

**THE ROLE OF ROUTINE INTRA-OPERATIVE ENDOSCOPY IN ELECTIVE
LAPAROSCOPIC COLORECTAL SURGERY****STEVEN D WEXNER**

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Intraoperative verification of anastomoses in particular distal intrapelvic anastomoses is important. Problems which can be identified and potentially intraoperatively treated include anastomotic defects, bleeding, and ischemia. While routine air insufflation and dye or povidone-iodine testing can reveal defects these methods do not allow direct anastomotic inspection. Since the advent of laparoscopy most surgeons have intraoperative endoscopy readily available. Although selective intraoperative endoscopy can be performed, according to specific instances routine intraoperative endoscopy may reveal additional unsuspected problems. A recent publication from our department reported the diagnosis and management of unsuspected peri-anastomotic problems by the re-use of routine intraoperative endoscopy, moreover the incidence of postoperative anastomotic bleeding was less often seen after routine intraoperative endoscopy as compared to after selective intraoperative endoscopy.

LEARNING OBJECTIVES

1. Evaluate the use of intraoperative endoscopy
2. To assess the advantages of routine instead of selective intraoperative endoscopy
3. Discuss the indications for intraoperative endoscopy

CONCLUSION

Intraoperative endoscopy is an important tool in low pelvic anastomoses. Accordingly, we advocate the use of routine intraoperative endoscopy after anastomoses to the rectum or anus.

OFFICE TREATMENT OF HEMORRHOIDS**ARMANDO C CRISOSTOMO**

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Hemorrhoids continue to be one of the most common conditions for which patients seek office consultation. The number of excisional hemorrhoidectomies has significantly decreased with an increased number of office and less invasive procedures being performed. Historically, various office procedures for hemorrhoids have been recommended with the objective of reducing the vascularity, hemorrhoidal volume and to fix the fibrovascular cushion to the rectal wall. These include: rubber band ligation, sclerotherapy, infrared photocoagulation, direct and bipolar electrotherapy, cryotherapy and Doppler guided hemorrhoidal artery ligation.

The indications, advantages and disadvantages of these office procedures will be discussed. Results of meta-analysis suggest that rubber band ligation and infrared photocoagulation to be most effective with rubber band ligation appearing to be more efficacious and less costly. The only other procedure that may be safely performed in the office for hemorrhoids is excision of a painful thrombus under local anesthesia. Recommendations for thrombus excision are based mostly on clinical experience rather than high levels of evidence.

REDO HEMORRHOIDECTOMY**ARUN ROJANASAKUL**

Colorectal Division, King Chulalongkorn Memorial Hospital, Bangkok, Thailand

Redo-hemorrhoidectomy for residual or recurrent hemorrhoid is not common. Recurrent hemorrhoids after traditional hemorrhoidectomies are rare (1%). New techniques such as stapler hemorrhoidopexy and hemorrhoid artery ligation have more recurrence of 5-7% and 7.5% respectively.

Redo-hemorrhoidectomy, in broader meaning, is re-operation for correction of complications. Complications after hemorrhoidectomy can be categorized into early and late complications. Early complications are bleeding, thrombosis and rare local infection. Reported incidence of bleedings are (0.8 – 4%) for traditional hemorrhoidectomy and 6.6% for stapler hemorrhoidopexy. Best option for controlling severe post-hemorrhoidectomy bleeding is suturing the bleeding point under general anesthesia. Late complications are stricture (3% – 5.9%), fissure, ectropion, mucosal prolapse and fistula-in-ano. Anal stricture can be managed by dilatation, internal anal sphincterotomy or anoplasty according to severity of the stricture. Stapler hemorrhoidopexy has unique but serious complications, which include rectal perforation and rectovaginal fistula.

Prevention of complications can reduce redo-hemorrhoidectomy, and can be achieved by patients-selection, preoperation evaluation, proper surgical techniques and adequate informed consent. Attention to details of the selected procedure should not be overlooked.

Lastly, there are still some types of hemorrhoid, especially circumferential large external hemorrhoid, which are technically demanding and should be taken care of only by experienced surgeons.

**STOMA CARE IN CHILDREN
TAI SEOW BENG**

Clinical Coordinator cum Lecturer, SEGi College Kuala Lumpur, Kuala Lumpur, Malaysia

Caring for infants with tiny stomas required special needs can be challenging and frustrating. There are certain factors to consider whether the baby premature or term? Secondly is the stoma temporary or permanent? Stoma siting is not done preoperatively due to emergent surgery, distorted abdomen and tremendous changes in physical growth. Newborn and children's skin do not provide same skin barrier as adult skin. Newborn skin is more permeable and ratio of surface to body weight is 3 times of adult placing greater risk of toxicity from products and immature skin thus increasing potential skin stripping. Paediatric selection of appliances varies from pouching vs non pouching system. Skin integrity is the criterion for assessing management method. Careful thoughts must be given with avoidance of usage aggressive adhesive and alcohol contents products. Physical growth in first year is triple their birth weight. This result changes of stoma size and abdominal contours which need reassessing. Tips will be shown on how to solve developmental growth problems. Parents faced different stages such as anger, grieving, having malformed baby, fear and anxious. Parents need professional help and support to deal with their feelings from different age group children. Adapting to a stoma never easy. The presence of a stoma in children can be put into perspective with accurate information caring and reassurance.

MALAYSIAN ENTEROSTOMAL NURSE CERTIFICATION PROGRAM**RAVATHY RAMAMURTHY**

Department of Surgery, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

As colorectal cancer is increasing in our country, the demand for nurses in caring for people who undergo ostomy surgery needed great attention. Training of these nurses to care for ostomates (person with a stoma) and their family members started in 1995 in Malaysia under the approval of the Malaysian Ministry of Health and Hospital Kuala Lumpur with the collaborative effort of Stoma Care Society of Malaysia. The whole program has got its recognized certification from the World Council of Enterostomal Therapy Nurses Association. It is a full time course for 3 months opened to both government and private hospital nurses.

AVOIDING AND MANAGING POST-OPERATIVE ILEUS IN COLORECTAL SURGERY

STEVEN D WEXNER

Professor of Surgery, Ohio State University, Ohio, USA &
Affiliate Professor, University of South Florida College of Medicine, Tampa, Florida, USA

Postoperative ileus (POI) is the failure of the gastrointestinal tract to regain its normal function following surgery. This postoperative phenomenon is associated with significant morbidity, prolonged hospitalization, and dramatically increase hospital cost. The traditional treatments of postoperative ileus have centered around nasogastric intubation and intravenous fluid replacement. Because of the morbidity and financial impact numerous recent investigations have focused upon better delineation of the mechanisms of ileus and improved methods of both prevention and treatment. Early ambulation, fast tract protocols, limited postoperative intravenous fluid use, patient controlled analgesia or epidural catheterization along with new pharmacologic advances offer promise in this arena.

