

COLON & RECTAL SURGERY

**CR01**  
**SHORT GUT SYNDROME**

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**Introduction** Short gut syndrome is a rare but devastating condition that can be associated with significant morbidity and mortality.

**Methods** A literature search was performed using Medline, Embase, Ovid, and Cochrane database for studies between 1980 and 2005 using key words including intestinal failure and short gut syndrome. This was combined with clinical experience of patient management at tertiary colorectal surgical institutions in Australia (St Vincent's, Melbourne), United Kingdom (St Mark's, London), and the USA (Cleveland Clinic, Cleveland, Ohio).

**Results** Short gut syndrome may occur secondary to reduction in actual or functional small bowel length, decreased absorptive capacity or functional ability. Three stages of intestinal failure can be recognised, hypersecretory (1–2 mths.), adaptive (3–12 mths.), and stabilisation (12–24 mths.) phases. There are significant pathophysiological changes to small bowel function during these stages affecting management of both fluid and electrolytes and nutrients, which must be proactively managed. Short gut syndrome often develops in the setting of a surgical catastrophe. Management can be summarised in terms of the 4 'R's', resuscitation, restitution, reconstruction, and rehabilitation. Patients should be managed in the context of a multidisciplinary team including gastroenterological, surgical, and nursing input. Home parenteral nutrition is essential for a proportion of the patients and small bowel transplantation may be a therapeutic option.

**Discussion** Short gut syndrome is a complex management conundrum that has acute and chronic impact. A multidisciplinary team management, initially in a tertiary hospital environment, is essential.

**CR02**  
**RECTAL ENDOMETRIOSIS: THE RESULTS OF RADICAL EXCISION**

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**Background** The aim of this paper is to review the results of radical surgical excision of rectal endometriosis.

**Methods** All cases of endometriosis involving the rectum treated by a single colorectal surgeon were identified from a prospective database and the results reviewed.

**Results** Between 1995 and 2005, 213 rectal procedures were performed on 203 patients together with an endo-gynaecologist. 18 cases involved dissection of endometriosis off the rectal wall, 58 involved full-thickness excision of the anterior rectal wall and 137 segmental excisions of the rectum were performed. The mean follow-up was 68 months (range 7–158 months). A loop ileostomy was required in 7 (5 percent) of the segmental resections. 75 percent of cases were laparoscopic. Infertility was significantly more common in the group requiring a segmental resection ( $P = .026$ ) and a history of rectal pain during defecation more common in patients having dissection of endometriosis off the rectal wall ( $P = .031$ ). There were no other significant differences in symptoms between the different types of rectal surgery. The morbidity for all rectal procedures was 7 percent and there was no significant difference in complication rate between the different groups. The overall rectal recurrence rate was 5 percent and was significantly more common in the group who had dissection of the endometriosis off the rectal wall ( $P = .004$ ).

**Conclusions** Endometriosis of the rectum can be successfully treated with low morbidity and low recurrence rates by excising the disease as completely as possible using full-thickness excision of the anterior rectal wall or segmental resection of the rectum.

**CR03**  
**SMOKING IS A MAJOR RISK FACTOR FOR ANASTOMOTIC LEAK AFTER LOW ANTERIOR RESECTION**

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**Purpose** To identify risk factors for anastomotic leak after colonic and rectal anastomosis at our institution.

**Methodology** Data was collected prospectively by Otago Clinical Audit between 1/1/2000 and 31/12/2004. All operations involving a colonic or rectal anastomosis were included. For all patients the association between clinical anastomotic leakage and seven demographic and clinical variables was assessed. For the subgroup of 118 patients who underwent low anterior resection, data on a further fifteen variables related to operative technique, lifestyle factors and pathology were obtained from chart review. The association between these and leakage was assessed. Continuous variables were analysed with t-tests. Categorical variables were analysed with univariate logistic regression, and Odds ratios (OR) with 95% confidence intervals (CI) were calculated.

