1097: EMERGENCY GENERAL SURGERY ADMISSION PROFORMAS: THE VALUE OF REPEATED AUDIT TO DELIVER SUSTAINED IMPROVEMENTS

Sarah Wheatstone*, Brenda Stacey, Kothandaraman Murali. *Darent Valley Hospital, Dartford, Kent, UK.*

Introduction: Clear, accurate and legible medical records are essential elements of good medical practice and prevent medical errors. The assessment and prescription of venous thrombosis (VTE) prophylaxis is a CQUIN target. We reviewed documentation standards before and after introduction of a dedicated emergency general surgery admissions proforma. After further adjustments we twice re-audited improved proformas.
Methods: We audited 50 consecutive emergency admission case notes at four different times: April 2011, October 2011, November 2012 and January 2014. Notes were inspected for patient demographics, team contact details, clinical documentation and management plans. Drug charts and handover sheets were also reviewed. Inpatient referrals were excluded.
Results: At final audit, significant improvements were found for patient identifying details (71%-100%, $p<0.001$), VTE risk assessment (2-86%, $p<0.001$), allergy documentation (87%-100%, $p<0.01$), and differential diagnosis (87-98%, $p<0.05$). There were sustained improvements in the recording of admitting doctor, investigations, and prescription of analgesia, anti-emetics and intra-venous fluids. Despite a prompt box, decision to operate and capacity assessment were rarely recorded.
Conclusions: A printed proforma can prompt admitting surgeons to capture more information. Re-audit followed by proforma refinement and team education can improve results further. General surgical teams should be engaged in these changes in the documentation process.

1099: SOFTLY SPREADING? THE INCIDENCE OF SOFT TISSUE INFECTIONS IN AN IRISH REGIONAL HOSPITAL

David Kennedy*, Sarah Phelan, Helen Mohan, Caoimhe Byrne, Niamh Bambury, Ken Mealy. *Wexford General Hospital, Co. Wexford, Ireland.*

Introduction: Soft-tissue infections are a major cause of morbidity and a burden on hospital resources. Internationally, their incidence is rising.[1] The main aim of this study was to examine trends in soft-tissue infection at an Irish regional hospital.
Methods: A retrospective analysis of a prospectively maintained surgical audit database (based on the Lothian surgical audit system) from January 2000 until December 2012 was performed. Information collected included baseline demographics, number of admissions, length of stay, and rates of surgical intervention. Statistical analysis was performed using Graph Pad Prism 6.
Results: In total, there were 1388 admissions for cellulitis from 2000-2012. There was a significant increase in the mean number of admissions per year over the study period, with a 53.4% increase from 2000-2003 compared with 2009-2012 ($p=0.0286$ Mann-Whitney U test). However, the mean length of stay remained unchanged (7.6 days versus 6.5 days, p=ns).
Conclusions: The incidence of soft-tissue infections is rising. This has implications for planning delivery of acute surgical services. Potential approaches include community based care for a suitable subset, and a focus on primary prevention.[1] Lautz TB, Raval MV, Barsness KA. Increasing national burden of hospitalizations for skin and soft tissue infections in children. J Pediatr Surg 2011 Oct; 46(10):1935-41.

1101: IS BILIRUBIN A USEFUL MARKER IN DIAGNOSING APPENDICITIS?

Umar Sharif, David Mathews, Ahmed Karim*, Michaela Janks, Hannah Boyd-Carson, Tiramula Raju. *Heart of England Trust, Birmingham, UK.*

