GS01
EARLY OPERATIVE MANAGEMENT OF ACUTE CHolecystitis

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There is now good data to support early laparoscopic cholecystectomy for acute cholecystitis as compared to non-operative management and interval operation. Complications rates are similar but hospital stay is significantly shorter. The problem remains in providing the service and resources to enable the majority of patients with acute gallstone disease to undergo early surgery. This will be discussed in detail on the background of separating elective and emergency surgery and sub-specialising in emergency surgery. Specific management of associated complicated scenarios related to acute cholecystitis will also be examined.

GS02
EMERGENCY GENERAL SURGERY: WHO SHOULD DO IT?

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The efficient, timely and expert provision of emergency surgical care is a core concern for the population, governments, health administrators and for surgeons. Current societal and professional trends are contributing to the difficulty of staffing emergency surgical services.

- Answers to the question of who should provide emergency care involve many considerations;
  - There should be an ongoing high level of Consultant involvement.
  - There must be an ongoing high level of commitment by the government and the increasing specialised surgical profession, providing high quality emergency services.
  - A new stand-alone specialty of emergency surgery is a possible but problematic solution.
  - Surgeons involved in emergency surgery need training and skills in a broad range of general surgery and surgery in general.
  - In regional, remote and outer suburban locations general surgeons need high level emergency skills in other specialties.
  - It is feasible and desirable that surgeons in specialties other than general surgery can be trained and perform as an Emergency surgeon for their hospital.
  - For some specialties such as paediatric surgery this would involve very little extra preparation. For others, a combination of recognition of prior learning obtained before their specialty training and appropriate post fellowship training would be needed.

GS03
SEPARATION OF ELECTIVE AND EMERGENCY SURGERY

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With the current reductions in trainee hours of work, resource limitations and the inevitable re-organisation of regional hospitals, it has become increasingly important to improve the management of emergency patients in order to reduce hospital stay and associated complications. Conditions left in the past to be operated on at night by junior trainees or managed non-operatively when early surgery has been shown to be better, is no longer acceptable. However, improving the management of emergency patients without impacting on the ever-increasing workload of elective patients remains the challenge and cannot be met without separating the two services. Consultants and trainees need to have no other commitments when ‘on-call’ and should be provided with appropriate ward and operating resources. For continuity of care this period of on-call should be for several days, perhaps with other teams covering the night work, but every unit will have their own solution. Various models of service re-configuration will be discussed along with data from Edinburgh, where emergency and elective surgery was separated in 1997 and then emergency services sub-specialised in 2004.

GS04
TRAINING AND MAINTENANCE OF EMERGENCY SKILLS IN AUSTRALIA

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The need to definitively manage emergency conditions which fall outside a surgeon’s regular elective practice will depend on the size of their hospital, the urgency of the treatment and the time required accessing tertiary assistance.

The RACS general surgical curriculum includes the emergency management of many conditions in areas of surgery increasingly not covered in elective surgical practice. The relatively new SET (Surgical Education and Training) program has potentially reduced trainee exposure to other specialties previously experienced during formal rotations of the defunct Basic Surgical Training program. These changes have led to increased numbers of trained surgeons who feel challenged by emergency surgical practice. SET may need to be supplemented with individually configured post fellowship experience.

Rural rotations are an important source of training and exposure to the emergency management of surgery in general. Rotations on sub-specialty general surgical units are also essential for high volume experience in defined areas of surgical endeavour.

Training continues throughout professional life. Working with specialist colleagues on emergency cases is a potent learning environment for a qualified surgeon. Clinical attachments and skill courses also allow rapid incorporation of new skills. A panel of mentors covering a range of specialties facilitates appropriate advice and decreases anxiety.

Adequate staffing of emergency surgical rosters will require surgeons with sub-specialty elective interests to maintain a commitment to surgery in general. Attendance at multi-speciality educational forums such as the RACS ASC will remain important.

GS05
TRAINING AND MAINTENANCE OF EMERGENCY SKILLS IN THE UK

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The core part of any Consultant general Surgeon’s workload is emergency surgery and it is this area which is most associated with complications, mortality, complaints and litigation. There are however a multitude of factors which make training and maintenance of emergency skills difficult. These include the reduced working hours of trainees and the increasing sub-specialisation of the consultant surgeons. While solutions may vary from one unit to another the key drivers to improvement relate to increasing the volume of work when on-call to maximise experience for the trainees and to provide better supervision for as much of this work as possible. This clearly will involve regional re-organisation of emergency services and changes in consultant job plans and working practices. Furthermore maintaining these emergency skills in the light of increasing sub-specialisation and in some cases a low volume of emergency workload, also needs to be addressed. These problems will all be discussed and some solutions suggested.
THE DELIVERY OF SPECIALIST SERVICES TO A WHOLE POPULATION

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The surgical profession has advanced its range of skills and effectiveness in part by specialisation. Specialisation has many advantages, but the rigid division of conditions into artificially designated specialist areas of endeavour has disadvantages in the realms of access, equity, safety, efficiency and cost.

What the whole population needs is access to the “benefits” of specialisation, not necessarily direct access to Specialists. A model of care that involves the delivery of most services close to home by available resident generalists, working in collaboration with remote but engaged specialists, has the ability to enhance emergency care, decrease duplication, increase holistic care and be cost effective for both the state and the patient and their family. The cooperative model has inherent quality control and education, established pathways for referral and repatriation, and enhances the professional development and efficiency of both the participating specialist and generalist.

When considering the delivery of surgical services, a modest increase in standards of care affecting the whole population is likely to have a greater net effect that focusing limited resources on a few “centres of excellence”. The modern, often uncritical trend to centralise specialist services on the basis of volume/outcome studies needs to be re-evaluated. A more sophisticated consideration of the elements that contribute to high quality care and good outcomes may allow regionalised care and acknowledge the powerful effects of access and equity on the health of whole populations.

CONTROVERSIES IN POSTINJURY COAGULOPATHY

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Most deaths in injured patients arriving to the hospital with major blood loss are due to progressive coagulopathy. Thus, identifying the patient at risk for coagulopathy and treating the factors associated with defective coagulation is integral to initial management. Factors predictive of severe coagulopathy include persistent haemorrhagic shock reflected by metabolic acidosis, extensive tissue disruption, core hypothermia, and massive transfusion. During the Viet Nam war, coagulation abnormalities were recognized to be associated with prolonged shock and ultimately a poor prognosis (1). However, extensive prospective studies by the Puget Sound Blood Center found a relatively poor correlation between PT, PTT, and bleeding times with coagulation status in patients requiring massive transfusion (2). Consequently, when whole blood transfusion was changed to blood component management, it was acknowledged that FFP should be given empirically with packed RBCs in patients anticipated to need a massive transfusion (3). More recently the concept has been extended to presumptive platelet transfusion (4). Despite 40 years of investigation, three inter-related areas of controversy exist today: (1) the pathogenesis of the acute coagulopathy of trauma, (2) the optimal ratio of blood components to be administered for resuscitation of the critically injured patients, i.e., damage control resuscitation, and (3) the end points for blood component management, i.e. goal directed therapy.

A RETROSPECTIVE REVIEW OF THE MANAGEMENT OF INTRAOPERATIVELY CONFIRMED BILE DUCT STONES

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Introduction: Laparoscopic common bile duct exploration (LCBDE) is as safe and efficient as endoscopic retrograde cholangiopancreatography (ERCP) in experienced laparoscopic centres but its use in the wider surgical community is less certain. We examine the use of LCBDE in managing bile duct stones (BDS) confirmed on intraoperative cholangiography (IOC) during cholecystectomy over a 3 year period in a single institution of General Surgeons with general surgical trainees.

Methodology: A retrospective review of notes was undertaken for patients who underwent IOC during cholecystectomy at Waitemata District Health Board between November 2006 and October 2009. Patients who underwent LCBDE to manage BDS confirmed on IOC were included.

Results: 651 patients underwent IOC during cholecystectomy. 95 patients were confirmed to have BDS. 41 patients underwent LCBDE with BDS cleared in 21 patients (51.2%). Conversion to open common bile duct exploration occurred in 4 patients (9.8%). General and procedure-specific complications in the two years following LCBDE occurred in 12 patients (32.4%) with Clavien-Dindo complication classifications ranging from Grade I to Grade III.

Conclusions: LCBDE is a useful tool for managing BDS. It can be successfully used by general surgical trainees and General surgeons without subspecialty interests in Upper Gastrointestinal or Hepatobiliary surgery.

DELAYED WOUND REPAIR DUE TO THE BACTERIAL REDOX TOXIN POLYCYNIN

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Purpose: Pseudomonas aeruginosa is a recognised cause of delayed wound repair, but the mechanism for this is poorly understood. This study was to examine the effect of the redox toxin of Pseudomonas aeruginosa, the pseudo aeroginosa, and the number of mitotic cells counted 24 hrs later. The cells were then harvested and incubated for a further 4 days, with cell proliferation assessed using MTT assay. Wound repair was assessed by scoring confluent layers of HDF and allowing cell regrowth to occur with or without polycyanin.

In vivo – 10 mice were subjected to skin biopsies and allocated to a control and treatment group with the wounds subjected to treatment with either polycyanin or glycerol/saline. The wounds were examined and photographed at 8 days and images analysed to determine percentage of initial wound area.

Results: In vitro an initial exposure, polycyanin inhibited cell replication with proliferative arrest persisting for several days. The wound repair assay showed that polycyanin delayed healing. In vivo polycyanin produced significant delay in wound healing across several clinically concentrations.

Conclusion: Polycyanin, a redox toxin secreted by P aeruginosa, is a potent inhibitor of fibroblast proliferation which persists for several days following a single exposure to the toxin that it delays wound healing in clinically relevant concentrations. Based on these findings, specific therapeutic targeting of polycyanin or its production by P aerogenosia may improve wound healing outcomes.

OPEN VS LAPAROSCOPIC CHOLECYSTECTOMY DURING PREGNANCY: A SYSTEMATIC REVIEW

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Purpose: Recent evidence suggests that compared to conservative management, the operative management of symptomatic cholelithiasis during pregnancy results in decreased overall morbidity. The aim of this systematic review is to compare the outcomes of the laparoscopic and open approach for cholecystectomy during pregnancy.

Methodology: A literature search was conducted using MEDLINE, PubMed and EMBASE using appropriate search terms. All comparative studies reporting maternal, fetal, and surgical complications were included.

Results: Six comparative studies, with a total of 9,906 patients were included. The laparoscopic approach was used at 19 weeks gestation and the open approach was used 28 weeks gestation. There was a significant difference between the two techniques for maternal complications with open 9% (95% CI: 7.5%–11%), laparoscopic 4% (95% CI: 3.4%–4%), (p < 0.001); and for fetal complications open 14% (95% CI: 6.0%–29%), laparoscopic 7% (95% CI: 4.5%–11%), (p < 0.001); and surgical complications for open 21% (95% CI: 12%–34%) and laparoscopic 10% (95% CI: 9.0%–11%). The average length of hospital stay was shorter by 3 days for laparoscopic cholecystectomy.

Conclusion: The results of this first systematic review suggest that laparoscopic cholecystectomy may be associated with fewer complications than open cholecystectomy during pregnancy. These findings however, do not account for the severity of symptomatic cholelithiasis in determining the surgical approach used nor gestational age during pregnancy, both of which may be significant confounding factors. The results support intervention earlier in the pregnancy with a laparoscopic approach. Further studies are required that evaluate the outcomes during pregnancy.
GS11
WARM HUMIDIFIED CARBON DIOXIDE GAS INSUFFLATION FOR LAPAROSCOPIC APPENDECTOMY IN CHILDREN: A RANDOMISED CONTROLLED TRIAL

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Purpose: Pneumoperitoneum during laparoscopy is typically created with dry, room temperature carbon dioxide (CO2) gas leading to desiccation-related peritoneal structural and inflammatory alterations. Clinically, this is linked to additional postoperative pain and delayed recovery. Warm humidified insufflation gas prevents peritoneal dessication and therefore may improve patient outcomes in children after laparoscopic appendicectomy.

Methodology: A double-blinded, randomised controlled trial was implemented. Intervention group participants received warmed (37°C) humidified (98% relative humidity) insufflation gas while control participants received standard room temperature (20°C) gas with 0% relative humidity. Perioperative analgesia and anaesthesia was standardised and intraoperative body temperature was regularly monitored. Severity of laparoscopic camera lens fogging was rated by the surgeon. Postoperative opiate usage was expressed as Morphine Equivalent Daily Dosages (MEDD) and pain intensity at rest and on moving was assessed using visual analogue scales. Postoperative recovery was assessed using a Day 10 questionnaire.

