed incorrectly. Only 30% of patients were adequately risk assessed on admission.

Discussion: After initial poor results we re-designed the assessment tool and educated peers on the importance of AKI risk assessment. We introduced this to the admission pro-forma then re-audited a

further 50 patients. Our revised pro-forma has resulted in a 98% adherence to AKI risk assessment. The new regional eAlert for AKI will allow for accurate AKI incidence rates which will help evaluate the impact of our pro-forma on AKI rates, severity, length of stay and costs.

Nutritional Screening and Management in Acute Stroke

John McGoran

Introduction: NICE guidelines on stroke advocate prompt nutritional screening and management, with appropriate swallow assessment, for acute admissions. Patients with acute stroke stand to benefit greatly from a concerted approach to ensuring adequate feeding.

Aims: The primary aim was to assess nutritional screening and management in a cohort of patients diagnosed with acute stroke. Furthermore, swallow screening measures were identified.

Methods: Stroke admissions from May-July 2013 (n=42) were assessed for adherence to guidelines on nutritional screening. The results were published and quality improvement measures were commenced. Admissions from March-May 2014 (n=31) were compared with those previous.

Results: 30/31 patients were admitted to the stroke ward compared with 29/42 previously. Pre-MUST screening improved from 69.0% to 87.1% with over a third qualifying for MUST however only 5/11 patients had this. Admission weighing improved from 57.1% to 74.2%. Despite educational efforts swallow assessment failed to improve.

Discussion: Improvements in stroke care are best implemented on a dedicated ward. Pre-MUST scoring may not be appropriate in this vulnerable population. We advocate direct MUST with weighing on admission. Greater liaison between disciplines is warranted and involvement of medical staff in swallow screening may improve onward referral.

Current Tourniquet Practices and What Pressure Should We Use?

Afiq Slim

Aim: To compare current tourniquet practices amongst Trauma and Orthopaedic Consultants and trainees in Northern Ireland with current guidelines and determine the lowest effective tourniquet pressure.

Introduction: Pneumatic tourniquet systems form an integral part of many orthopaedic surgical procedures helping to establish a bloodless field. Complications with the use of pneumatic tourniquets are rare but significant.

Methods: (1) An online questionnaire was e-mailed to all T&O Consultants and Trainees to establish current practices. (2) We also measured the Limb Occlusion Pressure on 20 injured lower limbs to ascertain the lowest pressure required to maintain a bloodless field which was assessed by an individual surgeon.

Results: The response rate was 50%. Only 22% used contoured cuff, 10% utilized stockinette as the undersleeve, 55% set their Lower Limb Tourniquet (LLT) pressure >300mmHg. Using the limb occlusion pressure to set the tourniquet pressure there was no requirement for the pressure to be above 250mmHg.

Discussion: Current guidelines are ambiguous and clinical knowledge are poor with regards the use of pneumatic tourniquets



highlighting the need for unit policies. We also advocate the use of Limb Occlusion Pressure to set the tourniquet pressure.

Medical Education

Attitudes of consultants to teaching medical students in small group settings

Lynn Darragh

Introduction: The delivery of medical student education has undergone significant change recently, shifting away from didactic lectures towards small group tutorials. Anecdotally enthusiasm for teaching is waning. This study aimed to assess the attitudes of consultants to teaching medical students in small group settings.

Methods: A Likert questionnaire was distributed to all consultants working in Northern Ireland. Attitudes to teaching, financial considerations, time constraints and attitudes to students were considered.

Results: 367 responses were received. 72% of responders were actively involved in teaching. Enjoyment of teaching was evident in the majority. Financial factors and time constraints were major influences on teaching. 60% felt they were not financially remunerated for teaching, however of this group 58% continue to be involved.

Conclusion: Consultants in this Deanery are actively involved in teaching and enjoy it. The perception of lack of financial reward is not a major deterrent. Time constraints are an issue and there is a desire to have teaching included in job plans. Medical student numbers were not identified as an issue in the setting of small group tutorials. Most Consultants are complimentary about student attitudes however there is an expectation that medical students should contribute more to their own learning.

Assessment of perception of task performance

Gail Davison

Introduction: Approximately 240 4th year medical students from Queens University of Belfast (QUB) will rotate through paediatric units in N.Ireland each year. Paediatric OSCEs revealed poor performance at prescribing paediatric medication despite attendance at an Interprofessional Education Pharmacy Workshop.

Aims: The aim of this study is to assess perception of task performance, assess actual task performance and compare.