Introduction: Acute appendicitis remains the most common surgical emergency. Inflammatory and biochemical markers remain are important tools in the diagnosis. Raised bilirubin is noted in other intra-abdominal pathologies. Our aim was to identify if raised Bilirubin was accurate in confirming appendicitis based on histopathology assessment.
Methods: A retrospective case note review of all appendicetomies performed in our trust between 2011 – 2013 was carried out. Using a proforma, data was extracted on demographics, blood results, type of operation, operative findings, and final histology.
Results: 584 appendicetomies were performed. Overall histology positive for appendicitis were found in 453 (77.5%); Bilirubin was tested on 369 (81.4%) of all patients with histologically confirmed appendicitis. Bilirubin was found to be raised (>20 IU/L) on 297 (80.4%) of patients with histologically confirmed appendicitis and tested for bilirubin.
Conclusions: Bilirubin was tested on 81.4% of patients with confirmed appendicitis. Of those that had histologically confirmed appendicitis 80.4% had raised Bilirubin. 19.6% had normal Bilirubin levels. Current evidence confirms raised bilirubin in response to intra-abdominal pathology. Based on these results we believe that Bilirubin may be a useful marker in diagnosing acute appendicitis, combined with clinical assessment. Further studies are needed to clarify this correlation.

1108: ACUTE SURGICAL ADMISSIONS IN THE AGING POPULATION?

Stephen Ball*, Jodie Milward, Srinivasan Ravi. *Blackpool Victoria Hospital, Blackpool, UK.*

Introduction: With an aging population and increasing life expectancy, the number of elderly patients admitted to acute surgical units is increasing. This study evaluated these admissions - do they have a prolonged length of stay?
Methods: Retrospective data collection was performed over a three month period. Data collected included age, length of stay, diagnosis, investigations, operations and place of discharge. Vascular and urology patients were omitted.
Results: 114 patients admitted were aged over 80. The average length of stay was 5.6 days (range 1-33). 12 patients had operative intervention, with 1 mortality (8%). In hospital mortality was 11% (13) - 4 were deemed too unfit for surgery. 72% of patients admitted for greater than 10 days needed either complex discharge or transfer to a medical ward.
Conclusions: Emergency surgery has good outcomes when performed on the correct patient. This study highlighted that the majority of patients (90%) were managed conservatively. Could these have been managed under the care of the physicians with regular surgical input? Further detailed works is needed to trial and evaluate the impact of a multidisciplinary approach with care of the elderly physicians would have on improving the service and care of acute elderly surgical patients.

1131: EVALUATION OF THE RELIABILITY OF THREE CLASSIFICATION SYSTEMS FOR THE DISTAL RADIUS FRACTURES ALONG WITH CT IMAGING

Michail Chatzikonstantinou*, Korina Theodoraki, Arealis Georgios, Ilias Galanopoulos, Christos Kitsis. *Queens Hospital, Burton on Trent, UK.*

Introduction: To evaluate the reliability of the distal radius fractures classification systems (AO, Fernadez and Universal) by determining inter-observer (agreement between assessors) and intra-observer (agreement with the initial assessment) accuracy based on plain radiographs and subsequent use of CT scans.
Methods: A prospective randomized study was performed using 26 patients with a displaced distal radial fracture. Five orthopeadic surgeons were asked to classify the patients' plain radiographs and CT scans. Reproducibility was assessed by the use of the proportion of agreement and kappa coefficient between pairs of observers.
Results: Classification systems generate fair to moderate interobserver reproducibility (Kappa = 0.19-0.43) when using both X-rays and CTs. The highest values were obtained with the Fernandez classification using CT scan (Kappa 0.43- moderate agreement, 55% inter-observer and 11.5% agreement with the "golden rule"). The lowest values were obtained with the Universal classification (Kappa 0.19 - slight agreement, 27% inter-observer and 0% agreement with the "golden rule"). There was no significant improvement of outcomes with the use of CT imaging.
Conclusions: No classification system generates satisfactory interobserver reproducibility sufficient for clinical application. Intra-observer reproducibility did not improve dramatically after obtaining CT scans, questioning the role of CT as a preoperative assessment tool.

1132: RESTRUCTURING IRISH TRAUMA SERVICES: AN ANALYSIS OF TRAUMA BURDEN AND OPTIONS FOR RECONFIGURATION

Daniel Mullan*[,1], Helen Mohan[1], Frank McDermott Whelan[1], Rory Whelan[1], Cathal O'Donnell[2], Des Winter[1]. [1] *St. Vincent's University Hospital, Dublin, Ireland;* [2] *National Ambulance Service, HSE, Ireland.*

Introduction: Level I trauma centers are associated with improved trauma outcomes. Ireland currently does not have a Level I trauma center. This study aimed to examine the distribution of trauma in Ireland, and

determine how to "best fit" trauma care in Ireland to international models.