**Results** Over the five-year period, 878 patients had an operation with a large bowel anastomosis. The overall rate of anastomotic leakage was 4.8% (42 of 878). In this group, longer operating time ( $p < 0.01$ ) and a low rectal anastomosis (OR 3.12; CI 1.44, 6.41) were significantly associated with anastomotic leak. The leak rate for low anterior resections was 12.7% (15 of 118). Involved lymph nodes (OR 6.7; CI 1.31, 64.7), metastatic disease (OR 4.32; CI 1.12, 16.7) and cigarette smoking (OR 17.6; CI 4.84, 63.8) were significantly associated with anastomotic leak in this subgroup.

**Conclusions** Current smokers and patients with advanced malignancy undergoing low anterior resection are at highest risk of anastomotic leak. These findings need to be confirmed prospectively and may have implications for clinical decision making.

**CR04**  
**SIX YEAR, PROSPECTIVE ANALYSIS OF RECTAL BLEEDING CLINICS AT THE QUEEN ELIZABETH HOSPITAL, ADELAIDE, SOUTH AUSTRALIA**

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**Background** One stop rectal bleeding clinics are designed to diagnose and treat colorectal diseases which present with rectal bleeding. The Queen Elizabeth Hospital rectal bleeding clinic is an open access clinic and is unique in South Australia. It offers flexible sigmoidoscopy and facilities for treating common anorectal conditions.

**Methods** All patients presenting to the rectal bleeding clinic were prospectively recorded into a database. Data is collected on the presentation, past medical history, diagnosis, treatment and intended follow-up.

**Results** A total of 1539 cases were seen in the clinic between March 2000 and February 2006. Flexible sigmoidoscopy was performed in 1145 cases (75.03%). Banding or injection of haemorrhoids was performed in 383 cases. A total of 590 patients were referred for colonoscopy and of these 27 were diagnosed with colorectal adenocarcinoma or squamous cell cancer of the anus. The majority of these patients were over 50 years old (26 of 27; 96.30%) and had associated symptoms, such as weight loss or altered bowel habit, with their rectal bleeding (23 of 27; 85.19%).

**Conclusions** Rectal bleeding clinics can facilitate early diagnosis of colorectal malignancy and can also provide a 'one stop shop' for treating benign anorectal conditions.

**CR05**  
**BACTERIA NOT COMMONLY ASSOCIATED WITH HUMAN FAECES IMPLICATED IN ETIOLOGY OF POUCHITIS**

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**Purpose** Chronic pouchitis is an important long-term complication following ileal pouch formation. Antibiotics reduce symptoms indicating bacteria

play a role in pathogenesis. We analyzed and compared the bacterial content (microbiota) of stool collected from chronic pouchitis and familial adenomatous polyposis patients. Additionally, we compared the microbiota of chronic pouchitis patients on and off antibiotics. We aimed to determine which of the bacterial inhabitants of pouches had a role in the pathogenesis of pouchitis.

**Methods** The stool microbiota of 17 patients with chronic pouchitis and of 15 familial adenomatous polyposis patients were analyzed by nucleic acid-based methods (temporal temperature gradient gel electrophoretic profiles, fluorescence in situ hybridization with flow cytometry).

**Results** The composition of the stool of chronic pouchitis and familial adenomatous polyposis patients was markedly different. Electrophoretic profiles of the stool microbiota of familial adenomatous patients clustered at the 80% level of similarity, whereas those of chronic pouchitis patients were disparate. The results of fluorescence in situ hybridization analysis showed that bacteria not commonly present in human faeces, nor in the stool of familial adenomatous polyposis patients, comprised about 50% of the stool microbiota of untreated chronic pouchitis patients. Antibiotic treatment reduced the proportion of these unknown bacteria in the stool of every chronic pouchitis patient.

**Conclusion** Chronic pouchitis is associated with a microbiota that contains bacteria not commonly associated with human faeces. These bacteria are reduced with antibiotics and are likely to be the pathogenic agents of chronic pouchitis.

#### CR06 DEFICIENCIES IN PATHOLOGICAL REPORTING OF COLORECTAL CANCER IN VICTORIA

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**Background** Colorectal cancer (CRC) pathological reporting deficiencies have been shown to be common with deviations from the minimum data set. Both information from the surgeon and pathologist is necessary for a complete report. These deficiencies have been shown to be correctable with the use of proformas. We performed an audit on a random sample of CRC pathological reports from the first six months of 2004, in Victoria Australia.

