Introduction: This study aims to describe the population that sustains distal femoral fractures, comparing them to hip fracture patients.
Methods: A retrospective cohort study using prospectively collected data on a consecutive series of distal femoral fractures sustained between 2010 -2013 was performed. Data was compared to published information for hip fractures including the national hip fracture database (NHFD).
Results: The series comprises 49 fractures (48 patients). Comparing distal femoral with hip fractures, there was no significant difference in gender (81% female versus 73%, p=0.30) but the distal fracture group was younger (mean age: 75 versus 83 years, p<0.01). 12 patients (25%) had ≥3 co-morbidities, compared with 7% hip fracture patients (p<0.001). At 30-days the mortality rate was 0%; it is approximately 8.2% for hip fractures. 120-day mortality rate for the distal fracture group was 6.3%. 5 (10%) patients developed pressure ulcers following their injury compared with 3.5% nationally for hip fractures (p=0.01).
Conclusions: Although younger, the population of patients with distal femoral fractures are frailer, with multiple co-morbidities and a higher incidence of pressure ulcers. These findings support a multi-disciplinary approach to management, which could be driven by an incentivized best practice tariff similar to that used for hip fractures.

0432: RADIATION SAFETY AND EXPOSURE TO ORTHOPAEDIC SURGEONS

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Introduction: The ICRP guidelines recommend that individuals working with operative ionising radiation should wear a thyroid shield and lead impregnated glasses. A retrospective questionnaire demonstrated 100% of orthopaedic surgeons were non-compliant & 86% demonstrated no knowledge of radiation guidelines. Our aim was to estimate the effective radiation dose and the awareness of the stochastic effect on the lens and thyroid. To determine if there is a difference in radiation exposure of trainees and consultants.
Methods: Trauma Theatre records for 138 cases in a 6-week period were collected retrospectively. X-ray images were consulted to identify total absorbed radiation dose (mGy)/case. This was converted to the effective dose to the orthopaedic surgeon using IRCP standardised tissue weighting factors.
Results: No consultants exceeded the ICRP recommended dose for thyroid (20 milliseverts). 50% of consultants exceeded the recommended dose for the lens (18 milliseverts). 28% of trainees exceeded the dose for thyroid. 82% of trainees exceeded the dose for lens. 4 trainees received >2x the recommended dose to lens.
Conclusions: This abstract highlights the potential stochastic health risks through severe lack of optimisation of personal protection and dose limitation, but also the obliviousness of radiation safety. The figures show a marked discrepancy between guidelines and actual clinical practice. Ionising radiation shows a linear-dose relationship for induction of cancers. It's therefore imperative that trainees are educated to wearing thyroid shields and lead impregnated glasses and increase awareness of ALARA principle.

0513: REDUCING UNNECESSARY ULTRASOUND REQUESTS IN EMERGENCY SURGICAL ADMISSIONS FOR LOWER ABDOMINAL PAIN

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Introduction: During a previous audit we found that 18% of ultrasound scans (USS) for lower abdominal pain were performed on inappropriate patients (Royal College of Radiology guidance). We introduced guidelines and have now re-audited our practice.
Methods: All USS performed for lower abdominal pain in adult emergency General Surgical admissions over 8 weeks were recorded prospectively, collecting demographics, request details, results and outcomes. Patients who had surgery within the last 28 days were excluded. Women of childbearing age (WCBA) was defined using WHO criteria (16-49).
Results: 49 patients had USS over the study period (96% female). 45(92%) USS were in accordance with our guidelines. There was a decrease of inappropriate USS by 50% (p=0.188). 12/45 scans performed on WCBA found pathology(8 ovarian, 2 appendicitis). 33/45 WCBA had normal USS with 8/33 having laparoscopies. 25/33 WCBA were discharged with no further inpatient treatment. The 1/4 inappropriate USS incidentally revealed liver metastases.
Conclusions: Potential annual savings are £1600 on not performing unnecessary USS alone. The study though underpowered, shows an improvement in practice after simply displaying our guidelines in clinical areas. This audit exhibits the usefulness of USS in WCBA, while demonstrating its limited usefulness in men and older women.

0562: LAPAROSCOPIC APPENDICECTOMY IN OBESE PATIENTS IS ASSOCIATED WITH SIGNIFICANT IMPROVEMENTS IN CLINICAL OUTCOME

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Introduction: Obese patients with general surgical emergencies provide unique challenges to emergency surgical teams. This systematic review evaluates the outcomes of emergency general surgical procedures in obese versus non-obese patients.
Methods: Primary outcomes evaluated were mortality, morbidity and duration of surgery. Secondary outcomes evaluated were superficial and deep surgical site infections, conversion to open surgery, and length of post-operative stay.
Results: Seven retrospective cohort studies and one prospective RCT met inclusion criteria. Four studies compared the outcomes in obese versus non-obese patients but the cohort is limited to those undergoing laparoscopic appendicectomy (LA). Six studies had the comparative outcomes of laparoscopic and open appendicectomy (OA) in obese patients. There is no published data reporting the outcomes of other general surgical emergencies in obese population. There was no statistically significant difference in outcomes between the obese and non-obese patients undergoing LA. LA in obese patients is associated with reduced mortality, reduced morbidity, reduced superficial wound infections, shorter operating times and post-operative length of hospital stay, compared to OA.
Conclusions: LA appears to be a safer alternative approach to open surgery in obese adult patents. There is no significant difference in the outcomes between the obese and non-obese patients undergoing LA.

0613: THE EMERGENCY GENERAL SURGICAL UNIT: THE CLINICAL AND ECONOMIC BENEFITS OF THE CENTRALISATION OF EMERGENCY GENERAL SURGERY

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Introduction: General surgical emergency admissions are the largest group of surgical admissions to UK hospitals, with high mortality up to 40% and considerable costs to the NHS. The creation of a centralised emergency general surgery unit (EGSU) at a University hospital in 2008, with a dedicated ward and team of consultants, was designed to improve such outcomes.
Methods: A retrospective observational study was conducted of patients who attended the EGSU between 2006 and 2012. Primary outcome measures were overall mortality and length of stay. Secondary analysis looked at emergency laparotomy with 30-day/long-term mortality as primary outcomes. Statistical analysis used Chi squared and Kaplan-Meier methods.
Results: Overall mortality fell from 2.3% in 2006 to 1.3% in 2012. Median length of stay reduced from 4.3 days in 2006 to 3.3 days in 2012, leading to savings of 5088 bed days and around £1.1million in one year. 226 patients underwent emergency laparotomy in 2007 with 30-day mortality of 19.5%. This reduced to 9.6% in 2012. The 2-year survival of patients undergoing emergency laparotomy in 2007 was 63%, increasing to 70% in 2012.
Conclusions: The introduction of an EGSU in a high volume unit improved mortality, reduced length of stay with considerable cost savings.

0629: PELVIC FRACTURES, HELICOPTERS AND THE INJURY SEVERITY SCORE – IS THERE A CORRELATION?

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Introduction: To assess if there is a difference in Injury Severity Score (ISS) of patients with pelvic and/or acetabular fractures admitted to Major Trauma Centres (MTCs) with or without the facility for helicopter transfer.