LEARNING OBJECTIVE

1. Assess the definitions of Ileus?
2. Evaluate underlying mechanisms relative to the pathophysiology of Ileus
3. Discuss clinical management
4. Evaluate potential pharmacological management options

CONCLUSION

It is incumbent upon all surgeons to perform intraabdominal procedures to strive to prevent postoperative ileus and to expedite its course and minimize its adverse sequelae if ileus occurs.

IDENTIFYING AND DIAGNOSING PATIENTS WITH HNPCC**KOH POH KOON**

Department of Colorectal Surgery, Singapore General Hospital, Singapore

Approximately 20% – 30% of all colorectal cancers (CRCs) exhibit a familial inheritance. Of these, Lynch syndrome (HNPCC) accounts for 5% – 10% and is inherited in an autosomal dominant fashion. HNPCC is characterized by a germline mutation that predisposes to developing cancers of the colon, rectum, endometrium, stomach, small intestine, hepatobiliary system, upper urinary tract, ovary and rarely, the brain. Patients with Lynch syndrome carry an estimated 68% to 82% lifetime risk of CRC, which presents at an early age (mean 45 years), is predominantly located in the proximal colon (60% – 70%), and has a 10% – 30% incidence of synchronous or metachronous cancers.

With the rising incidence of CRC worldwide, identifying potential HNPCC patients and their families will become an increasingly important aspect of preventive cancer care, as predictive gene testing is available for pre-symptomatic diagnosis of Lynch syndrome and clinical surveillance guidelines have been established to target the population at risk. Prophylactic colectomies and hysterectomies have been advocated for obligate gene carriers in high-risk families as a cancer-risk reduction strategy.

Lynch syndrome patients have traditionally been identified using clinical criteria such as the Amsterdam or Bethesda Criteria that trigger further genetic investigations. People who fulfill these clinical criteria are said to have Hereditary Nonpolyposis Colorectal Cancer syndrome (HNPCC). Patients with an identified MMR germline mutation are then classified as Lynch Syndrome. Emerging data suggests that Asian HNPCC cases may have a different clinical presentation compared to Caucasians.

This talk will examine unique challenges of HNPCC diagnosis in Asians, highlighting the advances in molecular diagnostics for identifying HNPCC and suggest cost-effective clinical strategies for HNPCC detection in our Asian population.

SURVEILLANCE RECOMMENDATIONS FOR PATIENTS WITH FAP**RICHARD SIM**

Tan Tock Seng Hospital, Singapore

Regardless of the surgical procedure performed for the FAP patient, postoperative surveillance - of the rectal remnant after TAC, the ileal pouch after IPAA, or the ileostomy after TPC - and screening for the extracolonic manifestations are essential for the remainder of the patient's life.

Initially, it should be at short intervals to assess the psychological and physical adaptation to surgery and identify desmoid tumor formation in its earliest stage. The initial follow-up should include a thorough physical examination, baseline abdominal ultrasound, CT or MRI to aid in detecting existing or future changes suspicious of a desmoid tumor.

Endoscopy of the rectal remnant, ileal pouch or ileostomy should be performed annually with polyps removed and examined histologically to exclude dysplasia.

To combat the substantial risk of upper gastrointestinal malignancy in FAP after prophylactic colectomy, upper gastrointestinal surveillance is recommended. Three yearly upper gastrointestinal endoscopy is recommended from age 30 years with the aim of detecting early curable duodenal and periampullary cancers. Patients with large numbers or advanced duodenal polyps should undergo surveillance yearly.

The role of novel imaging techniques (such as high resolution endoscopy, chromoendoscopy, single or double balloon enteroscopy and capsule endoscopy) and measures to enhance compliance with surveillance will also be discussed.

COLORECTAL LIVER METASTASES – CURRENT TREATMENT OPTIONS**KRISHNAN RAMAN, HARJIT SINGH, LIM KIN FOONG**

Hepatobiliary Unit, Selayang Hospital, Selangor, Malaysia

The liver is the most common site of metastasis from cancers within the abdomen. 40 – 70% of patients with colorectal cancer will develop liver metastases. 30% of patients with colorectal cancer have metastases confined to liver only. 15 – 30% will have synchronous metastases while 30% will develop metachronous metastases within 3 years. However, 80 – 90% of patients with colorectal cancer metastases to the liver have unresectable disease and only 10 – 20% will have resectable disease. Untreated metastatic liver disease invariably results in death. Surgical resection of liver metastasis can produce long term survival (25 – 40% 5 year survival) and cure in some patients.

The objectives of surgery are to improve long term outcome, achieve loco-regional control and to improve quality of life. Surgery is advocated provided the primary disease is completely controlled, complete removal of hepatic metastases is technically feasible, and there is no evidence of extra hepatic metastases. It cannot be overemphasized that resectability of ALL liver tumours including metastases **MUST** be determined by an experienced HPB Surgeon. Resectability is now determined by feasibility of performing an R0 resection and an adequate remnant liver following surgery. Methods to improve resectability include Perioperative Chemotherapy and Portal vein embolisation. Two-stage hepatectomy and repeat hepatectomies can also be performed.

Local destructive therapies may also be employed and these include Radio Frequency Ablation, Microwave Ablation, Cryotherapy, Ethanol Injection and Chemo-embolisation.

The principles of surgery should include a thorough Laparotomy / Laparoscopy whereby the abdomen is examined for any evidence of extrahepatic disease and any suspicious nodules biopsied for frozen section. An Intraoperative Ultrasound should be performed to evaluate the hepatic metastases. Hepatic resection is then performed under vascular control.

The results of the HPB Unit at Selayang Hospital will be presented.

OSTOMY COMPLICATIONS – SKIN ECORINATION**RASIDAH BINTI JAMALUDDIN**

Department of Surgery, Hospital Tuanku Jaafar, Seremban, Negeri Sembilan, Malaysia

Skin excoriations to be related with ostomy patients. Most ostomies initially have healthy peristomal skin. Due to improper siting and unadequate information given , skin excoriation occur.

Skin excoriation or skin irritation may be caused by allergies, exposure to chemicals, mechanical trauma, infection or radiation.

MANAGEMENT:

ACCORDING TO CAUSES

e.g. Dermatitis- protect damaged skin with skin barriers with hydrocolloids or stomahesive powder.

Mechanical trauma -pressure from belt can cause erosion due to tightness and press the skin.

Mx-Loosened the belt or padding may be worn under the belts.

From psychology aspects, most ostomates worried because they are spending more money on their appliances.

In conclusion, by preventing and detecting early stage of complications of peristomal area , skin irritation can be avoided.

PARASTOMAL HERNIATION**RAVATHY RAMAMURTHY**

Department of Surgery, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Parastomal Herniation is a common complication after stoma formation due to the weakness of the abdominal wall after an ostomy surgery. It is often little more than an inconvenience as it represents a setback for an ostomate to come to terms with psychological morbidity that a stoma produces; a change in body image.