Results: Over a 13-months period, 190 participants were randomised. Intervention (N = 95) and Control (N = 95) groups were matched at baseline and intraoperative body temperature variation was statistically similar. There were no statistically significant differences in postoperative MEDD and pain intensity scores. Postoperative recovery parameters and the severity of camera lens fogging were also found to be statistically similar.

Conclusion: Warm humidified CO2 gas insufflation for laparoscopic appendicectomy has no short-term clinical benefits in paediatric patients.

GS12
THE LILY WHITE APPENDIX

Iain Hennessy
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Purpose: A normal appendix is traditionally described as being lily white in colour. I aim to identify whether a normal appendix is or perceived to be this colour using colourmetric analysis of normal appendices and their representations.

Methodology: 23 surgeons were asked to identify the colour of a normal appendix from a possible 9 choices. Images of normal appendices were obtained from laparoscopic and text sources and their colour identified using an RGB system. The RGB profiles were then matched to existing named colours using an online colour naming tool. These colours were then compared to the official colour profile of lily white.

Results: Surgeons believe that the normal appendix is a colour called beauty bush, which correlates closely to anatomical textbooks which appear to be tony’s pink. Laparoscopic images of appendices are opium in colour. None of the perceived or measured colours match lily white’s colour profile or the colour of a white lily’s petals.

Conclusion: A normal appendix is not lily white in colour.

GS13
SINGLE PORT SPLENECTOMY

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Purpose: Laparoscopic splenectomy using three or four ports is well established as the gold standard for resection of normal or slightly enlarged spleens; however the operation can also be performed using a single port technique. In this video presentation we demonstrate our operative technique and review the results of our first 13 cases.

Methodology: All patients referred to our unit for elective spleenectomy since January 2011 were considered for a single port technique if they had a normal sized or slightly enlarged spleen, no previous extensive upper abdominal surgery and a normal BMI. The operations were all performed by two surgeons (MS, JPP) or their fellows under supervision, and digitally recorded. Patient demographic data, indication for surgery, operation time, length of stay and any complications were all recorded, and compared to patients undergoing standard laparoscopic splenectomy in the same time period.

Results: All 13 cases were successfully completed via the single port; there were no conversions to standard laparoscopy or open surgery. In cases where the spleen was required to be extracted intact, this was achieved via a Pfannenstiel incision. There was no significant difference in operating time or length of stay compared to standard laparoscopy, and no recorded complications.

Conclusion: Single port splenectomy is a safe, feasible and cosmetically appealing alternative to standard multiport laparoscopy. Further study is needed to establish whether there are advantages such as reduced postoperative pain or wound complications.

GS14
FLESH EATING BACTERIA: THE SURGICAL SOLUTION

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Necrotising soft tissue infections are life threatening emergencies for which surgery remains the prime therapeutic modality. Aetiological agents include a variety of bacteria and fungi but the infection follows a common pathway of tissue necrosis initially and remarkably, confined by fascial planes. Diagnosis can be difficult and is principally made by clinical observation, sometimes supplemented by CT, MRI and bed-side biopsy. Effective treatment requires initial resuscitation followed by urgent surgery. Anti-microbials are initially adjuncts. There is a good rationale but little high grade evidence for hyperbaric oxygen and other specific novel therapies. The principal aim of surgery is radical debridement of all non-viable tissue. Outcome is related to the time to first effective debridement. Repeated debridement is the rule.

Strategies to manage the large resultant defects are needed. Vacuum dressings are often appropriate. Early closure with split skin grafts is often indicated once the wound is no longer necrotic. Medium-term and long term reconstructive options are varied and often challenging.

GS15
DEDICATED GENERAL SURGERY EMERGENCY THEATRE SESSIONS REDUCE WAITING TIMES FOR OPERATIONS, AND IMPROVE SURGEONS’ JOB SATISFACTION

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Purpose: To assess the impact of consultant led, dedicated General Surgical Emergency operating sessions on service provision and surgeon job satisfaction at a regional hospital.

Methodology: From 1 February 2011, daily half-day operating lists were allocated for General Surgical emergencies. Patients treated on these lists were studied prospectively until 31 December 2011. Theatre waiting times and hospital stay were compared with the previous years’ cohort. A quality of life questionnaire was administered to all participating surgeons before commencement of the project, and after six months.

All figures are stated as median (95% confidence interval). Data were compared using the Kruskal- Wallis or Chi-square test as appropriate.

Results: During the control period, 969 patients underwent surgery during an emergency general surgery admission. During the study period, 984 underwent surgery. The median time from arrival in the Emergency Department to surgery was reduced from 19.0 (18–21) hours in the control group to 18.0 (17–19) in the study group (P = 0.033). The time from booking surgery to operation was reduced from 4.8 (4.3–5.4) hours to 3.9 (3.5–4.3) hours (P < 0.0001). There was no difference in total length of stay (3.0 (3.0–4.0) vs. 3.0 (3.0–3.0) (P = 0.12)) nor in post-operative stay (2.0 (2.0–2.0) vs. 2.0 (2.0–2.0) (P = 0.14) between the two groups.

During the control period, 592/969 (61%) of cases were commenced between 1800 and 1800, compared with 658/984 (67%) in the study group (P = 0.0090).

The surgeons’ responses to the questionnaires showed improvement in their job satisfaction (P < 0.0001).

Conclusion: This project has reduced waiting times for patients and improved job satisfaction for surgeons.
GS16
SUNSHINE HOSPITAL ACUTE SURGICAL UNIT MODEL: IS THE NEW BETTER THAN THE OLD?

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Purpose: To evaluate the performance of the new Sunshine Hospital (SH) Acute Surgical unit (ASU) versus the superseded model, and to compare it with the general surgical unit at Western Hospital (WH). The ASU model seeks to improve the efficiency, outcomes and training quality of the general surgical unit.

Methodology: All cases of appendicectomy, diagnostic laparoscopy for right iliac fossa pain, and emergency cholecystectomy were evaluated over 24 weeks in 2010 (pre-ASU) and 2011 (ASU). Data was sourced from Sunray Surgical Audit program, iPM system and medical records across both hospitals.

Results: 614 patients were recruited. At SH (values are 2010 vs 2011):
- Time from surgical review to appendicectomy (SR-Ap) increased from 10h19min to 13h12min (p<0.01) and time from US to cholecystectomy (US-Ch) increased from 21h36min to 26h38min (p=0.43). Increase in the number of operations ‘in-hours’ (42% vs 58%) and an increase of registrar as the first operator (23% vs 32%). Median total length of stay (LOS) has stayed constant at 3 days and median LOS post op has decreased from 2 to 1 days (p<0.01).
- Grade 3 complications have decreased from 9% to 6%. At WH (no ASU):
  - Time from SR-Ap increased from 8h24min to 11h16min and time from US-Chole has decreased 50h52m to 49h26m.
  - Median LOS post op has stayed constant at 2 days.

Conclusion: The introduction of ASU has resulted in an increase in overall time to theatre, with a corresponding increase of in-hours operating and increase in educational opportunities for the surgical trainee. It has also led to a decrease in hospital stay and decrease in serious complications. If we also compare this data to Western Hospital, the ASU has resulted in better outcomes for our patients.

GS17
ACUTE CHOLECYSTITIS AND EMERGENCY SURGERY: THE BAWREN HEALTH EXPERIENCE

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Background: Acute cholecystitis is a common cause of emergency surgical admission. The study’s objective was to determine how the Geelong Hospital outcomes compare regarding the timeliness of operation following the introduction of a dedicated emergency surgical list.

Methodology: As a baseline, all admissions with acute cholecystitis that underwent emergency cholecystectomy from February 2008 to October 2010 were identified. These were compared to data following the introduction of an Emergency Surgery Project in February 2011. The patients with pancreaticis were identified and analyzed separately.

Results: Emergency cholecystectomy was performed on 229 cases during the baseline 3-year period of the non-pancreatitis 47 (23.61%) were operated on within 24 hours; 116 (58.2%) within 48 hours and 159 (79.8%) patients by 72 hours. After the trauma list had commenced 44.44% of patients were operated on within 24 hours, 79.01% by 48 hours and 92.59% by 72 hours. The preoperative length of stay was reduced at 36 hours. We also noted statistically significant increase in patients receiving their operation during the acute admission and a decrease in patients being placed onto the public waiting list and postoperative length of stay.

Conclusion: Following the implementation of a General Surgical Trauma List we have been able to double the number of patients operated on within 36 hours of presenting with acute cholecystitis, operated on a higher proportion during their acute admission, decreased post-operative length of stay and reduced the number of patients put on the elective waiting list.

GS18
FLESH EATING BACTERIA IN THE OUTBACK

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Introduction: A retrospective audit over a 5-year period shows that Central Australia has a higher incidence of necrotising fasciitis than elsewhere in Australia. Despite the increased incidence of necrotising fasciitis in Central Australia and the difficulty in an early diagnosis, we report a significantly decreased morbidity and mortality.

Aim: We assess the incidence of necrotising fasciitis in Central Australia in order to show the relationship between specific risk factors and severity, diagnosis and presentation.

Methodology: We performed a retrospective audit of 5 years from 1st July 2006 to 31st June 2011 of data for patients admitted to Alice Springs Hospital with necrotising fasciitis and Formier’s gangrene.

Results: In the analysed 5-year period we identified 33 patients with necrotising fasciitis, of whom 17 required ICU admission. Our average LOS was 36 days (range 3–146) and our overall mortality was 12.1% (4 patients). This is considerably lower than the reported mortality of 25–73% in the literature.

Conclusion: We discovered our time from presentation to initial debridement, one of the key indicators for prognosis, averaged 26.7 hours (range 3–137). 94% of our patients were indigenous Australians, and 70% were diabetic.

GS19
ADHESIVE SMALL BOWEL OBSTRUCTION: PREDICTION OF STRANGULATION

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Purpose: Small bowel obstruction (SBO) due to adhesions from previous operations is common. The predictors of strangulated small bowel (SSB) are unreliable leading to concerns about the safety of non-operative management. The study aims to determine the predictors of SSB.

Methodology: All patients a diagnosis of acute SBO from 1994 to 2008 had their medical records reviewed. Independent variables pertaining to demographics, clinical features and investigations on admission were collected. The cohort of patients were divided into: 1. Urgent operation 2. Initial non-operative management 3. Failed initial non-operative management.

Results: 271 patients were diagnosed with acute SBO due to adhesions with 323 admissions. 52 (16%) had urgent surgery for presumed SSB; 11 (21.2%) had strangulation. 271 (84%) were initially managed no operatively, 150 (55.4%) resolved, 121 (44.6%) required surgery for failure to resolve. Clinical findings that conferred an increased likelihood of SSB were tachycardia (OR 2.99, p<0.03). Only 1 (0.3%) patient with no predictive factors for strangulation was admitted developed strangulation.

Conclusion: The absence of predictors of strangulation safely predicts the absence of strangulation allowing for safe non-operative management. The prediction of the presence of strangulation is inaccurate. A higher number of clinical indicators for strangulation confer a greater likelihood for strangulation.
**GS20**  
**AETIOLOGY AND OUTCOMES OF ACUTE PANCREATITIS IN WESTERN SYDNEY**  
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**Purpose:** Acute pancreatitis is a common surgical presentation, yet the causes, severity and outcomes are not known for Western Sydney. The aim of this study was to determine the aetiology, severity and outcomes of acute pancreatitis in Western Sydney.

**Methodology:** A retrospective cohort analysis of patients presenting with acute pancreatitis to four Western Sydney hospitals was undertaken between January 2009 and October 2011. Data from medical records and the hospital electronic pathology database was reviewed. Ethics approval was obtained from SWAHS Ethics Committee.

**Results:** During the study period 844 patients presented with acute pancreatitis. The median age was 51 (11–95) and 414 (49%) were male. Common causes were choledolithiasis (40.5%), alcohol (21.1%) and (25%) were idiopathic. A total of 51 (6%) patients were admitted to ICU, with an average ICU stay of 14 days. 705 (83.5%) patients were assigned a modified Glasgow score of which 10.6% had severe pancreatitis. 63 (7.5%) patients had local complications; pseudocyst (34), necrosis (22), fistula (4), ascites (2) and abscess (1). Only 10 (17.4%) had severe pancreatitis on Glasgow. Systemic complications developed in 78 (9.2%) patients, most commonly respiratory failure (24), sepsis (20) and renal failure (16), 20 (25.6%) had severe pancreatitis on Glasgow score. Mortality was 0.7%.

**Conclusion:** Gallstones were the most frequent aetiology of pancreatitis Western Sydney with a large group of idiopathic cases. The gallstone: alcohol ratio was 2:1. The majority of patients had mild pancreatitis. Local and systemic complications were not confined to the severe cases.