**Methods** A random sample of pathological reports for CRC were obtained from the Victorian cancer council. 120 of these reports were reviewed by a team of surgical and pathological trainees. Presence or absence of the NHMRC minimum data set for CRC reporting was recorded.

**Results** There were large deviations from the minimal dataset. Most notable was the absence of the information on the apical node, the presence of metastasis and vascular and perineural invasion.

**Conclusions** The opportunity existed for considerable improvement in the pathological reporting of CRC in Victoria in 2004.

#### CR07 CONTINUOUS WOUND INFUSION OF LOCAL ANAESTHETIC IN THE CONTROL OF PAIN FOLLOWING ELECTIVE ABDOMINAL COLORECTAL SURGERY

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**Purpose** Local anaesthetic wound infusions have been investigated in recent years as a potential alternative to standard analgesic regimens following major surgery. This study investigates the efficacy of a continuous wound infusion of ropivacaine in conjunction with best practice postoperative analgesia following midline laparotomy for colorectal surgery.

**Methodology** 310 patients presenting for major colorectal surgery were included in this prospective, randomised, double-blind, placebo controlled trial. Patients were allocated to receive either ropivacaine 0.54% or normal saline via a dual catheter Painbuster Soaker(tm) continuous infusion device for 72 hours postoperatively.

**Results** The continuous wound infusion of ropivacaine following abdominal colorectal surgery conveys minimal benefit when compared with saline wound infusion. No statistically significant difference could be shown for, pain at rest, morphine usage, length of stay, mobility, nausea or return of bowel function.

**Conclusion** Management of pain following elective abdominal colorectal surgery is best achieved through adopting a multimodal approach to analgesia. Delivery of ropivacaine to midline laparotomy wounds via a Painbuster Soaker device is safe but has no clinical application following major abdominal colorectal surgery.

#### CR08 ONE YEAR EXPERIENCE WITH FAST-TRACK SURGERY FOR ELECTIVE COLONIC RESECTION

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**Purpose** Fast-Track Surgery or Enhanced Recovery After Surgery (ERAS) programs are becoming increasingly common. However there are concerns regarding safety, readmission rates and the impact on overall morbidity. We aimed to compare the results from our ERAS program for elective colonic surgery with those from our institution prior to commencement of ERAS.

**Method** We established an ERAS program for colonic resection at Manukau Surgical Centre (MSC) in Auckland. This included strategies such as epidural analgesia, early feeding and mobilisation. Patients were discharged once they were able to tolerate a full diet, had evidence of return of GI function and pain was managed with oral analgesia. They were followed up within a week.

**Results** From Dec 2005 to Dec 2006, 35 consecutive patients undergoing elective colonic resection at MSC under our ERAS program were studied prospectively. The control group consisted of 35 consecutive patients undergoing colonic resection under conventional care at the same institution prior to Dec 2005. Groups were comparable with respect to physiological and operative CR-POSSUM scores. Median day stay for the ERAS group was 4 (3–27) compared to 8 (4–30) days for the conventional group ( $p < 0.001$ ). ERAS was associated with a trend towards an earlier return of gastrointestinal function, reduced rate of infective and pulmonary complications. There were no differences in the readmission rates.

**Conclusion** ERAS is a practical and safe method of managing patients undergoing major colonic surgery and such structured care plans not only reduce hospital stay but may also be associated with reduced immediate post-operative morbidity.

#### CR09 MANAGING FAECAL INCONTINENCE: THE ROLE OF PTQ INJECTIONS

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**Purpose** An attenuated or disrupted anal sphincter can lead to faecal incontinence. One means of augmenting the sphincter is with the use of the silicone-based biomaterial PTQ. The aim of this study was to evaluate the effectiveness of PTQ for the symptoms of passive faecal incontinence caused by a weak sphincter mechanism.

**Methods** The patient records of 37 patients with passive faecal incontinence treated by 2 surgeons were examined. Their faecal incontinence scores were recorded from pre-operative consultations and then in a follow-up phone interview. Any adverse effects of treatment were recorded including significant pain, development of perianal abscesses and loss of injected silicone.