Ostomates complain of cosmetic appearance, however, approximately 10-20%, have symptoms severe enough to seek operative correction. In cases where surgical interventions do not help much, nurses need to teach ostomates the proper and suitable appliances to prevent leakages, skin excoriation from taking place as well as prevent the bulge of the herniation being seen through the clothings. This is to assist such ostomates from feeling uncomfortable and embarrassed of their condition.

ROBOTIC COLORECTAL SURGERY – BEGINNING OF THE END?**SEON HAHN KIM**

Director of Robotic & MIS Center, Head & Professor of Colorectal Division
Department of Surgery, Korea University Anam Hospital, Seoul, Korea

In this lecture, my personal point of view on robotic colorectal surgery will be presented as a laparoscopic surgeon who has performed more than 1700 minimally invasive procedures for colorectal diseases, mainly colorectal cancer resection. In early 2000s, I was thinking that the robotics seems fancy and may be helpful for my practice. In 2003, I first performed a case of laparoscopic anterior resection for sigmoid colon cancer using the AESOP 3000 robotic system. But, it was a disaster since the left ureter was accidentally transected during the procedure. It was very difficult for me to simultaneously play the role of the 'two-person job (operator and camera holder)'. I could not focus on my surgical planes because I also had to move the robot with my voice at the same time. Since that experience, I had been believing that the use of robot in my practice is too much fancy and I rather need more practical equipment or instruments in my hands such as non-foggy scope, wide-view scope, multi-purpose instrument, or wide-jaw wide-angulated stapler, etc.

However, in early 2007, when I saw the data on radical prostatectomy for prostatic cancer, I thought that there is something in robotic prostatic cancer surgery, and started to realize that the 'da Vinci' system seems different from other previous robots. The prostatic cancer data showed that 41% of the whole radical prostatectomy performed in the United States in 2006 was the da Vinci prostatectomy. Many surgeons may agree that there are some similarities between the prostate and the rectum in regards to surgical difficulty in cancer operation and anatomical issues as well. At that time, I thought that robotic TME may be a good alternative to rectal cancer resection in order to overcome the pitfalls of laparoscopy. Many studies demonstrated that laparoscopic resection for rectal cancer results in better short term outcomes than open surgery. However, laparoscopic total mesorectal excision for middle and lower rectal cancer is technically challenging and has been performed by some highly experienced surgeons. The da Vinci®-S surgical system has advantages over conventional laparoscopic surgery. It provides a three-dimensional view, improved dexterity with an increased range of movements at the tips of the instruments, reduced tremor, enhanced ergonomics and a stable camera view.

Since I first employed the robot for rectal cancer surgery in July 2007, I have endeavored to develop a single stage robotic rectal surgery without moving the cart. There are several useful principles in my technique. Firstly, the robotic cart must be located beside the patient's left lower quadrant abdomen, which I believe is the best position to cover the wide operation field from the stage of splenic flexure mobilization to pelvic dissection. In addition, this approach allows colonoscopic examination in the situation that the location of tumor should be identified by intraoperative colonoscopy. The layout of port placement is similar to that of our current conventional laparoscopic surgery for rectal resection. This has great potential of simply converting to laparoscopy without additional port(s) when needed. Based on my current technique, the use of robot has several advantages. Keeping an adequate tension in the dissection plane by coordination between the surgeon and assistant is the most important factor in obtaining a good surgical view in laparoscopic TME. In robotic TME, three dimensional constant image and proper counter-traction provided by the assisting robotic arm guarantee a more excellent surgical dissection plane, thereby enabling robotic surgery to preserve autonomic nerves and even the neurovascular bundle. I found that the fourth robotic arm (acting as the surgeon's third hand) is particularly helpful for creating a wide operating space in the pelvic cavity of obese patients, even with

ROBOTIC COLORECTAL SURGERY – BEGINNING OF THE END?

huge prostate. So far, I have performed more than 130 robotic rectal resections. Currently, robotic resection is about 20% to 25% of the whole rectal cancer resection in my practice. The characteristic features of the da Vinci system also provide some advantages even for colonic resection. Easy application of intracorporeal suture anastomosis is the most prominent. Stable traction on the colonic mesentery enables easier lymph node dissection particularly around the middle colic vessels than that of conventional laparoscopic approach.

What I want to do more with robot in my future practice are as follows: (1) resection of a still fixed, T4 rectal cancer even after chemoradiation, if haptic function is available in robot, (2) safer and easier transection of the rectum, if robotic stapler is available, (3) single-port robotic colorectal surgery which will be available very soon in the market, (4) solo-surgery if a 5-arm system with some other robotic instruments are available such as a suction/irrigator, (5) development of colorectal techniques for the da Vinci standard system since the majority of hospitals throughout the world still have this system instead of the da Vinci-S system.

SYMPOSIUM 6 FAECAL INCONTINENCE

SACRAL NERVE STIMULATION

STEVEN D WEXNER

Professor of Surgery, Ohio State University, Ohio, USA &
Affiliate Professor, University of South Florida College of Medicine, Tampa, Florida, USA

Fecal incontinence is a devastating condition which is no doubt severely under reported because of the associated social stigma. The traditional treatment of sphincter repair has not stood the test of time. Until recently the only other option was a post anal repair but over the last several years, artificial bowel sphincter and stimulated graciloplasty became more widespread. Unfortunately these procedures have very high associated incidences of morbidity and rather moderate success rates. Sacral nerve stimulation has been developed to improve bowel control and decrease fecal incontinence without implanting a foreign body or even dissecting near the anus. This modality offers tremendous promise in terms of both an accepted morbidity rate and a good functional outcome.

LEARNING OBJECTIVES

1. Explain the Anatomical basics for sacral nerve stimulation
2. Evaluate the Technical steps of the procedure
3. Evaluate the Outcomes of sacral nerve stimulation for the treating fecal incontinence

CONCLUSION

Sacral Nerve stimulation is promising new modality for the treatment of fecal incontinence. It offers very good success rates with a very acceptably low morbidity

PERINEAL RECTOSIGMOIDECTOMY FOR RECTAL PROLAPSE**SHERIEF SHAWKI**

Clinical/Research Fellow, Cleveland Clinic Florida, USA &
Assistant Lecturer, Suez Canal University, Egypt

Rectal prolapse is a distressing condition often co-existent with fecal incontinence. In spite of an idiopathic etiology, has very clear associated anatomic characteristics including a deep cul de sac, a redundant rectosigmoid, an elongated mesorectum, increased perineal descent, levator ani diastasis, and fecal incontinence. The mere fact that over 100 procedures exist to attempt to treat rectal prolapse, it is clear attestation for the lack of universal success of any one procedure. In general, there are two categories of technique; transabdominal and transperineal. Transperineal procedures are associated with a lower success rate but also a much lower complication rate than are the abdominal procedures. Conversely, abdominal procedures which afford the patient a much better functional outcome with a much lower recurrence rate, are also unfortunately associated with a potentially significantly higher morbidity. The goal of the selection of therapy is to balance patient factors which would direct the surgeon towards either an abdominal or a perineal approach. This video presents the technical steps for perineal rectosigmoidectomy.