**GS21**  
**RECURRENT LAPAROTOMY FOR ABDOMINAL SEPSIS**  
**Simon Paterson-Brown**  
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There are two main scenarios for recurrent laparotomy for abdominal sepsis. The first follows some form of GI surgery when sepsis develops from some event such as a leaking anastomosis; and the second is in a patient with widespread peritonitis whose initial surgery does not result in resolution, or resolution is only temporary. Diagnosis and decision making are often difficult in both groups of patients and careful and experienced assessment on a regular basis is required along with high quality imaging. In some cases prevarication can be fatal and repeated return to the operating theatre may be required. Once the decision has been made for a recurrent laparotomy the surgeon can employ laparostomy, temporary mesh closure and negative pressure dressings, all of which have a role to play. Early diagnosis, decision-making and surgical strategies will be discussed.

**GS22**  
**RANDOMIZED CLINICAL TRIAL OF PROBIOTICS IN ENTERAL FEEDING IN CRITICALLY ILL PATIENTS**  
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**Introduction:** Gut failure in critically ill patients is common. Enteral feeding is one of the preferred routes of nutrition support to maintain gut function. However, enteral nutrition is not without complications such as alterations in gut transit time and gut eco-culture. Enteral nutrition supplemented with a probiotic offers a possible solution to modulating this ecosystem.

**Objectives:** The primary aim of this study was to investigate the effect of probiotics in enteral feeding on improving the gut function, inflammatory markers and clinical outcomes in critically ill patients.

**Methodology:** Forty-nine patients that were admitted to the intensive care unit in University Malaya Medical Centre requiring enteral feeding were randomized to receive either probiotics Hexbio or a placebo. Patients remained in the intensive care unit for more than 7 days and were examined prior to the start of enteral feeding and on day 8. Return of gut function was assessed by the time needed. Inflammatory markers including the White Cell Count and C-reactive protein levels were tested on day 1 and day 8. Clinical outcome was assessed by number of days of ventilation and total days in intensive care unit.

**Results:** There was a faster return of gut function in patients with the combination therapy of probiotics (p < 0.00). Inflammatory markers were similar between the 2 groups. Patients in the treatment arm had both shorter ventilation days and days in intensive care unit.

**Conclusions:** Probiotics enhances gut functions in critically ill patients who receive enteral feeding.

**GS23**  
**PREVALENCE OF MALNUTRITION AND NUTRITIONAL ASSESSMENT IN ABDOMINAL-SURGICAL PATIENTS: A PROSPECTIVE CROSS-SECTIONAL STUDY**  
**Boonying Siribumrungwong, Baiboon Srithamma, Kitchai Kuntupreeda, Prakitpunth Tomitchong and Veerata Paohareun**  
*Faculty of Medicine, Thammasat University, Pathumthani, Thailand*

**Purpose:** Nutritional intervention is important in abdominal-surgical patients. This study aimed to determine the prevalence of malnutrition, the rate of nutritional assessment and the association of malnutrition to postoperative complications in these patients.

**Methodology:** One hundred and six elective abdominal-surgical patients at Thammasat hospital from September 2008 to February 2010 were assessed preoperatively by independent research assistant using ESPEN criteria for preoperative nutritional support as diagnostic criteria. The patients that met at least one of these criteria would be considered to be malnutrition. The prevalence of malnutrition, rate of nutritional assessment, and missed malnutritional patients between benign and malignant were compared.

**Results:** Twenty-nine (27%) had malnutrition. The prevalence of malnutrition was significantly higher in malignancy (18 from 31; 58%) than benign (11 from 75; 15%) with p < 0.001. The rate of nutritional assessment by their responsible physicians (Benign 14 from 75; 19% vs. Malignant 24 from 31; 77%; p < 0.001) and severe malnutrition patients that had not been assessed by their responsible physicians (Benign 9 from 11; 82% vs. Malignant 2 from 18; 11%; p < 0.001) were also significantly different. After adjusting for other confounding factors, malnutrition was significantly associated with postoperative complications with odds ratio of 3 and 95% CI of 1.1, and 8.4.

**Conclusion:** Malnutrition is common in abdominal-surgical patients. Routine preoperative nutritional assessment in this type of patients is recommended.
In both upper GI and colorectal settings, organ specific scores outperformed predicted morbidity. In contrast, P-POSSUM was a useful predictor of mortality.

**Conclusion:**
POSSUM and P-POSSUM in predicting mortality. P-POSSUM is likely to be for upper GI surgery (n = 11,852) and 0.36 for upper GI surgery (n = 3,839). POSSUM underpredicted morbidity O : E 0.97 (n = 3,783). Subset analyses of POSSUM for mortality showed O : E of 0.50 for colorectal surgery (n = 11,852) and 0.36 for upper GI surgery (n = 2,851). Subset analyses of P-POSSUM showed O : E of 0.80 for colorectal surgery (n = 17,311) and 0.80 for upper GI surgery (n = 3,032).

**Conclusion:**
POSSUM significantly overpredicted mortality and underpredicted morbidity. In contrast, P-POSSUM was a useful predictor of mortality. In both upper GI and colorectal settings, organ specific scores outperformed POSSUM and P-POSSUM in predicting mortality. P-POSSUM is likely to be of benefit for all general surgical patients. Specific organ scores may be of use in subspecialty surgery.

**GS25**

**CLINICAL BENEFITS AND COST-EFFECTIVENESS OF ALLOGENEIC RED BLOOD CELL TRANSFUSION IN SEVERE SYMPTOMATIC ANAEMIA**

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**Background:**
It is well known that blood transfusion is life-saving, but also that it carries a serious risk of transmitting viral infections. Introduction of new methods of testing for transmissible diseases, blood banking and dispatch regulations has considerably increased the cost of blood products. However, the clinical benefits and cost-effectiveness of allogeneic red-blood-cell (ARBC) transfusion remain assumed yet undetermined. We assessed the clinical benefits and cost-effectiveness of ARBC transfusion in severe anaemia.

**Methodology:**
This was a multicenter observational study comparing Jehovah’s Witness (JW) patients with matched ARBC-transfused patients. Inclusion criteria were age ≥15 years and severe anaemia (haemoglobin ≤80 g/l). Two JW patients with palliative care cancer and five JW patients with haemoglobin (Hb) concentration between 70 g/l and 80 g/l, mild symptoms of anaemia and Auckland Anaemia Mortality Risk Score of 0–3 were excluded.

**Result:**
The entry criteria were met by 103 JW patients and the same number of patients treated with ARBC transfusion. ARBC transfusion reduced mortality by 94%, shock by 88%, gastrointestinal bleeding by 81%, infective complications by 81%, cardiac arrhythmia by 96%, angina by 86%, ischaemic myocardial injury by 81%, acute/acute on chronic renal failure by 66%, neurologic complications by 92%, delirium by 76%, depression by 91% and syncopal episodes by 95%. The incremental cost-effectiveness ratio of ARBC transfusion was 2011 US$22,515 for death prevented.

**Conclusion:**
ARBC transfusion in anaemic patients is clinically beneficial and cost-effective.

**GS26**

**RECOVERY AFTER MAJOR ABDOMINAL SURGERY – COMPARISON OF REGIONAL ANAESTHESIA VIA WOUND CATHETERS VERSUS EPIDURAL**

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**Purpose:**
Continuous rectus sheath ropivacaine infusion via wound catheters (WC) offers an alternative to epidural as part of post-laparotomy ERAS care. We have previously shown that successful analgesia can be achieved using both techniques. The aim of this study was to compare post-operative mobilization and hospital stay after major abdominal surgery managed with WC compared to epidural.

**Methodology:**
Between January 2009 and November 2011, 154 patients underwent laparotomy for acute and elective surgery in Wanganui Hospital. Retrospective review of notes was undertaken. Main outcomes measured were time until mobile and length of hospital stay. Other outcomes were time to removal of urinary catheter and return of bowel function.

**Results:**
Seventy-six patients received wound catheters and 19 patients received epidurals. Patient characteristics and surgical variables were comparable in both groups. Median length of hospital stay was 6 days for WC patients, significantly shorter than 8 days for those given epidural anesthesia (P = 0.034). Median time to mobilization was shorter in the WC group compared to the epidural group (2 days vs. 3 days, P = 0.01). Urinary catheters were removed earlier in the WC group compared to the epidural group (3.5 days vs. 5 days, P = 0.037). There was no difference in return to bowel function.

**Conclusion:**
Continuous regional anaesthesia via wound catheters is associated with earlier mobility and shorter hospital stay compared to epidural. Wound catheters are more practical in a peripheral hospital setting.

**GS27**

**LDH IN STAGE I-III MELANOMA**

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**Melanoma Institute Australia, New South Wales**

**Purpose:**
Elevated serum LDH is an established prognostic factor in stage IV melanoma, however its relationship to earlier stage (I-III) melanoma is not clearly defined. The aim of the study was therefore to clarify the effect of an elevated LDH on early stage melanoma.

**Methodology:**
Serum LDH of 1395 patients with their first diagnosis of melanoma between the 2000 and 2005 were assessed for survival analysis. Stage I-III patients comprised 98% of the overall cohort. Serum LDH was assessed for its role as a predictor of melanoma specific (MSS) and disease free survival (DFS). Distribution analysis of serum LDH was carried out within each stage of melanoma.

**Results:**
An elevated serum LDH level taken within 6 months of diagnosis was associated with diminished MSS in the overall cohort (p < 0.001), stage I-III cohort (p = 0.017) and stage II subgroup (p = 0.006). There was a trend towards diminished survival in stage III patients (p = 0.055). Elevated serum LDH was an independent predictor of MSS for the overall cohort after accounting for stage (p = 0.005) and for the stage II subgroup (p = 0.023). An elevated serum LHD was significantly associated with DFS in the whole cohort (p = 0.002), however did not remain significant on multivariate analysis.

**Conclusion:**
Elevated serum measured within 6 months of diagnosis is an independent predictor of Melanoma specific survival in stage I-III melanoma patients.
Patients with pelvic fractures who are hemodynamically unstable are a diagnostic and therapeutic challenge for the trauma team. Current management algorithms in the United States incorporate variable timeframes for bony stabilization and hemorrhage control by angioembolization (AE). We believe preperitoneal pelvic packing (PPP) has a central role in establishing hemostasis. Early institution of a multidisciplinary approach, involving trauma surgeons, orthopedic surgeons, interventional radiologists, the blood bank, urologists, and anesthesiologists is imperative.

Classification of pelvic fractures

The Young and Burgess classification schema uses the vector of force to categorize pelvic fractures into three basic categories: lateral compression (LC), anterior/posterior compression (APC), and vertical shear (VS). Within each category, there is a hierarchy of ligamentous injuries with displacement of the hemipelvis further categorizes the patient’s pelvic injury from type I (less severe) to type III (most severe). A patient’s fracture pattern, however, may not fit a specific category; rather a combination of LC, APC, and VS elements. A patient’s pelvic fracture may also be described as biomechanically stable or unstable within the AO/OTA classification system. This determination is based upon whether the fracture components and ligamentous instability results in a rotationally unstable (partially stable pelvis – type B) or a rotationally and vertically unstable (completely unstable – type C) pelvis. Generally, APC I and II, and LC I, II, and III injuries are considered rotationally unstable while APC III, VS, and combined mechanical injuries are both rotationally and vertically unstable.

Diagnosis of pelvic fracture and associated injuries

Any injured patient complaining of pelvic pain or who has tenderness with palpation on examination should be considered to have a pelvic fracture. Although a complete physical examination is paramount in evaluating the multisystem trauma patients, there are specific areas of focus in patients with pelvic injuries. Visual inspection of the perineum may reveal blood at the meatus or scrotal/perineal bruising which is suggestive of a urethral injury. There may be external lacerations which communicate with the pelvic fracture (i.e. an open pelvic fracture) or the occasional case of perineal dehiscence. All patients should undergo digital rectal examination to evaluate for presence of blood or bony spicules which suggest a rectal perforation. Vaginal examination with a speculum should also be done in women with pelvic fractures to exclude an open fracture. Some patients may require an exam under anesthesia in the operating room. Patients in extremis with need Foley catheter placement, and should undergo one attempt at catheterization; if the Foley does not pass easily, a percutaneous suprapubic cystostomy should be considered. Gross hematuria demands evaluation of the genitourinary system for injury, as bladder ruptures are commonly associated with major pelvic fractures. Neurologic exam should include sensorimotor deficits that may be due to either an associated spine injury or avulsion of a nerve root. Finally, a directed lower extremity vascular examination should be done to exclude associated external iliac or common femoral artery injuries. Although rare, a stretch injury of the external iliac artery over the pelvic brim may result in an intimal tear with associated thrombosis and distal ischemia. In addition to routine quantification of pulses in the extremities, an ankle: ankle index should be considered to have a pelvic fracture. Gross hematuria demands evaluation of the genitourinary system for injury, as bladder ruptures are commonly associated with major pelvic fractures.

