The total cost was £595,348 (£6,300 per patient). The cost related to hospital bed-days occupied was (£522,060). Radiology costs were £3388. Medication costs were £3,517. Blood test costs were £1,619. Operative costs were £61,632. Histology costs were £3,074.

**Conclusion:** Length of stay should be targeted in order to reduce costs. This study is limited by the difficulty to accurately ascertain the cost of staffing and certain other costs.

**0831: DOES GREATER ACCESS TO DIAGNOSTIC LAPAROSCOPY REDUCE NEGATIVE APPENDICECTOMY?**

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**Aims:** Limited guidance exists regarding best use of diagnostic laparoscopy in general surgery. Local expertise and cost have resulted in variable implementation across the UK. We aimed to assess whether increasing opportunity to perform diagnostic laparoscopic surgery reduced negative appendicectomy rates in females of child-bearing years.

**Methods:** This was a retrospective audit of women, 18–45 years, who underwent laparoscopic appendicectomy from April 2007–April 2011. Patients were identified using hospital codes for laparoscopy, appendicitis and normal appendix. Operative notes were examined for intra-operative diagnosis and compared with histological diagnosis. Seventy-five patients were audited. At operation, 29 had a normal appendix described, 38 appendicitis and 8 other pathology.

**Results:** 46.7% of appendices removed were histologically normal. Intra-operative diagnosis correlated with pathology in 45 women (60.0%). Consultant surgeons performed 12 appendicectomies (16.0%) and registrars 67 (84.0%) with intra-operative diagnostic accuracy 41.7% and 63.5% respectively (P=0.15).

**Conclusions:** Our data shows poor correlation between intra-operative and histological diagnoses. In our unit, incidence of negative appendicectomy exceeded rates reported in the literature for open surgery (10–30%). This suggests laparoscopy is unreliable in diagnosing appendicitis and does not improve with experience. We suggest that diagnostic laparoscopy be sparingly in a climate where economic viability is paramount.

**0878: A REVIEW OF OUTCOMES FOR APPENDICECTOMY COMPARING LAPAROSCOPIC AND OPEN APPROACHES**

Christopher Emmett, Poonam Valand, Claire Millins, John Martin, Venkatesh Shanmugam. Darlington Memorial Hospital, Darlington, County Durham, UK

**Aim:** Appendicectomy may be performed either open or laparoscopically, with the latter gaining in popularity. We aim to assess the difference in outcome between the two approaches in a population of adults and children.

**Method:** Ninety-seven patients were identified between 1st June and 31st October 2011. Complete clinical data was available for ninety. Surgeons’ preference and clinical judgement determined which approach was employed.

**Results:** 90 patients were included, 50% (n=45) male and 48% (n=88) emergency. 39 were open procedures, 51 were laparoscopic (3 converted to open, 6%), 19 appendices were histologically normal (21%); proportionally more of these were removed laparoscopically (29% vs 10%, p=0.037). Post-operative stay was shorter following laparoscopic surgery (1.8 vs 2.7 days, p=0.04). In-hospital complications were marginally higher after open procedures (8% vs 2%, p=0.31) as were 30-day re-admission rates (10% vs 6%, p=0.46); not statistically significant. Patients with abnormal histology had a higher mean white cell count (WCC) (13.5 vs 11.2, p=0.07) and CRP (71 vs 20, p=0.027) at presentation.

**Conclusions:** Our data demonstrates similar complication rates for both approaches. However, length of stay is shorter after laparoscopic surgery. More normal appendices were removed laparoscopically. WCC and CRP were identified as valuable markers in diagnosing acute appendicitis.

**0909: IDENTIFICATION OF HIGH RISK SURGICAL PATIENTS**

Mersey Emergeny Surgery Audit (MEnSA) Study Group Mersey Research Group for Surgery (MeRGS), Merseyside, UK

**Aim:** A recent publication from the Royal College of Surgeons suggested guidance on management of high-risk surgical patients. However, the most appropriate way to identify these patients is unclear. We compared efficiency of P-POSSUM and ASA score to identify high-risk patients.