LEARNING OBJECTIVES

1. Evaluate the method of perineal rectosigmoidectomy
2. Discuss potential adjunct procedures including perineal colonic J-pouch construction and levatoroplasty
3. Evaluate the outcomes of perineal rectosigmoidectomy for the treatment of rectal prolapse

CONCLUSION

Perineal rectosigmoidectomy is a relatively safe option employed for the treatment of rectal prolapse in elderly and or debilitated patients. The unfortunately high recurrence rate may be justifiable based upon the impressively low morb.

GRACILIS INTERPOSITION FOR RECTOVAGINAL FISTULA**SHERIEF SHAWKI**

Clinical/ Research Fellow, Cleveland Clinic Florida, USA &
Assistant Lecturer, Suez Canal University, Egypt

Rectovaginal fistula is a psychologically and often physically devastating problem the treatment of which is complex. Surgical options have included transanal, transvaginal, and transperineal approaches. More recently, biological solutions including fibrin and collagen have been attempted. Abdominal procedures have included coloanal anastomosis, omental interposition, and permanent stoma. Tissue interposition techniques have the benefit of being extra-abdominal in nature and of bringing fresh, healthy vascularized tissue into the area. Such flaps have included labus majorum fat pad, the bulbo cavernosus muscle, and the gracilis muscle. The gracilis muscle lends itself to transposition into this area and is an easy to learn operation associated with a reasonably high success rate and an acceptably low morbidity. This video will present the technical steps for gracilis interposition in rectovaginal fistula in a person with Crohn's disease in whom other surgical options have failed.

LEARNING OBJECTIVES

1. Assess the technique of gracilis interposition
2. Review the potential morbidity of this operation
3. Analyze the outcomes of gracilis interposition for rectovaginal fistula

CONCLUSION

Gracilis muscle interposition is a good alternative for the treatment of difficult, complex rectovaginal fistulae.

TRIPLE L FLAP FOR PILONIDAL SINUS**FRANCIS SEOW-CHOEN**

Seow-Choen Colorectal Centre Pte Ltd, Mount Elizabeth Medical Centre, Singapore

Pilonidal sinus and abscesses are not uncommon in surgical practice. I most often use the triple - L flap for this problem and have found it efficacious and easy to use. The complications are minor and consist usually of minor detachment of the corners. These normally heal with time. The flap should be made big enough to mitigate most of the valley of the buttock cleft; otherwise recurrence may be seen if only a small flap is made.

Tips and tricks: The third L after the Rhomboid is made for the excision of the central sinus and cleft is made on a horizontal basis on one or the other side of the rhomboid. The rhomboid is excised and removed to the deep fascia. The flaps are raised to their entirety and the flaps are then brought together with 20 vicryl. A small redivac drain is inserted and the skin approximated. Patients normally stay only a day or two in hospital.

SURGEON INFLUENCED VARIABLES IN THE OUTCOME OF RECTAL CANCER**STEVEN D WEXNER**

Professor of Surgery, Ohio State University, Ohio, USA &
Affiliate Professor, University of South Florida College of Medicine, Tampa, Florida, USA

Over the last several decades numerous improvements have been brought forward to better manage and treat rectal carcinoma. The advent of stapled anastomosis allowed more sphincters to be saved from excision and the widespread adoption of total mesorectal excision and surgical skills development have further improved patient outcomes. A variety of factors contribute to the outcome following rectal cancer surgery including the training and skill of the surgeon, the size and location of the tumor, the distal and radial margins, lymph node involvement, tumor markers, and surgical techniques. While tumor related factors cannot be controlled surgeon related factors certainly can be optimized.

LEARNING OBJECTIVES

Evaluate the surgeon related variables relative to the treatment of rectal cancer

Assess the importance of radial and distal margins for puritive resection of rectal cancer

Discuss methods of total mesorectal excision

Describe methods of reconstruction after proctectomy

Evaluate the influence of volume and specialization on rectal cancer surgery outcomes

CONCLUSION

Although tumor related factors cannot be modified the surgeon has significant control over the postoperative outcome due to careful attention to distal and radial margins, methods of reconstruction, and most importantly appropriate training and volume of cases.

**IS LAPAROSCOPIC SURGERY JUSTIFIED FOR
ALL COLORECTAL CANCER PATIENTS?****SHERIEF SHAWKI**Cleveland Clinic Foundation, Weston, Florida, USA &
Suez Canal University Hospitals, Ismailia, Egypt

Laparoscopic colorectal procedures began in 1991 and rapidly adopted for a variety of benign conditions. Commencing in 2005 with the publication of the clinical outcomes for surgical therapies trial (COST), laparoscopy became accepted for the surgery for curative intent of colon carcinoma. Numerous randomized control trials and meta analyses have shown at the very least equivalent oncologic outcome and in some instances improved oncologic outcomes with laparoscopy compared to laparotomy. Other benefits have included decreased levels of pain, shorter hospitalizations, more rapid resolution of postoperative ileus and less immune suppression.

LEARNING OBJECTIVES

1. Evaluate the role of laparoscopy for the treatment of colon carcinoma
2. Assess the technique of laparoscopic colon resection for carcinoma
3. Evaluate the outcomes of laparoscopic colon resection for carcinoma

CONCLUSION

Laparoscopy is an accepted tool for the treatment of colon carcinoma. It offers patients the benefits of minimally invasive surgery while retaining or perhaps even improving oncologic outcomes as compared to laparotomy.

LAPAROSCOPIC SURGERY IN INFLAMMATORY BOWEL DISEASE**STEVEN D WEXNER**Professor of Surgery, Ohio State University, Ohio, USA &
Affiliate Professor, University of South Florida College of Medicine, Tampa, Florida, USA

Laparoscopic techniques have been applied to the treatment of inflammatory bowel disease for almost 20 years. Even during the early stages of laparoscopic colorectal surgery when significant debate surrounded these techniques for the treatment of malignancy, benign pathologies were considered appropriate indications. Two very common disorders the treatment of which included laparoscopy were Crohn's disease and mucosal ulcerative colitis. Although even if at the exception of laparoscopic colorectal surgery, significant advantages were noted when laparoscopy was applied for the treatment of terminal ileal Crohn's disease, advantages were not readily apparent when these techniques were used for the treatment of mucosal ulcerative colitis. However, more recently, with the advent of energy devices, which have greatly facilitated dissection and vascular control, incision sizes have diminished and advantages seem to be apparent even for restorative proctocolectomy for mucosal ulcerative colitis.