External stabilization of the pelvis

Prompt reduction of the pelvic volume is considered a vital step in the initial management of the hemodynamically unstable pelvic fracture patient. Early stabilization decreases pelvic volume which promotes tamponade of venous bleeding, and prevents secondary hemorrhage from the shifting of bony elements. Immediate temporary stabilization with wrapping a sheet around the pelvis or application of commercially available compression devices (a.k.a. pelvic binder) should be performed. Wrapping the pelvis with a sheet and binding the knees and ankles is a simple maneuver that can be performed by virtually anybody in the emergency department. Commercially available compression devices simulate similar forces as sheeting the pelvis to close down the pelvic volume. While the sheet or binder are ideal for “open book” pelvic fractures, they may not improve pelvic alignment with completely disrupted posterior elements. Furthermore, long periods of tight immobilization of the abdomen or legs can contribute to abdominal or extremity compartment syndrome or cause skin necrosis. Thus, application of external frames should be done as soon as possible to correctly realign the pelvis. The external frames, particularly the C clamp, provide better operative access to the abdomen and pelvis.
not all patients require intervention. At the time of diagnostic angiography, the entire pelvic vasculature must be evaluated as multiple sites of hemorrhage in complex pelvic fractures is common. Ideally, selective embolization at a targeted site of bleeding is performed with Gelfoam. If the patient’s bleeding is significant and there is no localized source, proximal embolization of the internal iliac arteries may be considered for hemostasis, but such non-selective embolization has a higher risk of complications including gluteal claudication or even pelvic necrosis.

The question of whether it is best for patients with hemodynamic instability to proceed emergently to angiography for bleeding control, has not been definitively answered. Transporting an unstable patient from the emergency department to the interventional radiology suite may be a fatal error if the patient requires a laparotomy or thoracotomy to address ongoing torso hemorrhage. Numerous authors have sought to predict mortality and the need for angiography based on fracture classification and physiologic criteria. Only a small percentage of patients who undergo angiography have lesions embolized and angiography does nothing to address the potentially torrential venous bleeding that comprises >85% of the bleeding seen in pelvic fractures. Moreover, predicting the patient who does or does not require embolization remains a challenge. Finally, some institutions do not have therapeutic angiographic capabilities.

Preperitoneal pelvic packing
Another option for control of life-threatening pelvic hemorrhage in patients with unstable pelvic fractures is preperitoneal pelvic packing (PPP). PPP can also eliminate the often difficult decision of whether to take the patient to the OR versus IR? Originally described in Europe as transabdominal packing of the retroperitoneum for hemorrhage control, the technique was modified to direct packing of the pelvic space through a preperitoneal approach. Because 85% of bleeding due to pelvic fractures is venous or bony in origin, hemorrhage is often only arrested by increasing tamponade within the retroperitoneal space. The combination of external fixation and PPP address the major sources of hemorrhage by reapproximating bony edges and tamponading the venous bleeding.

In patients with a pelvic fracture, the proposed indication for PPP is persistent systolic blood pressure (SBP) <90 mmHg in the initial resuscitation period despite the transfusion of 2 units of packed red cells. Those patients with thoracic or documented abdominal sources of blood loss (by FAST or DPA) are taken to the operating room to address these sources in addition to PPP. Skeletal fixation of the pelvis with an anterior external fixator or posterior pelvic C-clamp is done concurrent with PPP. Palpation via the preperitoneal space may assist in optimal realignment with the fixator. PPP, performed through a small suprapubic incision, positioning six laparotomy pads (four in children) directly into the paravesical space, provides tamponade for the bleeding. Approximately 15% of patients with severe pelvic fractures will have ongoing transfusion requirement despite correction of coagulopathy after PPP; selective angioembolization should be pursued in this select group of patients. Patients undergo standard post-trauma resuscitative SICU care, and pelvic pack removal is performed within 48 hours. The pelvis may occasionally require repacking if there is persistent bleeding at the second look operation.

Management of open pelvic fractures
In addition to the challenges faced with complex pelvic fractures, patients with open pelvic fractures require management of the often extensive soft tissue destruction. During the patient’s initial evaluation in the emergency department, those with large degloving injuries of the perineum should undergo direct packing and compression through the skin opening with emergent transport to the operating room. Local exploration of the wound in the emergency department is not advocated. Exsanguination in these patients can be rapid due to violation of the retroperitoneal hematoma and loss of tamponade within this space. Those patients without overt hemorrhage from the wound should undergo evaluation of the perineum to rule out associated injuries of the vagina and rectum. The pelvic wound is manually debrided and then irrigated daily with a high-pressure, pulsatile irrigation system until granulation tissue covers the wound. The wound is then left to heal by secondary intention with a wound VAC. To reduce the risk of pelvic sepsis and osteomyelitis, a diverting sigmoid colostomy is usually indicated.

GS29P
A NOVEL LAPAROSCOPIC TECHNIQUE OF REPAIRING GIANT INCISIONAL AND PARASTOMAL HERNIA ARISING FROM RADICAL CYSTECTOMY AND ILEAL CONDUIT FORMATION

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Background: Parastomal and incisional herniae occur frequently following radical cystectomy and ileal conduit formation. Repair is often warranted due to undesirable consequences of these hernias including parastomal urine leakage.

Methodology: This paper presents a novel laparoscopic technique used to treat a case of concomitant giant incisional hernia and parastomal hernia, utilizing a Gelport hand access device and bioabsorbable mesh.

Results: The patient underwent laparoscopic repair of incisional and parastomal hernia in 6 hours and had no clinical or radiological recurrence of their hernia at 12 months follow up.

Conclusions: Minimally invasive approaches to the repair of giant para-stomal and incisional hernia are feasible through the novel use of a hand access device.

GS30P
A PROSPECTIVE EVALUATION OF ELECTROCAUTERY FOR DIVISION OF THE MEOAPPENDIX DURING PAEDIATRIC LAPAROSCOPIC APPENDICECTOMY

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Purpose: Electrocautery is the most cost-effective method for mesoappendix division during laparoscopic appendicectomy but it has been criticised for poor haemostasis and risks of collateral tissue damage. To assess the safety and effectiveness of routinely using electrocautery for laparoscopic appendicectomy in children, patient outcomes from a large prospective clinical trial were reviewed.

Methodology: Between February 2010 and March 2011, 190 children undergoing laparoscopic appendicectomy at Starship Children’s Hospital, Auckland, New Zealand were enrolled in a randomised controlled trial. As part of this trial, all patient outcomes and perioperative complications were prospectively assessed and recorded during the index hospital admission and subsequent readmissions, as well as at 6 weeks following the operation. Recorded complications were then graded using the Clavien-Dindo system.

Results: The median patient age was 12 and 63% (N = 120) were male. Mean operative time was 70.7 minutes (SD = 30.1) and mean duration of pneumoperitoneum was 44.0 minutes (SD = 20.4). Nine procedures were converted to open. Forty-four (23%) patients experienced complications including intraabdominal collections (5), wound infections (7), and postoperative ileus (10). There were no cases of haemorrhage or bowel perforation. One patient sustained electrocauterity thermal injury to small bowel serosa with no clinical consequences. Histological pathology was found in 152 (80%) appendicetal specimens and the remainder were normal.

Conclusion: Routine use of electrocautery for mesoappendix division during laparoscopic appendicectomy for suspected appendicitis in children is safe and effective.
A REVIEW OF CONSERVATIVE VS. OPERATIVE MANAGEMENT FOR APPENDICITIS

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Purpose: The conservative management of appendicitis using antibiotics has been advocated, but remains controversial. Our unit used conservative methods for a period in 2009. This study aimed to compare outcomes in conservative, antibiotic-managed patients with operative cases.

Methodology: Retrospective analysis of inpatient records in our hospital for all patients with confirmed appendicitis (either radiological or histological) from 2009–2011. Patients with a histologically normal appendix were excluded. Complications, length of stay and readmission rates were compared between patients managed conservatively and operatively.

Results: Data from 181 patients was analysed. Nineteen percent (34/181) were managed conservatively. Average age was 37 with mean length of stay 3 days. Nineteen (56%) of the 34 conservative patients needed appendectomy, 8 during the initial admission. Five of these (26%) were perforated with generalised pus, one requiring laparotomy. Two had neoplasms. Complication rate was 30%. The readmission rate in the conservative group was 42%. Eighty one percent (147/181) received primary operative management. Of these, 38% were laparoscopic with a conversion rate of 7%. Laparotomy performed in 4%. Average age 31 years, and length of stay 2 days. There was one mortality. Complication rate was 10%. Readmission rate was 4%.

Conclusions: Initial conservative management of appendicitis was associated with increased complications, hospital stay and a much higher readmission rate. These differences were all statistically significant.

A TECHNIQUE FOR ISOLATING AND DRESSING ENTEROATMOSPHERIC FISTULAE

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Purpose: One of the most significant complications of an open abdomen is the development of an “enteroatmospheric” fistula (EAF). In most cases, the use of special dressing techniques to isolate the fistula output are required as part of its management.

Methodology: We present a method we have successfully used to manage a patient with such enteroatmospheric fistulae. Our method utilises a modification of a standard negative pressure dressing to minimise leakage, either of pressure or enteric output. The key to our technique is to utilise the baseplate of a colostomy bag with its airtight plastic covering to provide a smooth surface for the polyurethane drape to adhere onto, whilst a foam ring provides the negative pressure which holds the stoma baseplate in place. We present a case of a 53-year-old gentleman with a proximal high output enteroatmospheric fistula who was managed with this technique.

Conclusion: Multiple enteroatmospheric fistulae complicating an open abdomen are a difficult problem to manage. The foam ring floating fistula technique adds to the increasing armamentarium for dressing difficult enteratmospheric fistulae.

ACUTE RECTAL BLEEDING IN A PROVINCIAL CENTRE: INVESTIGATIONS AND MANAGEMENT

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Purpose: Fresh rectal bleeding is a common acute general surgical presentation. There are multiple modalities available for the assessment and treatment of this important problem, such as surgical, endovascular and conservative techniques. The aim of our study is to develop an algorithm to aid in the assessment and management of rectal bleeding in a provincial centre.

Methodology: An electronic search of Hutt Hospital database was undertaken from Jan 2006 until Dec 2011 for those patients presenting with fresh rectal bleeding. Endpoints included; patient demographics, hemodynamic stability, transfusion rates, along with; endoscopic, radiological and surgical interventions. Morbidity and mortality outcomes for those treated with surgical, endovascular or radiologic modalities were compared and contrasted. Within the limits of the study duration, representation for bleeding was also assessed for each intervention.

Results: Full results are pending. However 5/23 patients required surgical resection.

Conclusion: Rectal bleeding is a common acute surgical presentation that has many options in terms of investigations and management. However, the appropriate investigation must be tailored for individual patients. In the setting of haemodynamic instability or massive transfusion, surgical intervention is required and post-op recovery can be even more challenging. Endovascular interventions are a much safer approach in the unfit surgical candidate, however this is difficult to obtain in a provincial setting due to resource constraints and geographical isolation.
GS36P
AWARENESS OF THE COST OF COMMONLY USED DISPOSABLE INSTRUMENTS USED IN MINIMALLY INVASIVE SURGERY (MIS) AMONG VARIOUS CATEGORIES OF SURGICAL STAFF
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Objective: Disposable laparoscopic instruments constitute a significant bulk of the overall cost of laparoscopic surgery. Cost-containment and minimization would require a working knowledge of the actual cost of these instruments. Data on cost awareness among the end users of these instruments, the surgeons and nurses is lacking.

Methodology: 40 surgical staff comprising 23 surgeons (9 consultants, 3 fellows, 11 registrars) and 17 theatre nurses (15 RNs, 2 ENs) of a large academic medical institution in South Australia were requested, in the presence of one of the authors, to estimate the price of twelve commonly used disposable laparoscopic instruments displayed. The estimated price of the instrument was arbitrarily set to be correct if it fell within ±20% of its list price.

Results: None of the 40 participants estimated all 12 instruments correctly. The maximum score was 6 (made by a consultant surgeon) and a minimum of 0 by 3 trainee surgeons. The mean score was 2.25 (S.D. = 1.428) with an overall accuracy of 16%. Most of the instruments (9 out of 12) were under estimated. There were no significant difference in the overall scores of nurses (mean = 2.35) and surgeons (mean = 2.17). Among the surgeons, a higher proportion of under or over estimates were from trainees (registrars/residents).