Methods: An estimate of Irish trauma burden and distribution was made using data from the Road Safety Authority (RSA) on serious or fatal RTAs. Models of a restructured trauma service were constructed and compared with international best practice.

Results: Trauma care is currently provided by 26 acute hospitals, with no Level I trauma center. (mean distance to hospital 20.6Km from site of RTAs). Based on our population, Ireland needs two Level 1 MTCs (in the two areas of major population density in the East and South), with robust surrounding trauma networks including level 2 or 3 trauma centers. With this model, the estimated mean number of cases per Level 1 MTC per year would be 628, with a mean distance to MTC of 80.5Km +/-59.2Km, (maximum distance 263.5Km).

Conclusions: Trauma care in Ireland is not in keeping with international models. To reform trauma services Ireland needs major trauma centers with surrounding comprehensive trauma networks and prehospital infrastructure.

1146: DOES THE INTRODUCTION OF AN EMERGENCY SURGICAL UNIT IMPROVE PATIENT WAITING TIMES?

Susan Yoong, David Hunter *, Patrice Eastwood. *Royal Victoria Hospital, Belfast, UK.*

Introduction: In June 2013 a new Emergency Surgical Unit (EMSU) with a dedicated emergency surgical team was introduced to the Royal Victoria Hospital, Belfast. Our aim was to determine if the introduction of the EMSU improved time from A&E to senior surgical review. Time from decision to operate to surgery was also audited against current standards set out by the Royal College of Surgeons of England (RCS).

Methods: A retrospective review was carried out of patients admitted via A&E who had either an emergency laparotomy or appendicectomy during July and August 2012 (Group 1; n=22). This group was compared to patients who had an emergency laparotomy during June and July 2013 after the introduction of the EMSU (Group 2; n= 24).

Results: The mean time from A&E consult to senior surgical review improved by approximately 30mins after the introduction of the EMSU (194mins vs 166mins). The percentage of patients meeting the RCS target times was 81% in group 1 and 75% in group 2.

Conclusions: The introduction of an EMSU has had a positive impact on patient waiting times to senior surgical review. This audit also identified time delays to theatre as an area that could still be improved upon.

1166: ADULT UPPER LIMB REPLANTATIONS AND REVASCULARISATION OUTCOMES: A 7-YEAR BIRMINGHAM AUDIT

Angus Kaye *[,1], Yez Sheena [1], Darren Chester [1]. [1] *Queen Elizabeth Hospital Birmingham, Birmingham, UK.*

Introduction: There is limited literature on digital replantation, particularly from UK based centres. We report our experience of hand and digital replant and revascularisation procedures at a Trauma Centre in The West Midlands.

Methods: A retrospective analysis identified digit/hand replantations and revascularisations between October 2004 and September 2011. Mechanism of injury (MOI), operative details and outcomes were recorded from electronic patient records.

Results: 28 patients with mean age 39.4 years had 41 digit and 3 hand replants/revascularisations. Power-saw was the leading MOI (15/28). 9/33 replant and 9/11 revascularisation procedures were successful. All hand replant/revascularisations survived. Of single digit procedures, 8/13 replantations and 3/3 revascularisations survived. Multiple digit procedures had a worse outcome; 3/18 replantations and 2/7 revascularisations survived. No replantation/revascularisation survived if attempted beyond 12 hours ischaemia time and 27 digits ultimately required terminalisation. Complications occurred in 25 digits; 19 of these occurred within 24 hours of surgery. Of the 7 congested digits, all received leeches but only the 3 that commenced this within 24 hours survived.

Conclusions: Power-saw, multiple replanted digits and longer ischaemia time were predictors of poor outcome. Early leech therapy improved survival. Our results may reflect differences in MOI and a lower threshold for attempted replantation.