LEARNING OBJECTIVES

1. Evaluate the level of laparoscopy for the treatment of Crohn's disease
2. Assess the level of laparoscopy for the treatment of mucosal ulcerative colitis
3. Discuss the outcomes of laparoscopy in inflammatory bowel disease

CONCLUSION

Laparoscopic techniques have been proven advantageous for the treatment of terminal ileal Crohn's disease and more recently have shown potential significant benefit for the treatment of mucosal ulcerative colitis.

MANAGEMENT OF RECTOURETHRAL AND RECTOVAGINAL FISTULAS**STEVEN D WEXNER**Professor of Surgery, Ohio State University, Ohio, USA &
Affiliate Professor, University of South Florida College of Medicine, Tampa, Florida, USA

Rectovaginal (RVF) and rectourethral (RUF) fistulas are devastating problems for the patients which represent significant challenges to the physician. Rectovaginal fistulas often follow obstetric trauma or may occur from other iatrogenic or non iatrogenic trauma as well as sepsis and crohn's disease. Rectourethral fistulas were almost universally associated with one of the adverse sequela of surgery or radiation therapy for prostate carcinoma. Surgical management is varied including local advancement flaps, fecal diversion, transabdominal reconstruction and tissue interposition. The latter group of procedures includes the labus majorum fat flap, bulbo cavernosus muscle, and gracilis muscle. Muscle interposition is a relatively safe option as it does not require intraabdominal access and it allows placement of new well vascularized tissue into an otherwise infected diseased area.

LEARNING OBJECTIVES

1. Identify the etiologies of RVF/RUF
2. Outline clinical presentation
3. Evaluate other surgical alternatives
4. Explain the technique of gracilis interposition
5. Discuss the surgical outcomes including success and morbidity

CONCLUSION

Graciloplasty is a high technically demanding procedure which has a very acceptable morbidity and a high success rate particularly for the treatment of rectourethral fistulas but also for the treatment of rectovaginal fistulas.

BOWEL PREPARATION IN COLORECTAL SURGERY – DO WE NEED IT?**ISMAIL SAGAP**

Department of Surgery, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Mechanical bowel preparation (MBP) has been routinely use in elective colorectal surgery and prior to colonoscopy for decades. While the use in colonoscopy is rather obvious, its use in elective colorectal resection was based on tradition, convenience and the hypothetical belief of decreasing fecal mass and bacterial load which then would reduce the severity of septic complications such as anastomotic leak and surgical site infection.

Comparative studies and meta-analyses of bowel preparation use versus non-use have recently demonstrated no difference in the measured outcome. Furthermore, omission of routine pre-operative MBP may prevent the rare occurrence of its serious adverse effects and safe cost.

These evidences should prompt surgeons towards careful use and re-evaluate the dogma of pre-operative mechanical bowel preparation.

MANAGEMENT OF ANASTOMOTIC LEAKS**ROBERT L CHANG**

Jose R Reyes Memorial Medical Centre, Manila, Philippines

The negative impact of a leak after intestinal anastomosis extends beyond increased patient morbidity and mortality: patients with colorectal cancers whose operations were complicated by anastomotic leaks had been observed to have decreased overall and cancer-specific survival. Extraluminal implantation of cancer cells from the leak, as well enhanced tumor spread and metastasis secondary to the inflammatory response, have been proposed as possible mechanisms.

This presentation will focus on operations for rectal cancers (anterior resections), and the impact of total mesorectal excision (TME) and neo-adjuvant chemo-radiotherapy on anastomotic leaks. The Tripartite Consensus Conference (1999) defined total mesorectal excision (TME) as the complete excision of the visceral mesorectal tissue to the level of the levators. Differences in cellular architecture have been observed in intestinal anastomosis with and without chemotherapy. Radiotherapy is also known to induce vasculitis and decreased collagen deposition in tissues.

Management strategies include intra-operative detections of leaks, measures to minimize complications from leaks (? diverting stoma), dealing with an established leak in the post-operative period, and finally, perhaps some paradigm change to decrease the incidence of leaks.

POSTER PRESENTATIONS

- PO 1 The Surface Protein Expression Of Colorectal Cancers In Relation To Tumour Stage 32**
Elaine H B Ng¹, L C Yeoh², B H Gooi¹, L H Gam²
¹Department of Surgery, Penang Hospital, Penang, Malaysia
²School of Pharmaceutical Sciences, University Sains Malaysia, Penang, Malaysia
- PO 2 Successful Enhanced Recovery Program After Colorectal Surgery In The County Hospital Setting 33**
Armen Aboulian¹, Mohd Zailani M Hassan², Matthew Lin¹, Ravin R Kumar¹
¹Harbor-UCLA Medical Center, Los Angeles, USA
²International Islamic University Malaysia, Kuantan, Pahang, Malaysia
- PO 3 Perineal Myxoid Liposarcoma: Report Of A Case And Literature Review 34**
R Prabhu¹, M N Azmi¹, M S Amri¹, H Norra², M Y Mubarak³, M H Zailani¹
¹Colorectal Unit, Department of Surgery, Faculty of Medicine, International Islamic University Malaysia, Kuantan, Pahang, Malaysia
²Department of Pathology, Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia
³Department of Radiology, Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia
- PO 4 Differentially Expressed Proteins In Colorectal Cancer By Two-Dimensional Gel Electrophoresis 35**
Munirah Mihat^{1,5}, April Camilla Roslani², Rosmawati Mohamed¹, Rohana Yusof³, Colin Ng⁴, Sanjiv Mahadeva¹, Saiful Anuar Karsani^{5,6}
¹Department of Medicine, ²Department of Surgery, ³Department of Biomolecules, ⁴Pantai Medical Centre, ⁵University Malaya Centre for Proteomics Research, Faculty of Medicine ⁶Institute of Biological Sciences, Faculty of Science
- PO 5 Impact Of Socio-Economic Class On Colorectal Cancer Patient Outcomes In Kuala Lumpur And Kuching 36**
Chee-Kwan Kong¹, April Camilla Roslani¹, Chee-Wei Law¹, Diana Law²
¹University Malaya Medical Centre, Kuala Lumpur, Malaysia
²Sarawak General Hospital, Kuching, Malaysia
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THE SURFACE PROTEIN EXPRESSION OF COLORECTAL CANCERS IN RELATION TO TUMOUR STAGE

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INTRODUCTION

Hydrophobic proteins are water-insoluble proteins often associated with the cell membrane in cellular and molecular biology. These proteins may serve as important biomarkers in drug-targeted therapy by enhancing delivery of drugs to target surface and increasing specificity of drug action with less adverse reaction. This is useful in malignancies if the drug-targeted chemotherapy can deliver the drug effects with high specificity and efficacy to the affected tissues without causing detrimental collateral damage to normal tissues. Today, colorectal cancer is one of the most common cancers affecting Malaysians of both genders.