Conclusions: Cost awareness for the displayed instruments was glaringly lacking. The estimates seem more like wild guesses. Lack of accurate knowledge may result in indiscriminate use of expensive MIS instruments that offer no clear benefits over inexpensive ones and wasting precious, limited resources.

GS37P
CASE STUDY: A NOVEL APPROACH TO GASTROJEJUNAL ANASTOMOTIC LEAKS
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Introduction: Morbid obesity rates are rising in developed countries and more patients are turning to bariatric surgery for weight loss, thus resulting in increased incidence of anastomotic leaks associated with bariatric surgery.

Methodology: We described a case study that developed a gastrojejunal anastomotic leak post laparoscopic roux-en-Y gastric bypass. The management of the gastrojejunal anastomotic leak was long and complicated, involving a re-operation and insertion of nasojejunal feeding tube, followed by removal of nasojejunal feeding tube and insertion of endoscopic stent, followed by adjustment of stent due to distal migration and finally a second insertion of an endoscopic covered stent over the pre-existing endoscopic stent to allow for anastomotic healing.

Discussion: Use of endoscopic covered stents for the management of gastrojejunal anastomotic leaks post laparoscopic roux-en-Y gastric bypass is a relatively new approach in our region with limited data demonstrating its efficacy. Our case study describes the use of endoscopic covered stents for the purpose of gastrojejunal anastomotic leak and its favorable outcome.

Conclusion: Use of endoscopic covered stents is an effective form of treatment for the management of gastrojejunal anastomotic leaks post laparoscopic roux-en-Y gastric bypass but more studies need to be performed to quantify its efficacy.

GS38P
CONSULTANT ROSTERING AND THE SUPERVISION OF EMERGENCY GENERAL AND ORTHOPEDIC SURGERY IN A REGIONAL SETTING
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Emergency operating time is a scarce and costly resource in the Australian Public Health Care System. Due to historical and political funding models, in-hours operating lists are filled with elective cases, leaving little time for the sickest patients in the community to be operated upon in a timely fashion. Traditionally, emergency cases were performed after hours, often by junior staff and with less consultant supervision, resulting in significantly increased operative case length and sub-optimal utilisation of theatre time. This led to increased competition between the surgical specialties for the limited emergency operating theatre time available, particularly in regional and rural centres.

The purpose of this study was to evaluate the effects of consultant supervision on efficient use of operating theatre time at Lismore Base Hospital, a regional centre in Northern NSW. The General Surgical consultants use an Acute Surgical Unit model, and are rostered on for one week in six, while the Orthopaedic Surgical consultants participate in a more traditional roster.

The study reviewed mean and median operative case length and the supervision of cases for two common emergency presentations in the rural setting: acute appendicitis in General Surgery and Fractured Neck of Femur in Orthopedic Surgery. Data for the project was collected over a period of three months.

Results are discussed in terms of level of surgical training of the primary operator, the presence of consultant supervision and the effect of the models of consultant on-call rostering in the regional setting. The risks and benefits of traditional versus Acute Surgical Unit models of consultant rostering on Emergency Surgery are discussed in terms of patient care.

GS39P
DEEP VEIN THROMBOSIS (DVT) PROPHYLAXIS AND ANTIBIOTIC PROPHYLAXIS IS IMPROVED BY THE ACUTE SURGICAL UNIT
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Purpose: An Acute Surgical Unit (ASU) was established in 2006 to improve the care of acute general surgical admissions. Two components were the use of specific evidence based management protocols and the incorporation of nurse practitioners into the clinical team. The aim of this study was to determine if the introduction of the ASU resulted in a greater proportion of patients receiving appropriate DVT and antibiotic prophylaxis.

Methodology: Medical records for several acute surgical conditions (appendicitis, cholecystitis, small bowel obstruction and diverticulitis) were collected over a 4 year period. This cohort of patients was divided into two groups; Pre-ASU (Nov 2004–Oct 2006) and Post-ASU (Nov 2006–Oct 2008), which were compared.

Results: There were 1,801 patients (806 pre-ASU and 995 post-ASU), with 54% female, median age was 42 years (range, 3–96 years). There was no difference in age between the pre- and post-ASU groups (p = 1.0). There was an increased use of TED stockings, pre-operative heparin, and pre-operative antibiotics in the ASU period (35% vs. 45%; p < 0.001), (46 vs. 65%; p < 0.001), (79% vs. 83%; p = 0.04), respectively.

Conclusions: The introduction of the ASU model has resulted in a significant improvement in DVT and antibiotic prophylaxis. However, further interventions are required to ensure complete compliance.
GS40P
COMPARISON OF OPERATIVE TIMES OF PHOTOSELECTIVE VAPORISATION OF THE PROSTATE (PVP) AND TRANSURETHRAL RESECTION OF THE PROSTATE (TURP)

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Southern Health, Victoria

Introduction: Photoselective vapourisation of the prostate (PVP) has been extensively criticised for its long operative time compared to a traditional transurethral resection of prostate (TURP). We aim to demonstrate that there is no significant difference in operative time for PVP compared to TURP and that PVP offers benefits including shorter hospital stay by evaluating a single institution, single surgeon series of 50 consecutive patients.

Methodology: We studied the first 50 patients who underwent PVP by a single surgeon at our institution, who has finished the PVP learning curve. He has been mentored for 30 cases by a recognised expert in the field and has completed a Greenlight workshop at Cornell University. Total lasering time, energy used, length of hospital stay, preoperative anticoagulation and catheterisation rates as well as post operative complications were evaluated.

Results: Mean operative time was 61.16 minutes (range 10–140 minutes). Mean energy used was 301 011.5 Joules (range 22240–4000114 J). Average length of hospital stay was 1.4 days (range 1–3 days). 34% of patients were catheterised preoperatively. 42% of patients were anticoagulated.

Conclusion: The average operative time for PVP closely resembles the standard TURP operative time once the learning curve is overcome. Our surgeon’s mean operative time is comparable to his mentor’s recently published data which demonstrated a mean PVP time of 70 minutes. Moreover, PVP offers additional benefits over traditional TURP with shorter mean length of hospital stay and the ability to operate while anticoagulated.

GS41P
DO INCIDENT INFORMATION MANAGEMENT SYSTEM (IIMS) REPORTS HELP US TO IMPROVE OURSELVES?

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Liverpool Hospital, New South Wales

Purpose: IIMS seeks to support a culture of continuous improvement. Quality-of-care outcomes within one institution are improved by leveraging lessons learned from incident management across the Area Health Service. Reporting an adverse event or serious ‘near miss’ should trigger investigation to identify underlying systems failures and lead to efforts redesigning the system in order to prevent recurrence. This project sought to examine the ability of IIMS to achieve this.

Methodology: 1347 IIMS reports were lodged in the operating and endoscopy suites across the Sydney Southwest Area Health Service from 2008 to 2009. These were examined, and the role of systemic factors assessed.

Results: Systemic factors such as complex administrative structures and information silos were identified in 31.5% and 47.6% of IIMS reports respectively. Understaffing was identified in 5.3%, inadequate resources in 18%, fatigue in 1.7%, and poor maintenance or upgrading of equipment in 8.7% of reports. However, this project did not find any associations with reported patient harm. A number of factors confound the ability of IIMS to capture information including software limitations, cultural reluctance, local reporting norms, and other clinical care priorities. There were institutional differences in the completeness of IIMS reports, and the nature of incidents described. Concern for public censure, legal liability and indemnity implications further complicate organisational learning.

Conclusion: Although this project did not demonstrate associations between latent or systemic conditions and reported patient harm, they represent a dimension of medical error that can be minimised with political and bureaucratic will.

GS42P
DOES THE ACUTE SURGICAL UNIT IMPROVE OUTCOMES FOR PATIENTS PRESENTING WITH ACUTE APPENDICITIS?

GRACE KWOCK, GUY ESLICK AND MICHAEL COX

Nepean Hospital, New South Wales

Purpose: An Acute Surgical Unit (ASU) was established in 2006 to improve the care of acute surgical admissions. Prince of Wales Hospital, Randwick reported improved outcomes for patients with acute appendicitis after the introduction of the ASU. The aim of this study was to determine if the introduction of the ASU resulted in improved clinical outcomes for patients presenting with a clinical diagnosis of acute appendicitis.

Methodology: Medical records for appendicitis patients were sampled over a 4 year period. This cohort of patients was divided into two groups; Pre-ASU (Nov 2004–Oct 2006) and Post-ASU (Nov 2006–Oct 2008), which were compared.

Results: There were 831 appendicitis patients in total (278 pre-ASU and 553 post-ASU), with 49% female, median age: 27 years (5–88 years). There were 575 (70%) adults and 249 pediatric cases. The ASU appendicectomy patients had more complications (10% vs. 5%; p = 0.01), longer mean operative times (47 min vs. 38 min; p = 0.03) and a higher rate of intra-abdominal abscess (3% vs. 1%; p = 0.06). The patients in the ASU cohort had a much higher incidence of severe (gangrenous or perforated) appendicitis (38%) compared to the pre-ASU group (27%; p = 0.009).

Conclusions: The increase incidence of appendicitis is not explained. The complication rate and operation duration is higher. These differences may be due to the higher proportion of more complicated disease.

GS43P
FACTORS CONTRIBUTING TO DELAYS IN PATIENT DISCHARGE AFTER AN ACUTE SURGICAL ADMISSION

YING WU, FARID MEYBODE, SENARATH EDIRIMANNE, GUY ESLICK AND MICHAEL COX

Nepean Hospital, New South Wales

Purpose: The Acute Surgical Unit (ASU) is an important surgical service provided at Nepean Hospital and has improved the care of patients with acute general surgical problems. The aim of this study was to determine predictors of becoming a long stay patient (>7 days).

Methodology: Data was collected from the medical records of consecutive adults from July 2010 to June 2011 in a random retrospective case-control study. Multivariate analysis was used to find factors that we identified as possible predictors of a long stay patient.

Results: 2252 patients were identified with 88 staying longer than 7 days (4%). 187 randomly selected age and gender matched patients who stayed less than 7 days were used as controls. Median length of stay of cases was 13 days (range 8–89) and controls 2 days (range 0–7). Multivariate analysis identified 6 independent predictors. These predictors were increased age (odds ratio (OR) = 1.03, 95% CI: 1.01–1.05), whether the patient had a major or minor operation (OR = 9.16, 95% CI: 3.74–22.46), grade of complication (OR = 1.67, 95% CI: 1.21–2.31), admission to the intensive care unit (OR = 3.61, 95% CI: 1.38–9.42), patient requiring another team to review them (OR = 4.63, 95% CI: 1.90–11.23) and whether the patients initial diagnosis was the same as their final diagnosis (OR = 0.27, 95% CI: 0.10–0.70).

Conclusions: Long stay surgical patients represent inefficient use of bed resources. Currently 4% of ASU patients become long stay patients. By determining predictors that can identify long stay patients we hope to implement a coordinated multidisciplinary approach to reducing long stay surgical patients.
GS44P
GALLBLADDER VOLVULUS: SYSTEMATIC REVIEW OF A RARE_SURGICAL DIAGNOSIS

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Purpose: Volvulus or Torsion of the gallbladder (GBT) is a rare surgical condition due to twisting of gallbladder (GB) along its long axis. Accurate diagnosis is essential to prevent significant morbidity and mortality. This study aimed to systematically review the literature.

Methodology: A literature search was conducted using MEDLINE, PubMed, and EMBASE databases (1950–2012), and evaluated all published papers. Full reports in English were included.

Results: 69 patients from 63 reports were included in the review. The median age was 78 years, with 67% male. The main presenting complaint was abdominal pain (84%), 47% presented with fever and 57% had nausea and vomiting. 53% had right upper quadrant and epigastric tenderness, but very few had a palpable mass (7%), 84% and 75% of patients had raised WBC and CRP, respectively. 35 patients had Ultrasound (US) but correct diagnosis was made in only one case. US findings included GB wall thickening (34/35), GB enlargement (23/35), gallstones (13/35) and pericholecystic fluid (7/35). Computed tomography (CT) performed in 33 cases with the most common finding of GB enlargement (18/33), GB thickening (15/33) and pericholecystic fluid (8/33). Correct CT diagnosis was made in 8 (24%) of performed scans. Time to diagnosis >24 hr (35%), >72 hr (25%) of cases. Most surgeries were open (59%) compared to laparoscopic (38%) and almost three-quarters of patients had a gangrenous gallbladder (74%). Morbidity was reported by 6% of patients with 1% mortality.

Conclusion: Although it is rare, gall bladder torsion should be considered in elder patients with a classical presentation of acute cholecystitis.