Methods: The method includes completion of a 'Paediatric Skills Survey' form and assessment of three reciprocal tasks, which include prescribing common paediatric medication, prescribing paediatric intravenous maintenance fluids and plotting growth parameters on an appropriate centile chart. 39 4th year medical students are included in the study.

Results: Both expectation and actuality were measured on 4-point ordinal scales using Kendall's tau-b. Correlation of expected and actual performance for drug prescription was 0.129 (P=0.40) while correlation of expected and actual performance for plotting growth parameters was -0.039 (P=0.80). Only 2 students gained a pass at IVF prescription despite 38 students expecting a pass of greater.

Discussion: The assumption that students are able to indicate assurances in skill performance are disproven. Lack of correlation between perception and performance would put a greater emphasis

on continued assessment of medical students and doctors in training.

The European Working Time Directive (EWT) and Surgical Training

Scott McCain

Introduction: EWT compliance for surgical trainees poses significant challenges for patient care, training and service provision.

Aims: To examine the impact of EWT compliance on operative experience for specialty registrars (StRs) in General Surgery and to compare mortality rates as a measure of surgical safety for compliant and non-compliant rotas.

Methods: Over an 18 month period StR operative experience in a District General Hospital was assessed when working full shift, 24-hour partial shift and on-call rotas. Mortality rates were analysed for each rota pattern.

Results: Median operative exposure increased with an on-call, compared with a full shift rota (184 vs 111, p=0.022). There was no difference in emergency or endoscopy experience. Increased experience was evident across all indicative procedures for Certificate of Completion of Training (CCT), reaching significance with regard to number of cholecystectomies (p=0.020). Significance was almost reached for inguinal hernia repair (p=0.058) and appendicectomy (p=0.055). There was no difference in mortality rates for each rota pattern.

Discussion: EWT compliance resulted in reduced operative exposure, incompatible with achievement of CCT. Surgical safety reflected by mortality rates remained similar throughout. On-call rotas provide better training with equivalent surgical safety.

Why do OSCE Examiners vary?

Andrew Robinson

Introduction: Examiner variation can be as high as 17 % for any Objective Structured Clinical Examinations (OSCE). Some examiners have been labelled as "hawk" examiners and others as "doves". Students expect an even playing field, where the only difference between candidates is student ability and knowledge. However, examiner variation can impact on the student's final mark.

Aims: The aims of this research are to identify who are the extreme examiners and explain the factors why examiners vary.

Methods: A prospective questionnaire was administered to all Final MB OSCE examiners in February 2014. The questionnaire asked general demographic questions about the examiner. Quantitative results were analysed using SPSS.

Results: A total of 128 returned questionnaires were returned, with a response rate of 69%. No examiner within this cohort was identified as being extreme. No individual factor was statistically significant to explain examiner variation. However, there was a trend that the more junior examiners displayed "hawkish" behaviours.

Discussion: There were no examiner specific factors identified that influenced examiner variation from the cohort in this study. Examiner bias and variation is reduced by pre-exam examiner workshops and online e-learning packages on awarding a global score.

Does Video Feedback Improve CPR Performance?



UMJ is an open access publication of the Ulster Medical Society (<http://www.ums.ac.uk>).

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Andrew Spence

Introduction: Teaching and feedback in Advanced Life Support Cardiopulmonary Resuscitation (ALS-CPR) have been developed in QUB using high-fidelity mannequins.

Aims: Determine if video feedback is superior to verbal feedback in CPR training; Determine if video feedback is superior to verbal feedback in individual components of ALS; Determine the effectiveness of video feedback on retention of CPR skills.

Methods: 137 final year students attended the Clinical Skills Centre (QUB). Cohort A received verbal feedback on their performance and cohort B received video feedback. Video analysis (StudioCode software) was distributed to students. The study was repeated four weeks later. Performance was assessed with an OSCE tool.

Results: Video feedback students had significantly greater improvement in scores compared to those receiving verbal feedback ($p = 0.006$). Individual skills, including ventilation quality and global score were significantly better using video

feedback ($p = 0.002$ and $p < 0.001$, respectively). Video feedback showed statistically significant improvement in global score and drug administration timing.

Discussion: Use of video feedback when teaching CPR is more effective than verbal feedback and enhances skill retention. Video feedback in CPR training should be considered for all such teaching sessions.

Does Video Feedback Aid Skill Retention in Wound Suturing?

Robert Spence

Introduction: There is a lack of curricular time for both under- and post-graduates to learn and practise new skills.