OBJECTIVE

To attempt identification of surface proteins more highly expressed in colorectal cancer tissues and their relationship to the stage of disease.

METHODOLOGY

Patients with colorectal cancer without any previous neo-adjuvant or palliative local therapy were identified. Both cancerous mucosal tissue and normal mucosal tissue at least 10cm from the tumour edge were sampled. The hydrophobic proteins were extracted from the tissues, separated using 2-D gel electrophoresis and analyzed using LC/MS/MS. Statistical analysis of the proteins was carried out to determine the significance of the expression of each protein to colorectal cancer (CRC) and their relationship to tumour stage.

RESULTS

17 pairs of colorectal cancer tissues and their adjacent normal mucosal tissues were analyzed. All the pairs were of tumour stages T3 and T4 or modified Duke's B and C. Thirteen differentially expressed proteins were identified. SLP-2, tubulin beta-2 chain, annexin A3 and annexin A4 were significantly expressed in T3. SLP-2 appears to be consistently expressed in T3 and T4.

CONCLUSION

There are specific proteins highly expressed in T3 and T4 CRC not expressed in corresponding normal mucosal tissues. This suggests a need for further investigation of the identified proteins to better understand the molecular basis of the disease in the hope of finding specific markers for molecular-targeted therapy.

SUCCESSFUL ENHANCED RECOVERY PROGRAM AFTER COLORECTAL SURGERY IN THE COUNTY HOSPITAL SETTING

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INTRODUCTION

In recent years, some enhanced recovery protocols after colorectal surgery have gained some acceptance as they have shown to improve patient recovery and decreased length of hospital stay.

OBJECTIVE

This study was designed to assess the feasibility of such a program in a large county hospital with a diverse patient population.

METHODS

A retrospective review of 54 consecutive patients who underwent colorectal resection without an ostomy by a single surgeon. Of the 54 patients, the first 27 were consecutive patients who were treated with a traditional intra and postoperative manner prior to institution of the enhanced recovery program, while the latter 27 were treated using a protocol with overall goals of early feeding and ambulation, intravenous fluid restriction and limited narcotic use. A Student's T-test was used for numerical values and a chi-squared test for categorical values.

RESULTS

From April 2008 to July of 2009, 54 patients underwent laparoscopic and open colorectal resection without an ostomy for benign and malignant disease processes. There were no differences between the groups in terms of age, gender, disease process (benign vs malignant) and type of procedure (laparoscopic vs. open). There was a statistically significant difference in the patients treated with the enhanced recovery protocol in terms of a shorter length of postoperative stay (median 4 days (IQR 4,5) vs. 6 days (IQR 5,8) $p = 0.003$) and less total intravenous fluids administered on the day of surgery (mean fast track vs not fast track, p -value) and up to three days following surgery (mean fast track vs not fast track). There were no differences in terms of complication and readmission rates.

CONCLUSION

The enhanced recovery program has shown to be effective in reducing hospital stay in patients undergoing colorectal resection without any increase in complication and readmission rate.

PERINEAL MYXOID LIPOSARCOMA: REPORT OF A CASE AND LITERATURE REVIEW

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Liposarcomas are rare soft tissue tumour, with an incidence of 30 cases per million population. The myxoid liposarcoma (MLS) consists of 45 – 55% of these tumours, making it the most common subtype. MLS commonly involves the thigh and retroperitoneum but relatively rare in the perineum or pararectal spaces. MLS presents with unique radiological challenges and have the potential for overt malignant behaviour. The determination of clinical behaviour and pathological subtype is invaluable to the management of these patients, as there is no available consensus on the use of neoadjuvant and adjuvant therapies in the form of chemotherapy or radiotherapy for non-metastatic soft tissue sarcomas. Therefore, surgery remains the mainstay of treatment for MLS. We presents an unusual case of myxoid liposarcoma presenting as a large perineal swelling occupying the para-rectal and para-anal spaces. The diagnosis, management and prognosis of myxoid liposarcoma are discussed.

DIFFERENTIALLY EXPRESSED PROTEINS IN COLORECTAL CANCER BY TWO-DIMENSIONAL GEL ELECTROPHORESIS

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BACKGROUND

In 2002, data from the Ministry of Health Malaysia showed that colon cancer (CRC) was ranked third among cancers reported in males and females. It accounts for 7.8% and 5.6% of all cancers in males and females respectively¹. Statistics from 2006 showed an increase in incidence of CRC among Malaysians, placing CRC as the second most common cancer in Malaysia. CRC is now the most common cancer among Malaysian men (16.2%) and the second most common cancer among Malaysian women (10.6%)².

CRC is generally preceded by formation of polyps. However, in Malaysia polyps are not commonly observed in the progression and transformation of normal colonic tissues to neoplastic stages. Therefore, it is crucial to study the gene expression of the local cases of colon cancer to compare with the findings in Western countries where polyps commonly precede cancer formation.

MATERIALS AND METHODS

We used two-dimensional gel electrophoresis to identify proteins that are differentially expressed in the serum of Malaysian patients with CRC and these proteins were then identified by Matrix Assisted Laser Desorption /Ionization- Time Of Flight (MALDI-TOF) mass spectroscopy.

RESULTS

Using the image masters platinum analysis, we have identified at least 30 individual protein spots as being differentially expressed in the serum of CRC patients.

CONCLUSION

Further investigation of these proteins may provide clues to novel pathways for CRC development.

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IMPACT OF SOCIO-ECONOMIC CLASS ON COLORECTAL CANCER PATIENT OUTCOMES IN KUALA LUMPUR AND KUCHING

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OBJECTIVE

Colorectal cancer is the third leading cause of cancer death in Malaysia. Research over the past several decades has indicated that low socio-economic class has a direct effect on health outcomes. However, the socio-economic classes are not evenly distributed throughout Malaysia. The objective of this study is to compare the presentation and survival of colorectal cancer patients in two such dissimilar cities, Kuala Lumpur and Kuching, Sarawak.

METHOD

All patients diagnosed with malignancy of the colon or rectum at Sarawak General Hospital and University of Malaya Medical Center from 1st Jan 2000 – 31st Dec 2006 were recruited. Data on presentation, socio-economic class and survival was obtained. The survival duration was categorized into more than 3 years or less than 3 years. Testing for significance was performed using the chi-square test, with p values less than 0.05 considered statistically significant.

RESULTS

A total of 565 patients admitted to UMMC and 642 patients to SGH had a new diagnosis of colorectal carcinoma. However, complete hospital records could be collected and analyzed in only 412 at UMMC and 419 at SGH. None of the patients in our sample were asymptomatic at presentation or diagnosed from screening. Patients at Kuching had longer duration of symptoms and more advanced stage at presentation. Lower socio-economic class was also a significant factor for late and more advanced stage at diagnosis. Three-year survival rate was lower for patients at Sarawak and those from lower socio-economic class.