GS45P
FOUR DIMENSIONAL COMPUTED TOMOGRAPHY (4DCT) FOR PRE-OPERATIVE LOCALISATION OF PARATHYROID PATHOLOGY

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Purpose: 4DCT provides both functional and anatomical imaging in a single test, and the reported sensitivities are equivalent or superior to sestamibi scanning (SeS) for pre-operative localisation. However, most authors recommend its judicious use due to concerns of increased radiation exposure. This study examines the role and accuracy of 4DCT in specific clinical contexts, in comparison to SeS.

Methodology: This is a retrospective cohort study. Pre-operative localisation of parathyroid tumour was correlated with the operative findings, histopathology, and clinical outcomes.

Results: 75 consecutive patients underwent both 4DCT and SeS prior to parathyroidectomy. Group A comprised of patients with a positive SeS (n = 56); Group B, patients with a negative SeS (n = 10); and Group C, patients undergoing re-operative parathyroid surgery (n = 9). In patients undergoing initial exploration, the sensitivity of SeS was 82% compared with 4DCT of 90%. In re-operative cases the sensitivities were 33% vs 88% respectively. In 2 Group A patients, 4DCT identified multiple abnormal glands where SeS had only identified one, potentially avoiding a failed operation. In Group C, 4DCT correctly identified abnormal parathyroids in 8 of 9 cases, including one patient undergoing her 6th neck exploration. Changes to the 4DCT protocol has led to a significant reduction in radiation exposure.

Conclusion: 4DCT is an accurate technique providing both functional and anatomical localisation of abnormal parathyroid glands. It is invaluable in patients with negative SeS and for re-operative cases, but should be used judiciously as the primary localisation technique in younger patients.

GS46P
GENTAMICIN-COLLAGEN SPONGES TO DECREASE SURGICAL SITE INFECTIONS: A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

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Purpose: Surgical Site Infections (SSI) cause significant morbidity and increase the costs of healthcare. Antimicrobial prophylaxis is a cornerstone of SSI reduction. Prophylactic local delivery of antibiotics with novel biodegradable drug carrier systems, such as the Gentamicin-impregnated collagen sponge, is a potential avenue for SSI reduction. Gentamicin-collagen sponges have been previously assessed in multiple randomised controlled trials (RCTs) with conflicting results. Therefore, a systematic review and meta-analysis of all relevant RCTs was conducted to determine whether Gentamicin-collagen sponges decrease the incidence of SSI.

Methodology: Major medical databases and trial registers were searched for published and unpublished RCTs. The endpoint of interest was the incidence of SSI. A random effects model was used and pooled estimates were calculated for odds ratios (OR) with the corresponding 95% confidence interval. A subset analysis by wound type was planned a priori.

Results: 15 RCTs encompassing a total of 6982 patients were included in the final analysis. The included studies were of moderate to high quality. Gentamicin-collagen sponges significantly reduced SSI (OR = 0.51; 95% CI 0.33 – 0.77; p < 0.001; NNT = 21; I2 = 75%). These results were seen in a subset analysis of clean (OR = 0.53; 95% CI 0.33 – 0.87; p = 0.01; NNT = 30) and contaminated surgery (OR = 0.48; 95% CI 0.24 – 0.96; p = 0.04; NNT = 11) specifically. No adverse effects on wound healing were observed.

Conclusion: Gentamicin-collagen implants decrease the rate of SSI and should be considered for clinical use in eligible patients.

GS47P
GROUP A STREPTOCOCCAL PERITONITIS – A RARE AND SHOCKING MIMIC OF ACUTE APPENDICITIS

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Spontaneous bacterial peritonitis (SBP) is a potentially fatal condition often targeting young and previously healthy patients. We report a 17-year-old female with history of right iliac fossa pain, fevers and elevated inflammatory markers. We suspected acute appendicitis and proceeded to laparoscopic appendicectomy which revealed extensive intraperitoneal purulent fluid despite a normal appendix, gall bladder, uterus and ovaries. There were nil other significant findings to require laparotomy so the peritoneal cavity was drained. In the course of the laparotomy, the patient underwent a laparoscopic appendicectomy and drained intraperitoneal pus. A subsequent blood culture grew Group A beta haemolytic streptococcus. The patient responded to intravenous antibiotic therapy.

There are less than 30 reported cases of primary Group A – haemolytic streptococcal peritonitis. This is the first managed surgically by only laparoscopic washout though three others were converted to laparotomy. Most are women of reproductive age with no infective source identified. After thoroughly assessing for other causes of peritonitis, spontaneous bacterial peritonitis should be considered as a differential diagnosis particularly in young women.
GS49P
IS A LOW-DOSE ERYTHROPOIETIN BENEFICIAL IN SEVERELY ANAEMIC JEHOWAH’S WITNESS PATIENTS?
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Background: In anaemic Jehovah’s Witness (JW) patients the use of erythropoietin (EPO) is often used as an alternative to blood transfusion. At present there are no comparative studies on the clinical effectiveness and costs of EPO treatment in severely anaemic JW patients. We investigated whether a low dosage of epoetin beta (EPO-β) improves clinical outcomes and less expensive in severe anaemia.

Methodology: This was a retrospective observational study comparing clinical outcomes and costs of treatment of JW patients treated with a low dosage of EPO-β (≤ 40000 units per week) against JW patients, who received a conventional therapy. The inclusion criteria were age ≥15 years, severe anaemia (hemoglobin ≤80 g/L). Palliative care cancer patients, asymptomatic anaemic JW patients, and patients treated with a high dose of EPO-β were excluded.

Results: The eligibility criteria were met by 61 JW patients treated with the conventional therapy and 40 JW patients treated with EPO-β. There were no statistical differences in mortality and major complications. EPO-β treated patients stayed longer in hospital, were more often readmitted for complications, and had higher total health care provider costs than the conventional therapy group.

Conclusion: The use of a low-dosage regime of EPO-β in JW patients with severe anaemia does not improve clinical outcome and is more expensive.

GS50P
LAPAROSCOPIC MANAGEMENT OF DE GARANGEOT’S Hernia
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Objectives: De Garegeot’s hernia (the presence of a vermiform appendix in a femoral hernia sac) was first described in 1731, which was 5 years before the first reported appendicectomy. This rare hernia usually presents with both diagnostic and therapeutic dilemmas. We wish to present the usefulness of laparoscopy in both the diagnosis and treatment of de Garegeot’s hernias.

Methodology: A diagnostic laparoscopy was performed initially. The appendix was seen to disappear into the femoral hernia sac. An attempt to reduce the content proved futile. An open groin exploration was then done to reduce the appendix into the peritoneal cavity. Subsequently, pre peritoneal mesh repair was done prior to laparoscopic appendicectomy.

Results: We were able to obtain a correct diagnosis and perform the pre peritoneal mesh repair of the femoral hernia prior to appendicectomy. The patient recovered without any complication.

Conclusions: Diagnostic laparoscopy could be a valuable tool in the correct diagnosis and management of any unusual presentations of incarcerated groin hernias.

GS51P
NON FIXATION OF MESH IN OPEN INGUINAL HERNIA REPAIR: SINGLE SURGEON’S EXPERIENCE
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Background: During open inguinal hernia repair many surgeons anchor mesh to the defect as a means of re-enforcement by sutures or clips. Some surgeons have found that non-fixation of properly positioned mesh provides comparable results to those where the mesh has been sutured or clipped. This study seeks to identify those who have undergone open inguinal hernia repair without fixation of mesh by a single surgeon over the last 9 years in order investigate recurrence rates and levels of post-operative pain.

Methodology: Patients who underwent open inguinal hernia repair under a single surgeon using the above method at Sunshine Coast Health Service locations between 2002–2009 were identified using a departmental database. An approach by mail was followed by a telephone interview. A Standardised Questionnaire was developed for the interview assessing basic demographic data, and questions assessing post-operative recurrence and pain at 1 month and 12.

Results: 131 patients were contacted, 69 (53%) participated in the telephone interview. 81% male and 19% female. 73 total procedures were conducted. Age at operation ranged from 21–88 years. Follow-up range 24 to 120 months. Preliminary recurrence rate identified at 2 out of 73 (2.7%). 84% reported no limitation in activity due to pain at 1 month which improved to 96% by twelve months. 15% reported mild to moderate limitation by pain requiring ongoing analgesia at 1 month which decreased to 5% by twelve months. There was only 1% reported as severe limitation due to pain at 1 month and twelve months.

Conclusions: Results suggest that non-fixation of mesh in open inguinal hernia repair carries acceptable recurrence rates and low levels of post-operative pain.
GS52P
LESSONS LEARNT FROM 454 NEGATIVE APPENDICECTOMIES

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Purpose: To determine the characteristics of patients with negative appendicectomy in a medium resource hospital in Asia.

Methodology: This is a five-year, single center, retrospective study on 2,864 patients who underwent appendicectomy in Hospital Tuanku Jaafar, Seremban, Malaysia. Statistical analysis was done by SPSS ver.19.

Results: Appendicitis is a disease of the young, 75% occurs between the age of 10–39 years. The negative appendicectomy rate was 15.8%. Although 62.8% (285/454) of the negative appendicectomies occurred in the age group 10–29 years, subgroup analysis showed there was little difference between all age groups. A diagnostic error was made in 6.8% (104/1525) of males and 26.1% (350/1339) of females. Of the misdiagnosis, the reason was gynaecological in origin in 33.9% (154/454), due to other surgical conditions in 3.1% (14/454), and not apparent in 63% (286/454).

Conclusion: Negative appendicectomies occur mainly in females of all age groups and is not necessarily confined to those in the reproductive age group. The cause of abdominal pain in 2/3 of negative appendicectomies remains obscure.

GS53P
MEDICAL DEVICE REGULATION IN AUSTRALIA: SAFE AND EFFECTIVE?

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Purpose: Medical devices are widely used to improve patient outcomes but may also be hazardous. We aimed to describe the frequency, characteristics and outcomes of reports of possible harms related to medical devices submitted to the Australian Therapeutic Goods Administration (TGA) from the perspective of an average healthcare worker or informed patient using publicly available data.


Results: Up to June 2009, 6812 medical device incidents were reported to the TGA, although no information was available beyond this time and for several time periods prior to this. Device incidents were reported more frequently in later years. 295 deaths and 2357 serious injuries have been related frequently in later years. Device incidents were reported more frequently in later years. 295 deaths and 2357 serious injuries have been related to device incidents, with serious injury peaking in 2009 (n = 597). Most device incidents were not investigated (47.5%) or after investigation, no further action was taken (25%). In comparison, between 2000 and August 2011 there were 29 medical device recalls and 25 medical device alerts issued by the TGA, with no consistent increase over time.

Conclusions: Based on publicly available data from the TGA it is difficult to make informed decisions about the safety of any given device. Faced with an increasing number of medical device incidents, a large number of reported deaths and serious injuries, a small number of recalls and incomplete data, public confidence in the regulatory system is likely to be undermined. Therefore, we suggest that a review of medical device regulation in Australia is urgently required.

GS54P
OMENTAL TORSION SECONDARY TO LEFT INGUINAL HERNIA: A DIAGNOSTIC CHALLENGE

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University of Malaya, Kuala Lumpur, Malaysia

Objectives: Torsion of the greater omentum is a relatively rare entity. Preoperative diagnosis can be difficult due to its non-specific clinical signs and symptoms. We wish to highlight the importance of computed tomography (CT) scan as a useful adjunct in aiding the clinical diagnosis in a 59-year-old man who presented with a 2 day history of severe epigastric pain.

Methodology: Erect Chest X-ray did not show any air under diaphragm. However, abdominal CT scan revealed a whirling mass extending from the upper abdomen into the left inguinal canal. An exploratory laparotomy was done and the infarcted omentum was resected and primary repair of the inguinal hernia was performed.

Results: CT scan enabled us to plan our surgery and manage the patient accordingly. The patient recovered well and was discharged on day 3 post operation.

Conclusion: CT scan remains an invaluable tool for the surgeon in the diagnosis rare causes of acute abdomen.

GS55P
OUTPATIENT CLINIC SATISFACTION QUESTIONNAIRE

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Taranaki Base Hospital, Taranaki, New Zealand

Purpose: This prospective study examines Patient Reported Outcome Measures (PROM) of satisfaction of the General Surgical Outpatient Clinic at Taranaki Base Hospital. It follows from an inpatient survey performed previously. Expectations within the health sector include patient centred approaches which this study examines.

Methodology: A questionnaire based upon the Health and Disability Commission’s code of conduct was formulated and this was handed out by the clerks to patients attending the Clinic at intervals throughout 2011. The forms were anonymous and included demographic information and a tick box to agree or disagree with proposed statements. The data was tabulated on Microsoft Access and examined using Excel.