Aim: This study aims to compare skill retention in medical students performing wound suturing with, and without, the use of video feedback.

Methods: Forty students were randomly allocated into verbal or video feedback groups in this cross-over study. Video feedback was given using Apple iPad (StudioCode software) giving a quantitative score. At session 1, one group received video feedback, and the other verbal feedback. Students were crossed-over, the skill repeated and scored, receiving video or verbal feedback. All completed a third session where the skill was repeated and scored.

Results: Thirty five students completed all three sessions. Receiving video feedback leads to higher skill retention than verbal feedback, with only 4.6% decrease of mean score from baseline, compared to 14.6% decrease in the verbal feedback group ($p = 0.005$). When the verbal feedback group received video feedback, their skill retention increased by 16.0% ($p = 0.005$).

Discussion: Video feedback improves undergraduate practical skills performance, allowing greater skill retention, with implications for teaching and assessment in craft specialities.

Case Reports/series

No Pain No Gain? A Case Report and Literature Review of Spinning Class-induced Rhabdomyolysis

Ashley Elliott

We present two near identical cases of exercise naive young women who had attended their first spin class and subsequently developed rhabdomyolysis. Both cases made a complete recovery in hospital without evidence of end organ damage.

Discussion: Exertional rhabdomyolysis (ER) is a rare but established clinical entity. It can present as a spectrum of illness, ranging from asymptomatic elevations in serum muscle enzymes to life-threatening electrolyte imbalances, compartment syndrome and acute kidney injury. A literature review revealed three papers reporting spin class induced rhabdomyolysis.

Our findings support the current evidence relating to risk factors for the development of ER. However, we found Creatinine Kinase (CK) levels peaked at day 5, which is later than documented in other publications, questioning the appropriate safe discharge time. As detailed our cases recovered fully, but a patient in a previous case review developed compartment syndrome, despite having similar pre-morbid characteristics. The outcome therefore can be variable and unpredictable. With the popularity of spinning classes increasing, our case report asks is it time that more information is given to those undertaking this type of training?

Uterine Arteriovenous Malformation Managed with Therapeutic Embolisation'

Catherine Malone

Case Study: A 32 year old para 1+2 required IV tranexamic acid for torrential menorrhagia one month after D+C for missed miscarriage. This procedure was complicated by massive haemorrhage despite removal of products of conception and laparotomy revealing an intact uterus. Balloon tamponade and massive blood transfusion arrested the bleeding. Histology confirmed products of conception and haematological studies ruled out any coagulation disorders. Her first pregnancy ended in D+C for miscarriage at 7 weeks, followed by an emergency caesarean section at term. She suffered a PPH intra-operatively and required two subsequent emergency laparotomies and seven units of blood for uterine angle extension and posterior uterine tears. Pelvic angiogram following second D+C showed a large AVM of the uterine blood vessels with multiple feeders. She had bilateral uterine artery embolisations, requiring three treatments before symptoms abated.

Discussion: Uterine AVMs are rare lesions with potentially catastrophic complications. They can be congenital or acquired-associated with gestational trophoblastic disease or secondary to uterine trauma. Presentation can vary from menorrhagia to life-threatening post-partum or post-instrumentation haemorrhage. Historically treatment of choice has been hysterectomy, however with interventional radiology successful embolisation of these lesions can be achieved.

Fluorine-18 Fluorodeoxyglucose Avid Oesophageal Tumour in a Fifteen Year Old Boy – A Diagnostic Dilemma

Andrew McGuigan

Introduction: A mediastinal soft tissue mass was incidentally discovered on the chest x-ray of a fifteen year old boy who presented with collapse. There was no reported dysphagia, regurgitation or weight loss. Subsequent investigations confirmed a large, solid, intramural mass in the distal oesophagus with normal overlying mucosa. Positron emission computed tomography (PET-CT) revealed the tumour to be FDG avid with an SUV max of 5.8. Given



the concern regarding possible malignancy raised by the PET-CT, an Ivor-Lewis oesophagectomy was performed. Histology from the resected specimen was consistent with a benign leiomyoma of the oesophagus.

Discussion: Leiomyoma is rare, but represents the most common benign oesophageal neoplasm (67-80%). Endoscopy, endoscopic ultrasound, CT and PET-CT are all useful modalities in characterising an oesophageal mass and determining the likelihood of malignancy. There have been six previously reported cases of a benign, isolated oesophageal leiomyoma showing abnormal FDG uptake on PET-CT, none of which involve an adolescent patient. Resection or enucleation (open or minimally invasive) have both been described as valid treatment options. Oesophageal leiomyoma can cause abnormal FDG uptake in the absence of malignancy. Such lesions require careful endoscopic, radiological and intra-operative assessment to determine the diagnosis and most appropriate treatment.