CONCLUSION

There is near-zero awareness of colorectal cancer screening in Malaysia. However, poorer survival of patients from Sarawak and from lower socio-economic classes is multi-factorial and warrants further detailed research. These findings support reaching out to communities of lower socioeconomic backgrounds to improve the colorectal survival rates.

MESOCOLIC DESMOID TUMOUR PRESENTING AS AN ACUTE ABDOMEN R PRABHU¹, A R FADLI², S ROSLINA³, M H ZAILANI¹, M N AZMI¹

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Mesenteric fibromatosis (MF) is a subgroup of intraabdominal desmoid tumour and is a rare neoplasm. MF is a locally aggressive fibroconnective tissue neoplasm that frequently recurs after excision but does not metastasize. There is a high association of mesenteric fibromatosis with previous trauma, hormonal imbalance and Gardner's syndrome. This tumour is commonly found in the mesentery of the small bowel and usually has an insidious clinical presentation. Surgical removal with segments of bowel remains the treatment of choice. We report a case of Mesenteric fibromatosis (MF) in the mesocolon presenting as an acute abdomen.

POSTER 7

VALUES OF BIOFEEDBACK IN FUNCTIONAL CONSTIPATION Y H HANIM, Y AZNIWANI, M H ZAILANI, R PRABHU, M N AZMI

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INTRODUCTION

Constipation is a debilitating medical condition with a wide range of aetiological factors. The two most common causes include pelvic floor dyssynergia and slow transit constipation. Eventhough constipation is not a life threatening, it does have an adverse effect on patient quality of life and associated with significant morbidity and financial implication. Biofeedback is frequently used as treatment option after conservative management has failed to improve the symptoms.

OBJECTIVE

The study aims to analyze the value of biofeedback therapy in the treatment of functional constipation.

METHODS

All consecutive patients presented to our surgical clinic with symptoms of chronic constipation were included in our study. These patients will undergo routine history, physical examination, standardized blood investigations and endoscopic examination to exclude pathological causes of constipation. Transit study and defaecating proctogram will be used to differentiate between slow transit and pelvic floor dyssynergia constipation. Wexner constipation scoring system (maximum score = 30) was used to determine the severity of constipation before and after the biofeedback training program within 3 months after they have completed the training. The Student's t test was used to detect differences in the means of constipation score before and after biofeedback training.

RESULTS

Seventeen patients (12 females and 5 males) fulfilled the criteria of functional constipation were included with mean age of 33.6 (range from 17 to 59). Mean constipation score before and after biofeedback showed a significant different with a p-value < 0.001. (pre-biofeedback = 16 versus post biofeedback = 7).

CONCLUSION

Biofeedback training exercise is effective in the treatment of functional constipation after other non surgical treatments have failed to improve the symptoms.

You may type over these instructions.

DIAGNOSTIC YIELD OF COLONOSCOPY IN PATIENTS WITH COLORECTAL SYMPTOMS FROM TWO HOSPITALS IN MALAYSIA

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INTRODUCTION

In Malaysia where colorectal cancer screening is not practiced, the detection of colorectal cancers and their precursors are usually in symptomatic patients. Colonoscopy is a widely available diagnostic tool for colorectal diseases. A growing demand of colonoscopic examination in medical practice has led to an inevitable rise in health care cost. Therefore, there is a need to optimize the resources for colonoscopic examination.

AIMS

1. Determine the relationship between colorectal symptoms with detection of colonic polyps and carcinomas.
2. Evaluate the yield of colonic polyps and carcinomas in patients with colorectal symptoms.
3. Identify which symptoms have more weightage in terms of clinical significance.

PATIENTS AND METHODS

We conducted a cross sectional study of 3557 patients with symptoms of colorectal neoplasm who presented to two hospitals in Malaysia; Penang Hospital (2000 – 2005) and HTAA (2005 – 2007).

- Colorectal symptoms: Rectal bleeding, altered bowel habit (ABH), abdominal pain
- Exclusion criteria: Screening and surveillance colonoscopy.
- Diagnostic yield was defined as the ratio between significant findings detected during colonoscopy and the total number of procedures performed for that indication.

RESULTS

In this study, 52% of patients were male. 973 (27.4%) were Malays, 1196 (56.1) Chinese and 545 (15.3) Indians. 65% were above 50 years old. 20.4% were positive from colonoscopic examination where 6.9% malignancies and 13.5% polyps were detected. The major symptoms for colonoscopy were rectal bleeding and ABH having 20.2, % and 23.7% positive findings respectively. Multiple logistic regression analysis revealed (odds ratio [95% CI]) that rectal bleeding (1.9 [1.3-2.9]) and ABH (1.4 [1.1-1.7]) were positive predictors of cancers. Age above 50, male (1.5 [1.2-1.8]) and ABH (1.9 [1.3-2.9]) are significant positive predictors of polyps and carcinomas.

CONCLUSION

The symptoms of alteration in bowel habit and rectal bleeding have a higher diagnostic yield among symptomatic patients who underwent colonoscopic examination.

HIGH RESOLUTION MELTING ANALYSIS FOR DETECTION OF THE APC CODON 1309 MUTATION IN COLORECTAL HYPERPLASTIC POLYPS

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INTRODUCTION

Despite being the most common type of polyp detected in the human colon and rectum, relatively little is known about the etiology, natural history, or growth rate of hyperplastic polyps. Hyperplastic polyps and the histologically related serrated adenomas and mixed polyps may either lie in the classic adenoma-carcinoma pathway for a subset of tumors or define a distinct mutator-phenotype pathway independent of adenomatous polyps.

METHODOLOGY

We searched for germ-line mutation at codon 1309 of the APC gene in 30 unrelated patients with colorectal hyperplastic polyps. DNA was extracted from paraffin-embedded tissues and the mutation in the APC gene hot spots at codon 1309 was tested by PCR-HRM (High Resolution Melt) analysis.

RESULTS

Thirty colorectal hyperplastic polyps were suitable for analysis. All samples showed no epithelial cell dysplasia. Seventeen polyps were from male patients and 20 polyps were taken from left colon. The size of these polyps ranged from 4 to 7 mm in maximal dimension. Mutation in codon 1309 was found only in 2 patients (6.6%).

CONCLUSION

Hyperplastic polyps may not be entirely benign and the presence of the APC mutation may have malignant potential.

KEYWORDS

Hyperplastic polyps, APC gene, High Resolution Melt.

RECTOVAGINAL FISTULA: THE UMMC EXPERIENCE**A H Y AMAR, A C ROSLANI**

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BACKGROUND

Rectovaginal fistula is a debilitating condition which can have a number of different aetiologies. It is also a socially embarrassing disease and is likely under-reported in Malaysia. To date, there is little local data on rectovaginal fistula.