Results: Overall, patients were found to be satisfied with all aspects questioned and there were no significant differences between the sub groups.

Conclusion: The delivery of service is meeting expectations by patients at our clinic.

GS56P
PAIN PREVENTS EARLY ACTIVATION OF PENILE PROSTHESES

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Monash Medical Centre, Victoria

Purpose: All prosthetic implants are subject to capsule formation. This may limit inflation of an Inflatable Penile Prostheses (IPP) decreasing the length and girth of the erect penis. To minimise these experts are now recommending early activation and cycling of the prosthesis. Thus patients begin cycling the device at two instead of six weeks post-operatively. Accordingly, from 2011, we aimed for early activation of all devices implanted at our institution and present our experience one year on.

Methodology: We conducted a retrospective audit of all cases of IPP implantation performed at our institution in 2011. All cases were carried out via an infrapubic incision in accordance with the ‘Perito Minimally Invasive Technique’. This technique included placement of a drain in the scrotum for 24 hours to prevent hematoma collection around the pump. Operation and review notes were accessed via electronic medical records. Patient demographics including age and cause of impotence where recorded. Additionally, time to successful activation of the device was calculated.

Results: 10 cases of IPP implantation were performed at our institution in 2011. The average age of our patients was 54 years (range 28 to 69 years). Despite attempts to review patients early, 60% (6 patients) required repeat appointment and delay in activation due to post-operative pain. Consequently the mean time between implantation and activation was 44 days (range 17 to 57 days).

Conclusion: Our data suggest that the early activation of IPPs, despite being beneficial for capsule prevention, may not be possible due to pain in the majority of cases.
GS57P
PATIENTS’ PERCEPTION OF SURGICAL TRAINING IN PRIVATE HOSPITALS

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Introduction: Surgical training is traditionally a public hospital based practice. At Epworth Private Hospital, Richmond, Victoria, there are three accredited surgical training positions and one fellowship position. We conducted a patient survey to review the patients’ perspective of surgical trainees in private hospitals.

Methodology: Over six weeks, one hundred patients admitted under the surgical units with full time surgical registrars were given a survey to complete in two parts on the training of surgeons in private hospitals.

Results: Seventy per cent of surveys were returned completed. Ninety per cent of respondents agreed that private hospitals should be involved in surgical training and 86% of patients were agreeable to having trainees involved in their operation. Only 8% of patients were not in agreement with surgical training in private hospitals.

Conclusion: Our results clearly show that private hospital patients are generally favourably disposed to the presence and participation of surgical trainees in the private hospital setting.

GS58P
RADICAL PROSTATECTOMY DOES NOT INCREASE THE RISK OF INGUINAL HERNIA

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Introduction: Inguinal hernia has been reported to occur in 15 to 20% of patients after Radical Prostatectomy (RP). The risk of Inguinal Hernia (IH) is higher in patients undergoing Open Radical Prostatectomy (ORP) versus Laparoscopic Radical Prostatectomy (LRP). Furthermore, it has been reported that the risk of inguinal hernia post ORP is increased in patients with previous IH and increased age.

Methodology: We conducted a retrospective audit of all cases of RP on our unit from 1/1/2004 to 1/1/2009. We then audited all patients undergoing IH repair at all 4 campuses of our tertiary referral centre between 1/1/2004 to 31/7/2011. The databases were then cross checked for matching patient record numbers.

Results: 320 RPs were performed at our institution from 1/1/2004 to 1/1/2009. This group was made up of ORP and LRP. Furthermore, LND was carried out in D’Amico intermediate and high risk groups. From 1/1/2004 to 31/7/2011 a total 2574 hernia repairs were performed. This number includes incisional and IH. None of our patients required hernia repair during this period.

Conclusion: It is postulated RP may weaken the normal fascia structures at the internal inguinal ring leading to an increased risk of IH. However the exact mechanism of post-RP IH remains unknown. It has been reported that previous IH surgery and age increase the risk of post-RP IH. Furthermore, pelvic lymph node dissection, postoperative anastomotic stricture and duration of surgery have not been associated with an increased risk of post-RP IH. No specific risk factors for post-LRP IH have been identified. As none of our 320 RPs developed IH requiring surgical repair we postulate that the association between RP and IH is weaker than previously thought.

GS58P
DEMOGRAPHIC RISK OF INGUINAL HERNIA FOLLOWING OPEN RADICAL PROSTATECTOMY

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Background: Patients on warfarin usually require interim anti-coagulation in the peri-operative period. Enoxaparin ‘bridging’ may be employed whilst the INR is sub-therapeutic, often following American College of Chest Physicians Guidelines.

Purpose: To identify if patients at a tertiary referral hospital were anti-coagulated in line with these guidelines; patients with the highest risk of bleeding; the incidence and nature of bleeding and thrombo-embolic complications.

Methodology: A retrospective review was conducted of the Alfred Hospital General Surgical and “Hospital at Home” databases. Patients underwent elective general surgical procedures. Demographics, indication for anti-coagulation, bleeding and thromboembolism rates were recorded. Thrombo-embolic risk was estimated according to the guidelines.

Results: The study identified 110 patients. Three-quarters were anti-coagulated with enoxaparin doses in accordance with the guidelines. Thirty suffered bleeding complications. This group was younger, weighed less, received higher doses of enoxaparin and were at higher risk of thromboembolism than non-bleeding patients. Wound haematoma was the most frequently identified complication followed by per-rectal, anastomotic and intra-abdominal bleeding. Bleeding occurred 4.75 days post-operatively on average. Ten patients returned to theatre, six were readmitted and three received blood transfusion. One patient suffered thromboembolism.

Conclusion: Enoxaparin bridging therapy when prescribed appropriately is associated with low rates of inpatient thromboembolism in elective general surgical patients within our institution, but may increase bleeding complications. Careful consideration must be given to risk stratification.

GS59P
BRIDGING THERAPY IN GENERAL SURGICAL PATIENTS – ALFRED HEALTH, 2007 – 2010

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Department of Surgery, Alfred Hospital, Victoria

Background: Patients on warfarin usually require interim anti-coagulation in the peri-operative period. Enoxaparin ‘bridging’ may be employed whilst the INR is sub-therapeutic, often following American College of Chest Physicians Guidelines.

Purpose: To identify if patients at a tertiary referral hospital were anti-coagulated in line with these guidelines; patients with the highest risk of bleeding; the incidence and nature of bleeding and thrombo-embolic complications.

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Conclusion: Enoxaparin bridging therapy when prescribed appropriately is associated with low rates of inpatient thromboembolism in elective general surgical patients within our institution, but may increase bleeding complications. Careful consideration must be given to risk stratification.

GS60P
RISK OF MALNUTRITION IN PRE-OPERATIVE SURGICAL PATIENTS WITH GASTRO-INTESTINAL AND PANCREATIC CANCER

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Disease-related malnutrition is highly prevalent in hospital inpatients and varies from 25–40%. The Eastern Cooperative Oncology Group study showed that over 50% of patients with cancer present with weight loss at diagnosis. Early nutritional screening of patients at admission helps to improve recognition of malnourished patients and enhance clinical outcomes. A total of 104 preoperative surgical patients with esophageal, stomach or pancreatic cancer were recruited in our study. The risk of malnutrition was examined using the quick-and-easy Malnutrition Universal Screening Tool. Data on age, height, weight, body mass index, per cent weight change over the past 6 months, unintentional weight loss, dietetic referrals, and history of nutritional intervention were collected. A total of 75% of our participants were at high malnutrition risk with a mean (+SD) of weight loss of 5.18 (+6.23)%, despite a mean BMI of 26.09 (±5.73)kgm-2. Participants with significantly higher per cent weight change, involuntary weight loss, dietitian referral and nutritional intervention had higher risk of malnutrition (p < 0.05). Multiple Logistic Regression was used to control for all confounders significantly associated with malnutrition risks. Presence of involuntary weight loss is the only significant predictor associated with risk of malnutrition; adjusted OR of 3.22 (95% CI: 1.23–8.40). In conclusion, the high prevalence of malnutrition and associated poorer clinical outcome in our study highlights the importance of routine screening of malnutrition in oncology patients. Surgical personnel must be aware that involuntary weight change is an important predictor of malnutrition risks even if the patient’s BMI is not suggestive of malnutrition.
GS61P
SAFETY, ETHICAL, LEGAL AND ENVIRONMENTAL CONSIDERATIONS IN THE REUSE OF SINGLE USE DISPOSABLE INSTRUMENTS (SUDS) IN MINIMALLY INVASIVE SURGERY

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Objective: Reprocessing and reuse of single use disposable instruments in minimally invasive surgery (MIS) to achieve cost-containment involves complex ethical, safety, legal and environmental issues. This survey was to gauge the level of awareness among surgeons and theatre nurses of these important considerations.

Methodology: 49 surgical staff comprising 31 surgeons and 18 theatre nurses of a large academic medical centre in South Australia was requested to complete an anonymous questionnaire on these key issues, in the presence of one of the authors.

Results: 74% of the participants indicated that no reprocessing or reuse of SUDs occur in their hospital. 17(34.7%) participants (16 surgeons and a nurse) felt the dangers of reuse of SUDs have been over exaggerated, 73.5% would not encourage SUD reuse while 11(22.4%) participants (all surgeons) indicated that they would encourage its reuse for cost containment. Only 24 (43%) of the participants considered patient’s informed consent necessary for SUD reuse while 13(26.5%) participants including 12 surgeons thought it was unnecessary. 67% of the participants were concerned about SUD medical waste’s effect on the environment.

Conclusions: The majority of the participants, barring a few surgeons, were well informed on the dangers of SUD reuse and would not encourage this practice regardless of the scale of economic gain. This finding is in conformity with the healthcare provider’s moral obligation to the patient “to do no harm” and well within the ambit of the 2005 Australian Therapeutic Goods Administration (TGA) recommendation that SUDs should be disposed of after use.

GS62P
SESSILE SERRATED POLYPS OF THE LARGE BOWEL: WHO, WHY, WHERE, WHAT, WHEN, AND WITH WHOM

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Introduction: Recent data suggests that 20% of colorectal cancers arise via a “serrated” pathway, with sessile serrated polyps/adenomas as the key polyp precursor. Sessile serrated polyps are hard to see endoscopically and little is known about their natural history. Here we present a consecutive series of sessile serrated polyps.

Methodology: This is a review of polyp data collected prospectively between 2004–2010. All patients with a histological diagnosis of sessile serrated polyp were identified. Medical records and endoscopic reports were reviewed.

Results: 157 sessile serrated polyps were identified in 111 patients. Who: Mean age 63.8+/−10.6 years; 62 (55.9%) women. 39 patients (35.1%) had family history of CRC. Why: Indications for colonoscopy: average risk screening 27 (24.3%), family history CRC 20 (18.0%), past history of polyps 54 (48.6%), past history CRC and well within the ambit of the 2005 Australian Therapeutic Goods Administration (TGA) recommendation that SUDs should be disposed of after use.

Conclusion: The majority of the participants, barring a few surgeons, were well informed on the dangers of SUD reuse and would not encourage this practice regardless of the scale of economic gain. This finding is in conformity with the healthcare provider’s moral obligation to the patient “to do no harm” and well within the ambit of the 2005 Australian Therapeutic Goods Administration (TGA) recommendation that SUDs should be disposed of after use.

GS63P
SHORT TERM OUTCOMES FOLLOWING LICHTENSTEIN HERNIA REPAIR

Sameh Farah and Maurice Brygel
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Introduction: Although the Lichtenstein technique is well described, fewer surgeons perform the procedure under local anaesthetic (LA) and sedation. This study assesses the short-term results of a dedicated hernia surgeon who uses the Lichtenstein technique with LA and light sedation. It analyses the post-operative pain, recovery, return to normal activities and work.

Methodology: 459 patients who underwent single, bilateral or recurrent hernia repair from 2006 to 2010 were reviewed. Audit data was collected at routine post-operative review, and included post operative analgesia requirements, pain, and time to return to normal activities were. Patients were analyzed on an intention to treat basis, and linear regression analysis was used to evaluate potential risk factors for post-operative outcomes.

Results: Return to work took a median of 6 days. The median analgesia requirement was 2 days. Regession analysis showed younger patients had more post-operative pain than older patients (F = 0.0054, R² = 0.42). There was no relationship between normal levels of exercise and post-operative pain, and no relationship between preoperative and postoperative pain. 21 patients had low impact complications. There was only one incidence of visceral injury.

Conclusion: LHR provides favourable & consistent short-term outcomes when combined with LA and sedation, even amongst older patient. Considering that convalescence is short & the rate of serious complications is low, surgeons should consider this technique more often.