**Results** Thirty-seven patients received PTQ injections and completed follow-up interviews. The main cause of faecal incontinence for this group was obstetric trauma. The follow-up period was from 1–43 months with a median of 9 months. Twenty-five patients experienced improvements in their faecal incontinence with 7 patients remaining unchanged and 5 worse symptomatically. The median improvement in faecal incontinence scores was 3 with an average of 3.76. It was important to note that the improvement was more marked in follow-up over 18 months, with an average of 4.5. Four patients developed post injection abscesses, the most common adverse outcome and these were successfully treated with surgical drainage.

**Conclusion** PTQ injections are a successful and minimally invasive treatment in the management of passive faecal incontinence. Two thirds of patients were improved with the injection of PTQ. Ten percent of the patients developed injection related abscesses.

### CR10 LAPAROSCOPIC RIGHT HEMICOLECTOMY PERFORMED DURING THE 'LEARNING CURVE PHASE' DOES NOT IMPACT ON ONCOLOGICAL RESECTION

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**Purpose** Laparoscopic colectomy for the management of colonic neoplasia is technically feasible and increasingly popular. It is expected that the laparoscopic operation deliver similar oncological clearance to open operation. The 'learning curve' for laparoscopic right hemicolectomy has been estimated to be 20 cases and is now set as a guideline by ASCRS. This study was performed to compare histopathology specimens following laparoscopic right hemicolectomy (LRH) performed during the 'learning curve' phase with those following open right hemicolectomy (ORH) to evaluate oncological clearance of colonic neoplasms.

**Methods** 125 patients were identified as having undergone right hemicolectomy by two surgeons for colonic neoplasia from January 2001. Data regarding patient details and tumour pathology were obtained by retrospective case note review. Thirty-five patients underwent LRH compared to 90 who had ORH during the same period. Histopathology from the two groups were compared for length of specimen resected, proximal and distal resection margins, size of tumour resected or number of lymph nodes harvested. Analysis was performed using Student's T-test.

**Results** The two groups were matched with respect to age, sex and tumour characteristics. There was no significant difference between the groups in terms of length of specimen resected ( $p = 0.37$ ), proximal ( $p = 0.29$ ) and distal ( $p = 0.40$ ) resection margins, size of tumour resected ( $p = 0.37$ ) or number of lymph nodes harvested ( $p = 0.58$ ).

**Conclusions** 'Learning curve' laparoscopic right hemicolectomy allows similar lymphovascular clearance to traditional open surgery.

### CR11 PATIENT RECALL OF INFORMED CONSENT INFORMATION PRIOR TO COLONOSCOPY

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**Purpose** To determine if patients presenting for colonoscopy can remember information discussed in the informed consent process. Focusing on whether patients know of the possible risks.

**Methodology** A prospective study of patients presenting for elective colonoscopy through the Colorectal Unit. Patients were consented in outpatient clinics prior to the procedure using the colonoscopy consent form supplied by Queensland Health. On the day of the procedure a 2 page questionnaire with 13 questions was completed by the patient prior to their colonoscopy. Indications for colonoscopy date of consent & procedure and seniority of consenting doctor were obtained from medical records.

**Results** 100 patients completed the questionnaire. 94% of patients could correctly identify colonoscopy as the procedure being undertaken. 45% of patients were able to identify that there were any risks involved with the procedure. Only 28% of patients could name perforation as a possible risk. In regard to other investigative options 83% could not identify any from a list of three. Despite this 92% felt they were given enough information and were happy to proceed.

**Conclusion** This study highlights room for improvement in the current informed consent process. The current process falls short in educating patients of the possible serious risks involved. Patients do not recall other therapeutic options given. The consent process does convey basic information allowing the patient to identify the name of the investigation and anatomical area investigated. Despite these shortcomings most patients felt they were given enough information to proceed.

### CR12 ENTEROCUTANEOUS FISTULAE – ARE WE GETTING IT RIGHT?

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**Purpose** Enterocutaneous fistulae (ECF) present a difficult management problem and can cause significant morbidity. The aim of the study was to assess the outcome of these patients.