PASH syndrome

Bryan Murphy

A 26 year old female presented with painful, discharging wounds in her axillae and groin. She had severe acne, suppurative hidradenitis (SH) and stable ulcerative colitis (UC) with prior subtotal colectomy and ileostomy. She denied joint problems. Despite intravenous antibiotics her wounds deteriorated warranted minimal surgical debridement and washout. Pathology demonstrated pyoderma gangrenosum (PG). She responded well to adalimumab having failed infliximab due to hypersensitivity.

Discussion: PASH syndrome is a rare, autoinflammatory condition consisting of a triad of PG, acne and SH. It is similar to PAPA syndrome (PG, acne and pyogenic arthritis) but without joint involvement, satisfying the criteria of a disease entity distinct from infection, allergy and autoimmune disorders. No genetic mutation has been found.

An association between inflammatory bowel disease and neutrophilic dermatoses is well known, however is more commonly observed in Crohn's patients. Concomitant SH and PG is so rare that a review in 2010 identified only 20 such patients; none having UC. Our review of the literature in September 2013 identified only two peer-reviewed reports describing PASH syndrome. Our patient appears to be the first case following colectomy for UC and furthermore the first to be successfully treated with adalimumab. We suggest this as a viable treatment option.

Acute Budd Chiari in previous JAK 2 Negative Patient

Rebecca O'Kane

Introduction: Budd-Chiari syndrome is an eponym for hepatic venous outflow tract obstruction, whatever the level or the mechanism of obstruction. Primary Budd-Chiari syndrome is related to thrombosis of hepatic veins or the terminal portion of the inferior vena cava. This rare disease is usually caused by multiple concurrent

factors, including acquired and inherited thrombophilias.

Case: A 49 year old female admitted at the end of June 2014 with increased abdominal distension and ankle oedema. She was found to have acute Budd Chiari Syndrome, with significant ascites and underwent a TIPSS at start of July, which was unsuccessful owing to thrombus in the graft. She was therefore listed for transplant on an urgent basis, receiving an orthotopic liver transplant in August 2014. She had previously been seen by haematology in 2011 for investigation of a mild thrombocytosis, was negative for JAK 2 mutation at that time and underwent a bone marrow biopsy. They concluded that her thrombocytosis was likely reactive to her chronic sinus and chest problems (asthma, bronchiectasis). Post-transplant investigations of rising platelet count found her to be JAK 2 positive and she was started on hydroxycarbamide. Of note, her haemoglobin on admission in June was normal but with microcytic red cell indices, an elevated red cell count and thrombocytosis. She was seen again seen by haematology in September 2014 who felt that the picture is consistent with polycythaemia vera and concomitant iron deficiency. It was felt that the underlying myeloproliferative neoplasm undoubtedly contributed to the initial thrombotic event. She is currently receiving antiplatelet therapy with aspirin together with warfarin- aggressive measures with the aim of preventing further thrombotic episodes.

Traumatic Rupture of the Sternocleidomastoid Muscle following an Epileptic Seizure

Nicola Wooles

A 29 year old known epileptic, presented to A&E following a tonic-clonic seizure lasting five minutes during which he fell striking his head. He suffered a second self-limiting seizure in the department. Following these he complained of neck pain, swelling and stiffness. Otorhinolaryngology examination of his neck revealed: a tender left side with two palpable masses, reduced rotation to the right and lateral flexion to the left, and no focal neurological deficit. Ultrasound scan showed a ruptured middle third of the left sternocleidomastoid muscle. He was treated non-surgically with analgesia and intensive physiotherapy. Six weeks later there was significant functional improvement despite a palpable defect in sternocleidomastoid.

Discussion: Treatment of a ruptured sternocleidomastoid muscle is primarily conservative with early physiotherapy to reduce the torticollis risk and subsequent cosmetic and functional repercussions. Early surgical correction is advocated in patients resistant to physiotherapy.

Uncommonly sternocleidomastoid muscle rupture has been reported following high velocity trauma, but to our knowledge this is the first case described in the literature following an epileptic seizure. The case illustrates the importance of thorough examination to exclude significant pathology that may be masked by the presenting complaint and effectiveness of conservative therapy in selected traumatic ruptures.