GS64P
SINGLE INCISION LAPAROSCOPIC APPENDICECTOMY IN ADULTS AND PAEDIATRICS: A SYSTEMATIC REVIEW

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Purpose: Single incision laparoscopic appendicectomy (SILA) is the latest surgical technique aiming to reduce trauma of surgical access, incidence of wound complications, postoperative pain and recovery time as well as conceal surgical scars. The systematic review was undertaken to analyze the safety and efficacy of SILA.

Methodology: A computerised search of the Medline and Embase databases up until December 2011 using “Appendectomy”, “Single incision or Single port or Transumbilical” and related terms. Collated data were examined for patient demographics, techniques employed, operating time, conversion rate, length of hospital stay, and postoperative complications.

Results: Total of 45 studies were included for analysis. There is extensive heterogeneity associated with operating techniques and types of instruments used. Overall, the conversion rate in adults and paediatrics group were 7.8% and 8.7% respectively but conversions to open surgery were seldom performed (1.1% and 2.6%). The mean operating times were 55.3 minutes (adult) and 42.60 minutes (paediatric). Complication rates were 8.4% (adult) and 4.5% (paediatric). The mean lengths of stay were 2.1 days (adult) and 2.87 days (paediatric).

Conclusion: Most of the studies to date include small number of patients, short follow up time and lack uniformity in terms of the types of instruments as well as techniques used. However, based on currently published data that we have collated, SILA seems to be a safe and feasible technique in both adults and paediatrics group. Further work in the form of larger, prospective randomized and comparative studies are needed to determine whether these conclusions can be generalized.
GS66P
STANDARD OF CARE FOR ACUTE PANCREATITIS IN WESTERN SYDNEY
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Purpose: Acute pancreatitis is a common surgical presentation with a high level of evidence supporting specific management strategies. The aim of this study was to review the management of pancreatitis in Western Sydney.

Methodology: A retrospective cohort analysis of patients presenting with acute pancreatitis to four Western Sydney Hospitals from January 2009 to October 2011. Data from medical records and the hospital electronic pathology database was reviewed. No comparison between hospitals was performed. Ethics approval was obtained from the SWAHS Ethics Committee.

Results: During the study period 844 patients presented with acute pancreatitis. The median age was 51 and 414 (49%) were male. Causes included cholelithiasis (40.5%), and alcohol (21.1%). 705 (83.5%) patients had been assigned a modified Glasgow score; 10.6% were severe. Of the severe cases 60% had antibiotic therapy, 12% had early enteric nutrition commenced and 34.8% with severe biliary pancreatitis had an early ERCP. Gallstones were demonstrated in 354 patients but only 238 (67.2%) underwent cholecystectomy; with only 151 (63.4%) in the index admission. A CT scan was performed in 54.3% of all patients with most (89.8%) in the first 3 days.

Conclusion: Documentation of severity is usually done. There is poor compliance with evidence based guidelines regarding antibiotic treatment, early enteric feeding, early ERCP for severe pancreatitis. The cholecystectomy rate on index admission is low. Unnecessary early CT scanning is being performed too often. The study hospitals need to review their management of acute pancreatitis.

GS66P
STATINS IN ABDOMINAL SURGERY: A SYSTEMATIC REVIEW
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Purpose: Statins have important pleiotropic properties and have shown various surgically-relevant benefits in experimental and observational studies that may be useful in abdominal surgery. A systematic review was performed to evaluate the current evidence pertaining to this topic.

Methodology: A systematic literature search was performed using MEDLINE, EMBASE, CENTRAL and PubMed databases from inception to May 2011. All published studies and scientific abstracts evaluating the peri-operative use of statins in patients undergoing abdominal surgery were included. A qualitative systematic review was performed using appropriate methodology according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement.

Results: Eight relevant studies were identified for review. All studies involved a retrospective cohort analysis with considerable variation in patient characteristics, operation type and outcomes assessed. Within the limitations of study design, some important hypotheses were generated. Statin users had higher baseline operative risks, due to pre-existing medical comorbidities, yet demonstrated several benefits of clinical significance including reduced mortality in systemic infection, a lower rate of anastomotic leak following colectomy, decreased need for surgery in adhesive small bowel obstruction, and reduced clinical severity of systemic inflammation. There was no consistent benefit in reducing surgical wound infections.

Conclusion: Statin use is associated with several clinical benefits in patients undergoing abdominal surgery. There is a need for well designed prospective studies to evaluate the proposed benefits.

GS67P
THE ACUTE SURGICAL UNIT AS A NOVEL MODEL OF CARE FOR PATIENTS PRESENTING WITH ACUTE DIVERTICULITIS
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Purpose: The Acute Surgical Unit (ASU) was established in 2006 to improve the care of acute surgical admissions. One component was the use of specific evidence-based management protocols. Current evidence divides diverticulitis into complicated and uncomplicated presentations, which require primarily surgical intervention and Non-operative intervention, respectively. Concerns have been raised about the management of more complex colorectal disease in an ASU model. The aim of the study was to determine if the introduction of the ASU resulted in better outcome for both surgical and medical intervention.

Methodology: Medical records for acute diverticulitis patients were collected over a 4 year period. Two years before the establishment of ASU, Pre-ASU [Nov 2004--Oct 2006] and two years after the establishment of ASU, Post-ASU [Nov 2006--Oct 2008].

Results: There were 60 acute diverticulitis patients in total that required surgical intervention (17 pre-ASU and 43 post-ASU). The time to diagnosis was similar under the ASU (5.0 hours vs. 5.2 hours; \( p = 0.39 \)). Although not statically significant waiting time until surgery was reduced under the ASU (16.2 hr to 9.8 hr; \( p = 0.21 \)), the total length of stay decreased (16 days to 13 days; \( p = 0.35 \)), as was the rate of post-operative infection (20.9% vs. 23.6%; \( p = 0.87 \)). There were similar conversion rates for pre- and post-ASU. There were a total of 216 patients managed non-operatively (92 pre-ASU, 124 post-ASU). The hospital stay was similar for the 2 groups (4.5 days vs. 4.2 days; \( p = 0.45 \)).

Conclusions: Acute diverticular disease can be managed in an ASU model with a tendency toward improved clinical outcomes.

GS68P
THE EFFECT OF HANDOVER ON THE OUTCOMES OF SMALL BOWEL OBSTRUCTION IN AN ACUTE CARE SURGICAL MODEL
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Purpose: The management of small bowel obstruction can be a waiting game – albeit a shorter one with the increasing use of therapeutic gastrografin. In the acute care model, given anecdotal experiences, we suspected there was a tendency to hand-over patients with small bowel obstruction in the absence of alarm features – thus avoiding the decision to operate. Does the handover process thus lend itself to increased complications?

Methodology: We performed a retrospective review of all patients admitted with small bowel obstruction since the inception of acute care in 2005, comparing their outcomes to a random group of age matched controls from the pre-acute care era.

Results: 171 patients were included in the acute care cohort, with 61 handed over and 7 patients handed over more than once. Complication rates and lengths of stay were not significantly different. Those handed over were significantly more likely to have undergone CT scanning and gastrografin small-bowel-series, and if they underwent an operation it was more often in normal working hours.

Conclusion: The acute care model offers management advantages for small bowel obstruction, without evidence of increase complications. The process of handover does not detrimentally affect the outcome of small bowel obstruction.
GS69P
THE EFFECT OF MAJOR ABDOMINAL SURGERY ON CYTOKINE PRODUCTION

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Purpose: Surgical operations induce complex cytokine changes in patients throughout the perioperative period. Cytokines drive the initial systemic inflammatory response syndrome and its counterpart, the compensatory anti-inflammatory response syndrome. This study was part of a larger study examining the pharmacokinetic and metabolic profile of repeated administration of intravenous paracetamol after major surgery. The associated cytokine profiles are discussed here.

Methodology: Twenty subjects undergoing elective major abdominal surgery were enrolled in the study, mean age 68 years. Cytokine assays were taken prior to anaesthesia, during surgery and at multiple intervals in the postoperative period.

Results: There were no serious adverse events during the surgical procedures or perioperative period. At baseline, some of the cytokines were above normal values (II1a, II1b, TNFα and MCP1). There were postoperative elevations in II1a, II6, II8, II10, II12, GCSF, MCP1 and VEGF, their profiles varied according to the nature of the particular cytokine. Diurnal variability was apparent for GCSF, MCP1, HuP10, MPI1b, PDGFβb, RANTES and VEGF, we do not believe this has previously been reported.

Conclusion: The early post-operative elevations in cytokines represent inflammation and are consistent with tissue injury and duration and severity of surgery. The later elevations are consistent with a corresponding anti-inflammatory response, with tissue repair and healing. There was no overall elevation in the cytokines associated with cell-mediated immunity, humoral immunity or autoimmunity. The cytokines which did not elevate after routine operations may have the potential to be developed as markers of post-operative sepsis.

GS70P
THE MANAGEMENT OF THE OPEN ABDOMEN: 11 YEARS EXPERIENCE IN THE TROPICS

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Purpose: The management of the open abdomen (OA) has changed over the last 11 years with Topical Negative Pressure (TNP) systems now the first line of treatment in our institution. We share our experiences with the use of TNP systems in contrast to the previous Planned Ventral Hernia (PVH) approach.

Methodology: 92 consecutive patients with OA were reviewed from operating theatre and intensive care unit (ICU) databases from 2001 to 2011 at the Cairns Base Hospital, Queensland, Australia. Mortality rates were compared in relation to APACHE III scores as well as the incidence of adverse outcomes such as enterocutaneous fistulas (ECF), anastomotic leaks, and intra-abdominal abscesses within the two management systems. These results were analysed using chi-squared test for categorical variables, with statistical significance being identified as p value less than 0.05.

Results: Peritonitis accounted for 58% of cases of an open abdomen. There was observed increased mortality associated with PVH (16% vs. 29%) when APACHE III scores ranged from 46–126. There was no statistical significance between the two management systems in relation to incidence of ECF rate, anastomotic leaks or intra-abdominal abscesses. Patients with TNP spent less time in ICU (24.3 days vs. 31.6 days).

Conclusions: The TNP systems have replaced the previously used PVH systems in the management of the OA in our institution. Analysis suggests that TNP systems can be safely employed in the management of OA as compared to the PVH approach.

GS71P
TUBERCULOSIS MIMICKING MALIGNANT DISEASE

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Purpose: Tuberculosis (TB) is uncommon in Australia. 5.4 cases per 100,000 population, with 86.4% of these occurring in the migrant population. Extra-pulmonary disease occurs in 20% of the migrant population as the initial presentation. The purpose is to make practitioners aware that TB can mimic many types of malignancy. A high index of suspicion is needed in specific population groups.

Methodology: 2 patients who were extensively investigated for malignant disease, but were found to have extra-pulmonary TB.

Case 1, a 56-year-old male, presented initially with epididymo-orchitis and was treated with antibiotics for six weeks. Further assessment by USS, CT and PET scan suggested metastatic prostate cancer. A diagnostic laparoscopy confirmed miliary TB.

Case 2, a 23-year-old male, presented with a left supravacularicular node with diagnosis of an infective seaceous cyst. Excision biopsy showed inflammatory changes. Six weeks later a recurrence of the lump occurred. CT scanning showed the appearance of a cystic lesion, after which a re-excision was performed and tissue analysis confirmed TB.

In both patients past exposure to TB was confirmed after the fact. Both migrated to Australia years ago, case 1–13 yrs and case 2–5 yrs ago. Both responded well to the three-drug treatment for TB. An unusual manifestation of TB must be considered especially in the migrant population, irrespective of the time they have been living in Australia. It will avoid unnecessary and expensive investigations.

GS72P
VACUUM ASSISTED CLOSURE: AN EFFECTIVE WAY OF MANAGING EXTENSIVE WOUNDS POST NECROTISING FASCIITIS

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Acute necrotizing fasciitis is a devastating infectious process that can require extensive surgical debridement. This can leave large open wounds that are difficult to manage and are susceptible to superimposed infections. Vacuum-assisted closure (VAC) is now a well recognised and accepted means of wound management, with comparable cost effectiveness to conventional dressings. We report a series of five patients with necrotising fasciitis where an extensive debridement had been performed with tissue loss ranging from 10–30% total body surface area. All five cases were managed with VAC dressings prior to definitive reconstruction. Sites include upper limb, torso, abdomen, perineum and lower limb. We found this to be an extremely effective way of temporising each wound. We found the dressing to be well tolerated by patients; no patient developed a superimposed infection; and we found the VAC to be a successful means of managing large amounts of exudate. All five patients progressed to successful second stage reconstruction by means of split skin grafting. We advocate the use of VAC dressings in the management of extensive wounds as a means of reducing morbidity associated with such wounds.