**Methodology** A retrospective chart review of all patients with ECF managed at a tertiary centre between 1996 and 2006. Demographic, management and outcome data was recorded. Factors influencing ECF closure and outcome were assessed with Cox regression analysis.

**Results** Thirty-three patients (17 male) were identified with ECF (median age 63, range 27–84). The primary aetiology was Crohn's (30%), anastomotic leak (24%), iatrogenic (18%), mesh (6%), neoplasia (6%) and other (16%). Definitive surgery was undertaken in 21 (64%) at a median of 6.4 months (0.4–72 range) following presentation. Twenty percent of patients required emergency surgical intervention and 5 patients required preoperative total parenteral nutrition (TPN). Surgical management was formal resection and reanastomosis in all patients, with a mean operative time of 4.75 hours (SD = 1.8). The median hospital stay for the operative group was 19 days (7–85). Four patients required post-operative TPN. Fistula closure rate was 97% (operative group 21/21, non-operative group 11/12). Mean follow up was 37.3 months (0.5–217). Six operative patients (19%) developed fistula recurrence. There were 2 deaths at 2 and 5 months (fistula aetiology malignant colonic fistula and radiation enteritis respectively). No factor was predictive of fistula recurrence.

**Conclusion** Patients with enterocutaneous fistula can be treated with low morbidity and low recurrence rate in a multidisciplinary setting. Patients with ECF should be referred to specialist units for management.

### CR13 UTILITY OF 18-FLUORODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY (FDG-PET) IN THE STAGING AND MANAGEMENT OF ANAL CANCER

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**Purpose** Accurate nodal staging in anal cancer is important for prognosis and planning of chemo-radiation fields. Mounting evidence exists for FDG-PET in the staging and management of cancer, with superior sensitivity and specificity compared to conventional imaging (CI) shown for several tumour sites, although little published data for anal cancer. The aim of the study was to determine the impact of FDG-PET on the nodal staging and management of patients with primary anal cancer.

**Methods** Sixty-two consecutive patients with anal cancer referred to a tertiary centre between August 1997 and November 2005 were staged with CI and FDG-PET. The stage determined by CI and the proposed management plan was prospectively recorded prior to FDG-PET. The impact of FDG-PET on stage and management was assessed and the accuracy of changes confirmed by subsequent clinical follow-up.

**Results** The stage was changed in 23% (14/62) as a result of FDG-PET (15% up-staged, 8% down-staged). The staging FDG-PET scan had high impact (altering management intent) in 3% (2/62), and medium impact (altering radiotherapy fields) in 13% (8/62). Fourteen percent of T1 patients (3/22), 42% of T2 patients (10/24) and 38% of T3-4 patients (6/16), assessed using CI, had a change in their N or M stage following FDG-PET. Sensitivity for nodal disease for CI and FDG-PET was 72% and 92% and specificity was 99.5% and 100% respectively.

**Conclusion** FDG-PET shows increased sensitivity over CI for staging nodal disease in anal cancer and changes management in a significant proportion of patients.

#### CR14 EFFICACY OF PERITONECTOMY FOR PERITONEAL CARCINOMATOSIS FROM COLORECTAL CANCER

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**Purpose** The objectives of this report were to critically evaluate the efficacy of cytoreductive surgery combined with perioperative intraperitoneal chemotherapy (peritonectomy) for patients with peritoneal carcinomatosis from colorectal carcinoma.

**Methodology** Forty patients with histologically confirmed peritoneal dissemination from colorectal cancer underwent peritonectomy at the St George Hospital, Sydney. All clinical and treatment-related data were prospectively collected. Perioperative and survival results were analysed by intention-to-treat principle.