1190: 30-DAY MORTALITY OF EMERGENCY LAPAROTOMY IN A DISTRICT GENERAL HOSPITAL: A RETROSPECTIVE AUDIT

Khawar Hashmi *, Jason Wong, Christopher Bastionpillai, Hannes Gransberg, Maitham Al-Wouhayb. *Barnet General Hospital, Enfield, UK.*

Introduction: To compare the 30-day mortality rate (MR) following emergency laparotomy (EL) performed at our institution with the National Emergency Laparotomy Audit (NELA) results published in 2012.

Methods: List of EL performed from November, 2012 to October, 2013 retrieved. Electronic patient records and notes reviewed and demographics, intra-operative (Consultant presence, immediate complications) and post-operative data (Destination, 30-day MR, complications) were noted. Data was analysed using Microsoft Excel 2010 software.

Results: (n=90) patients, age 70 years, 24-90years (Median + IQ). Male to female ratio of 1.25:1. Non risk adjusted 30-day MR was 12% as compared to 14.2% national average. 30-day MR was 12.5% in cases performed during day time, 10.8% in evenings and 20% during night time. 30-day MR was 30.7% among those who required ITU care post-operatively. Median days of hospital stay were 19. Overall mortality was 38.4% in ASA 4 group. Consultant surgeon was present in 98.8% cases while anaesthetic consultant was available in theatre in 75% cases. Overall morbidity was 49%.

Conclusions: EL carries significant risk of morbidity and mortality. Procedures performed with consultant surgeon and anaesthetist's presence carry a favourable outcome. There is growing need of developing a national strategy to improve outcomes of EL in UK.

1206: COMPLIANCE WITH COLLEGE GUIDANCE ON OPERATIVE DOCUMENTATION IN LAPAROSCOPIC APPENDICECTOMY

Mohamed Mohamud *, Andrew J. Beamish, Danielle Eddy, Thulasi Kurubaran, Brian Stephenson, Gethin Willliams. *Royal Gwent Hospital, Newport, UK.*

Introduction: Appendicitis represents the most common surgical abdominal emergency, affecting 7% of the population during their lifetime and laparoscopic appendicectomy is safe and effective for the treatment of uncomplicated appendicitis. With reducing thresholds for litigation, accurate and appropriate documentation of operative procedures and findings is crucial to minimise the burden to the NHS of legal action. This audit aimed to quantify compliance with i. RCSEng guidance; ii. local consensus on documentation from a medico legal perspective.

Methods: Operative records were assessed from 100 consecutive laparoscopic appendicectomies at a large DGH in 2013. Standards used were RCSEng published guidance and local consensus on important documentation items used in legal challenges.

Results: Seventy-eight records were fully compliant with RCS guidance, but none was fully compliant with medico legal documentation consensus. Documentation was particularly poor regarding perforation (16%), direct vision port insertion (34%), thromboprophylaxis instructions (34%) and comments on other organs (48%). The grade of trainee did not affect the standard of documentation ('SHO' vs 'SpR', p=0.466), but trainees outperformed Consultants (81% vs 33% RCSEng compliance, p=0.02).

Conclusions: Compliance with RCSEng guidance was good, but medico legally pertinent documentation was lacking. Training on medico legal aspects of documentation may be useful for trainees and Consultants alike.

1213: WHAT IS THE DIAGNOSTIC VALUE OF WHITE CELL COUNT, NEUTROPHIL COUNT, C-REACTIVE PROTEIN IN ACUTE AND PERFORATED APPENDICITIS?

Kevin Cao *[,1], Jessica Ng [2], Zuhaib Keekeebhai [2]. [1] *North Middlesex University Hospital, London, UK;* [2] *Core Surgery Trainee – London Deanery, London, UK.*

Introduction: White cell count (WCC), neutrophil count (NC) and C-reactive protein (CRP) are used as adjuncts in the diagnosis of appendicitis. The aim of this study was to determine the diagnostic accuracy of the above blood tests in acute and perforated appendicitis.

Methods: We retrospectively reviewed appendicectomies at a district general hospital in 2013. Operative and histology findings were correlated with admission blood tests.