**Method:** In 8 acute trusts, all emergency surgery operations were identified during a 30-day period in 2011. Details on operation and in-hospital mortality within 30 days were recorded. High-risk was deemed as P-POSSUM predicted mortality >10% or ASA ≥3. Data was analysed centrally. Inter-observer agreement was compared with kappa statistic.

**Results:** 430 procedures were identified. Overall mortality was 6% (24 patients). 65 cases were identified as high risk using P-POSSUM and 143 using ASA. Correlation between the two methods was fair (kappa=0.38). Of those deemed high-risk by P-POSSUM, 14 died (26.5%) leaving 10 patients not identified; sensitivity 63%, specificity 88%. All 24 who died had an ASA ≥3; sensitivity 100%, specificity 71%.

**Conclusion:** Although specificity of ASA is lower, it appropriately identified all in-hospital mortalities. ASA is easier to calculate and is available preoperatively allowing it to be used to optimize surgical management. ASA is a robust and accessible identifier of high-risk patients.

**0945: HAVING NO ASSISTANT AT HIP FRACTURE SURGERY RAISES INFECTION RATE AND MORTALITY**

Charlotte Lewis, Olivia Mitchell, Sherief Elsayed, Christopher Moran, Daren Forward. Queens Medical Centre, Nottingham, UK

**Introduction:** We sought to evaluate the influence of consultant supervision and presence of assistants in hip fracture surgery with respect to infection rate and mortality.

**Methods:** Retrospective study of patients admitted to the Queen’s Medical Centre with a fractured hip (n=9032). Comparisons were made between infection rates and assistant availability when a consultant was present or absent, the infection rate when a single surgeon operated and mortality with or without an infection complication.

**Results:** The overall infection rate was 2.9% (120/4086), with no significant difference in infection rate when surgery was performed by a consultant compared to a trainee (p=0.186). When a consultant was present, 27.4% had no assistant; when absent, 49.6% cases were operated on by a lone surgeon (p=0.001). With a lone surgeon the infection rate was significantly higher regardless of their grade compared to when there was a surgeon and an assistant (3.6% (63/1742) compared to 2.4% (57/2344), p=0.027).

**Conclusion:** This study provides evidence that a lone surgeon in hip fracture surgery raises infection rates leading to increased mortality. Absence of a consultant increases the chance of operating unassisted.

**0952: LOWER ABDOMINAL PAIN IN FERTILE FEMALES – A DIAGNOSTIC DILEMMA IN EMERGENCY SURGERY**

Andrew Torrance, John Hardman, Lewis Taylor, Alex Coupland. Heart of England NHS Foundation trust – Good Hope Hospital, Birmingham, UK

**Introduction:** Females of childbearing age presenting with lower abdominal pain remain a diagnostic dilemma. This study aims to examine whether initial presenting signs, symptoms or investigations can be used to predict diagnosis.

**Method:** A retrospective audit was performed of all female patients of childbearing age presenting with lower abdominal pain to a general surgical take over a 6 month period. Details from their history and examination, blood tests, urinalysis, imaging, operation and diagnosis were collected.

**Results:** 200 patients were identified, median age 24 (IQR 19–36). 57 (28.5%) patients had non-specific abdominal pain, 51 (25.5%) gynaecological, 31 (15.5%) gastrointestinal, 29 (14.5%) appendicitis, 23 (11.5%) urological and 9 (4.5%) other diagnoses. Multivariate logistic regression identified neutrophilia as a predictor of appendicitis (p=0.001; OR=6.034 [95%CI 1.511-24.088]) and recent history of gynaecological complaint (p=0.002; OR=6.303[95% CI 2.008-19.789]) and irregular menstruation (p=0.039; OR=12.430 [95%CI 1.140-135.584]) as predictors of gynaecological pathology.

**Conclusion:** This study has shown that in fertile females with lower abdominal pain referred to the general surgeon a high proportion have causative gynaecological conditions. Patients with a recent history of a gynaecological complaint have a significant increased likelihood of having a gynaecological cause for referral. These patients may be best initially investigated by a gynaecologist.