**Results** The mean age at the time of surgery was 54 (S.D. = 14) years. There were 25 male patients. Three, 20 and 17 patients had well-, moderately- and poorly-differentiated tumours. The mean peritoneal cancer index was 12 (S.D. = 9). The mean operation duration was 7 (S.D. = 4) hours. The mean ICU, HDU and overall hospital stay was 1 (S.D. = 0.5), 5 (S.D. = 8) and 28 (S.D. = 34) days, respectively. Seventeen patients (42%) had moderate morbidity and required interventional procedures for resolution. Six patients (15%) had severe morbidity and required returning to ICU or operating theatre for management. There was no operative death. After a median follow-up of 12 months since peritonectomy, the overall median survival was 30 months (range 1 to 46), with 1- and 2-year survival of 67% and 61%, respectively.

**Conclusions** Peritonectomy is a treatment option for selected patients with peritoneal carcinomatosis from colorectal carcinoma.

#### CR15 LOCAL RECURRENCE AFTER CURATIVE RESECTION FOR RECTAL CANCER IS ASSOCIATED WITH ANTERIOR POSITION OF THE TUMOUR

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**Background** Mobilization of rectal cancer can be difficult if the tumour is located anteriorly and may result in a higher incidence of local recurrence. The aim of this study was to determine whether local recurrence and survival following curative resection of rectal cancer were associated with the position of the tumour.

**Methods** Data were drawn from a comprehensive, prospective hospital registry of all resections for rectal cancer from January 1990 to December 1998, with follow-up to December 2003.

**Results** The 5-year local recurrence rate was 15.9 (95 per cent confidence interval (c.i.) 11.0 to 22.8) per cent in 176 patients with tumours that had an anterior component compared with 5.8 (95 per cent c.i. 2.8 to 11.9) per cent in 132 patients with tumours without an anterior component ( $P = 0.009$ ). This association persisted after adjustment for other factors linked to local recurrence (hazard ratio (HR) 2.4 (95 per cent c.i. 1.1 to 5.4)). Similarly, anterior position had a significant negative independent association with survival (HR 1.4 (95 per cent c.i. 1.0 to 2.0)).

**Conclusion** Anterior position is an independent negative prognostic factor for both local recurrence and survival after curative resection of rectal cancer.

#### CR16P METHYLENE BLUE INJECTION REDUCES PAIN AFTER LATERAL ANAL SPHINCTERTOMY

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**Introduction** Intradermal methylene blue has been used successfully in pruritus ani. The mechanism is likely the destruction of dermal nerve endings. We report a new method in achieving postoperative pain relief using intradermal methylene blue injection to the perianal region after lateral anal sphincterotomy.

**Methods** Consecutive patients undergoing lateral anal sphincterotomy between July 2004 and January 2006 were studied prospectively. All were performed under local anesthesia. Four ml 1% methylene blue and 16 ml 1% lignocaine was injected into the perianal skin and intersphincteric space. Patients were asked to fill in a pain chart with a visual analog scale of 0 to 10.

**Results** There were 24 patients studied during this period. The median pain scores were under 2.5 for the first 4 days and were 0 from the 5th postoperative day. Nineteen out of 24 wound have healed by 2 weeks post sphincterotomy. There were no perianal complications.

**Conclusion** Intradermal injection of methylene blue together with local anesthetic gives good post-operative pain control with minimal complications.

#### CR17P LAPAROSCOPIC COLECTOMY: A STUDY OF OPEN CONVERSION

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**Purpose** Recent literature has indicated that patients having conversion during laparoscopic assisted colorectal resection may yield poorer clinical outcomes when compared to open or laparoscopic completed procedure.<sup>1,2</sup> This study aimed to audit our experience of laparoscopic assisted colectomy, and assess clinical outcomes of patients undergoing conversion.

**Methods** All patients having elective laparoscopic right hemicolectomy (RHC) or Anterior resections (AR) by 6 surgeons in Adelaide from 1997 to 2006 were recruited. Data pertaining to patient sex, age, ASA score, pathology, operative outcomes including operating time, conversion, reason for conversion, length of stay (LOS) and intraoperative and postoperative complications were analysed.

**Results** Laparoscopic AR (n = 203) has a higher rate of open conversion than laparoscopic RHC (n = 164) (18.7% vs 10.4%,  $p = 0.028$ ). In the RHC group none of the risk factors for conversion investigated were statistically significant; morbidity rates between the two groups were similar. Of AR group median operative time was significantly longer ( $p = 0.012$ ) and wound morbidity rate higher in the converted group (13.2% vs 3.0%,  $p = 0.022$ ). Age > 75 yo and high ASA status were significant independent risk factors for conversion in AR.

**Conclusion** Open conversion in laparoscopic AR is associated with higher wound morbidity. We recommend careful considerations prior to elderly (>75 yo) patients with high ASA status for laparoscopic AR, and informing them of the increased risk and morbidity observed in conversion. In RHC, conversion is not significantly associated with the parameters investigated nor to increased morbidity.

#### Reference

1. Tekkis et al
2. Guillou et al

#### CR18P LAPAROSCOPIC VS OPEN TOTAL MESORECTAL EXCISION FOR RECTAL CANCER: AN EVALUATION OF THE MESORECTUM'S MACROSCOPIC QUALITY

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**Purpose** Next to surgical margins, yield of lymph nodes, and length of bowel resected, macroscopic completeness of mesorectal excision may serve as another quality control of total mesorectal excision (TME). In this study, the macroscopic completeness of laparoscopic TME was evaluated.

**Methodology** A series of 25 patients with rectal cancer were managed laparoscopically (LTME) and included in this study. The pathologic specimens of the LTME group were prospectively examined and matched with a historical group of resection specimens from patients who had undergone open TME (OTME). The two groups were matched for gender and type of resection (low anterior or abdominoperineal resection). Special care was given to the macroscopic judgment concerning the completeness of the mesorectum.

**Results** A three-grade scoring system showed no differences between the LTME and OTME groups.

**Conclusion** The current study supports the hypothesis that oncologic resection using laparoscopic TME is feasible and adequate.

#### CR19P THE VALUE OF BEDSIDE COLONOSCOPY FOR THE CRITICALLY ILL PATIENT IN INTENSIVE CARE UNIT

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**Purpose** Bedside colonoscopy for the critically ill patient in Intensive Care Units (ICU) confronts the endoscopist with a new set of challenges and aims. This study examines the value and benefits that colonoscopy offers to critically ill patients with acute lower gastrointestinal disease.

**Methodology** ICU patients who received bedside colonoscopy were identified from the colonoscopy database and the indications, co morbidities, depth of intubation, progression to surgery and death were recorded.

**Results** 39 patients underwent one or more bedside ICU colonoscopies to investigate ischemic colitis (11, confirmed in 8, 3 operated), colonic distension (10, all decompressed, 2 operated), lower gastrointestinal hemorrhage (13, cause found in 3, 2 operated), and diarrhea (4 patients). 14 patients died. Overall, 18 patients were diagnosed with ischemic colitis; 7 were operated and 6 died.

Colonoscopy reached the cecum in 16 patients, the hepatic flexure in 25 and the splenic flexure in 36. Prep was poor in 15 patients and stool prevented completion in 13. In 30% of patients colonoscopy was not pursued to the cecum because decompression was achieved without it, or because ischemic colitis was already diagnosed. Colonoscopic techniques specific to ICU included prevention of a loop outside the patient and "slide-through" with copious irrigation.

**Conclusion** Bedside ICU colonoscopies are able to make an accurate diagnosis. Reaching the cecum is often not the aim of the study, nor is the diagnosis of small adenomas. In many cases a serious colorectal disease can be diagnosed or excluded, helping in the management of these severely ill patients.

#### CR20P NEED FOR STOMA DETERMINES LENGTH OF STAY AFTER LAPAROSCOPIC RECTAL SURGERY AND NOT CONVERSION TO OPEN SURGERY

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**Purpose** Published evidence suggests a shorter length of stay (LOS) following laparoscopic colorectal resection. Increased LOS may result from conversion to open surgery and post-operative complications but these factors are generally unpredictable. By contrast, the need for a permanent or temporary stoma is often predictable and may alter the LOS.

**Methodology** This was a retrospective analysis of a prospectively collected database of all laparoscopic rectal procedures performed under the care of one surgeon since June 2003. Conversion was defined as an incision made in order to progress the intra-abdominal dissection, either by a midline, Pfannenstiel or targeted incision.

**Results** 105 patients were included in the study (90 anterior resections, 10 abdomino-perineal resections (APER), 3 Hartmann's resections and 2 completion proctectomies). Conversion was performed in 27 patients (26%). Median LOS was 6 (range 3–83) days for the laparoscopic group and 7 (range 4–24) days for the converted group ( $p = ns$ ). A stoma was performed in 27 patients (26%). Following anterior resection without stoma, median LOS was 6 (3–83) days. By contrast, after anterior resection with covering stoma, median LOS was 9 (3–30) days, whilst in those patients undergoing APER, Hartmann's or completion proctectomy, the corresponding figure was 13 (5–35) days ( $p < 0.0001$ ).

**Conclusions** Conversion to open operation during laparoscopic rectal surgery did not increase mean LOS in this study. However, patients receiving a

stoma have significantly longer hospital stays. Intensive pre- and post-operative stoma education should be considered in these patients if overall in-patient stay after laparoscopic surgery is to be reduced further.

#### CR21P MALE SEXUAL DYSFUNCTION AFTER LAPAROSCOPIC PELVIC SURGERY IS UNCOMMON WHEN PERFORMED BY SURGEONS BEYOND THEIR "LEARNING CURVE"

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**Purpose** The CLASICC trial reported higher levels of sexual dysfunction in men after laparoscopic pelvic surgery as compared to patients undergoing open surgery. This finding has since been replicated in a smaller study from Singapore. This has led some surgeons to question the role of the laparoscopic approach to pelvic surgery. This issue has been addressed further in this study.

**Methodology** This study represents a retrospective analysis of a prospectively collected database for a single unit, comprising 2,000 patients undergoing laparoscopic colorectal surgery. Data collected prospectively at post-operative clinic visit on impotence and retrograde ejaculation were evaluated.

**Results** 150 males undergoing pelvic surgery were identified. The incidence of impotence and retrograde ejaculation were less than 5% for men undergoing laparoscopic pelvic surgery. This does not differ significantly from rates seen in patients undergoing open pelvic surgery in this unit.

**Conclusions** In this unit, laparoscopic pelvic surgery has been performed only since 2001, by which time there had been experience of over 1,000 laparoscopic abdominal procedures. Previous studies reporting poorer functional outcomes have probably included a significant number of patients on the surgeons' "learning curve". By contrast, the low rates of sexual dysfunction in this unit may be attributable to pelvic dissection only being undertaken by experienced laparoscopic surgeons.

#### CR22P PERINEAL FLAP RECONSTRUCTION FOLLOWING EXTENDED RESECTION FOR PELVIC MALIGNANCY

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**Purpose** Extended resection for colorectal pelvic malignancy has shown good outcome but may involve extensive perineal resection necessitating plastic surgical reconstruction. The aim was to assess the indications, techniques, morbidity, and outcome of perineal flap reconstruction for extended pelvic resection.

**Methods** Patients requiring perineal flap reconstruction following colorectal resection at a tertiary centre from 1994 to 2006 were identified from a prospective colorectal database. Details of the indication, procedure, morbidity, and outcome were obtained from the database and retrospective chart review.

**Results** 21 patients (11 male, 10 female), median age 59 years (range 26–80) underwent perineal flap reconstruction. Indications for resection were advanced primary colorectal cancer (7), recurrent rectal carcinoma (8), recurrent anal carcinoma (3), and other pelvic malignancy (3). 18/21 patients had neoadjuvant radiotherapy. Reconstruction was by pedicled flap in 14 patients (5 gracilis flap, 7 vertical rectus abdominal muscle flap; 1 gluteal rotation flap) and latissimus dorsi free flap with microvascular anastomosis in 7 patients. Eighteen patients had immediate reconstruction and three were delayed. Five patients underwent vaginal reconstruction following posterior vaginectomy. There were four major flap complications (19%) requiring five unplanned reoperations. There were 2 minor complications (10%) requiring 1 unplanned reoperation. There were no donor site or longterm flap complications.

**Conclusion** Perineal flap reconstruction by both pedicled and free flaps may be achieved with low morbidity following extended pelvic resection.