OBJECTIVE

The aim of this study was to audit cases of rectovaginal fistula presenting to University of Malaya Medical Centre (UMMC).

METHODS

Records of all patients diagnosed as having rectovaginal fistula from 1st January 2006 until 31st December 2009 in UMMC were retrospectively reviewed. Data extracted included demographics, aetiology, management and outcomes.

RESULTS

Nine patients were enrolled. Six (66.7%) were Chinese, followed by Malay, Indian and other race, 1(11.1%). Eight were over the age of 40 (88.8%). Aetiologies included cervical carcinoma, (four, 44.4%) and iatrogenic [post-ultra-low anterior resection (three, 33.3%), obstetric injury (two, 22.2%)]. Seven (77.8%) had also been subjected to radiation. Five (55.6%) patients underwent repair, while the other four (44.4%) were only defunctioned due to the advanced nature of their disease. Repairs performed included two gracilis interposition flaps (40%), one simple closure (20%), one Martius flap, one overlapping sphincteroplasty and one omental interposition. Two patients who had previous radiation therapy experienced recurrence (40%) Overall recurrence rate were 40% and successful repair was 60%. Mean follow up was three months.

CONCLUSION

Rectovaginal fistulas diagnosed in UMMC are similar to that reported in the literature. Managing these patients is difficult and very challenging, especially those who had undergone both surgery and radiation therapy for malignant disease. This group of patients warrants special consideration since operative repair is more likely to fail as compared to fistulas of benign aetiology.

**CASE REPORT: APPENDICOVESICAL FISTULA ARISING FROM
AN APPENDICEAL DIVERTICULUM – AN UNCOMMON ENTEROVESICAL
FISTULA ARISING FROM A RARE PATHOLOGY**

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INTRODUCTION

Appendicovesical fistula is an uncommon type of enterovesical fistula, usually a rare complication of unrecognized appendicitis. Our case illustrates this rare condition, which was not due to an unrecognized appendicitis but instead from an appendiceal diverticulum.

CASE REPORT

We present a 60 year old gentleman who presented with dysuria and suprapubic pain, pneumaturia and fecaluria for 2 weeks. Abdominal examination revealed no abnormality. Digital rectal examination revealed a 20g prostate.

A CT scan of the abdomen and pelvis did not demonstrate any enterovesical fistula, bowel or bladder abnormality. Flexible cystoscopy revealed a fistula opening at the dome of the bladder. Flexible sigmoidoscopy revealed diverticulosis and a polyp at sigmoid colon. Histopathological examination of the polyp was consistent with tubular adenoma. A clinical diagnosis of colovesical fistula secondary to sigmoid diverticular disease was made and he was posted for a laparotomy.

During surgery, to our surprise there was an appendicovesical fistula. A simple appendicectomy and partial cystectomy was performed. A suprapubic catheter and a Foley's catheter were inserted at the end of surgery. Postoperatively he recovered well. Both the catheters were removed on day 14 postoperatively after a cystogram showed no urine leak from the bladder.

Histology of the resected specimen revealed an essentially normal appendix with no obvious increase in inflammatory cells or malignancy. The tip of the appendix has thickened and disorganized muscularis with overlying large intestinal mucosa replacing the focally absent serosa. A histological diagnosis of appendicovesical fistula arising from an appendiceal diverticulum was made.

DISCUSSION

Appendicovesical fistula is an uncommon type of enterovesical fistula with less than 200 cases reported in the literature. Appendicovesical fistula arising from an appendiceal diverticulum is even rarer. Diagnosis of this condition can only be made if surgery is performed and the specimen is examined by a careful pathologist.

AUDIT OF FISTULA IN ANO : HOSPITAL SELAYANG**A H Y AMAR¹, M T K RAZALI¹, F HENRY¹, I SAGAP²**¹Hospital Selayang, Selangor, Malaysia²Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia**BACKGROUND**

Fistula-in-ano is the one of the most common benign anal conditions in daily surgical practice. The procedure to treat them should eradicate the tract, prevent from recurrence and avoid the complications. No one surgical procedure has become the standard treatment for these fistulae.

OBJECTIVE

To review all cases of fistula-in-ano that have been treated in Hospital Selayang and their outcome.

METHODS

We reviewed records of all patients treated for fistula-in-ano in Hospital Selayang form 1st January 2005 until 31st December 2008 and analysed healing and recurrence episodes

RESULTS

Fifty five patients with fistula-in-ano were identified. There were 51 males (92.7%). Malay 32(58.2%), Indian 13(23.6%), Chinese 9(16.4%). The majority (94.5%) were aged between 20-60 years. All patients presented with perianal discharged either spontaneously or after drainage procedure. In most instances, EAUS was used preoperatively. The types of fistulae were transsphincteric fistula (76.3%), intersphincteric (20%), supra and extrasphincteric (1.8%). Posterior internal opening was found in 32 cases (58.2%) while in 33 cases (60%) there was associated horseshoe extension. Seton was used in 33 (60%) cases and fistulotomy in 29 cases. Both single and combined procedures was equally used as treatment strategy (28, 50.9% and 27, 49.1% respectively). The overall recurrence rate was 10.9% with mean follow up of 14.9 months. The recurrence rate for simple and complex fistula was 15.2% and 4.5% (P=0.38) while recurrence for multiple and single operation was 13.5% and 5.3% (P=0.65) respectively. There is no difference in recurrence whether a single or combine procedure were used (14.3% and 7.4% (P=0.66).

CONCLUSIONS

Regardless of complexity of fistula, multiplicity of surgery and combination of surgical procedures, recurrence is inevitable and it is difficult to predict.

NER: CORRELATION BETWEEN COLONOSCOPIC IMPRESSIONS AND BIOPSY REPORTS IN TWO MOH HOSPITALS

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AIM

To assess the accuracy of endoscopic diagnosis by verifying it with the histopathological biopsy reports.

METHOD

All biopsies taken during colonoscopy in Hospital Sultanah Bahiyah Alor Setar (HSB) and Hospital Kuala Lumpur (HKL) were traced from a prospectively collected data in the National Endoscopy Registry from 1st August 2008 to 31st May 2009 and compared with the recorded endoscopic findings. All results that match with the endoscopic impression are considered correct whilst those completely different are incorrect. Those results without conclusive diagnosis are considered inconclusive.

RESULTS

A total of 242 biopsied cases were collected from Hospital Kuala Lumpur and 112 from Hospital Sultanah Bahiyah. The indications for biopsy are categorized into 4 main reasons such as ulcers, carcinomas, polyps and colitis. Another group of biopsies which do not come under these mentioned categories and were put under the category named as others. Generally, more than 50% of the endoscopic diagnosis were confirmed by histology. The most inaccurate impression was for ulcers in HKL where only 37.5% were histologically confirmed. The highest number of biopsies (46.7%) were taken for polyps in HKL of which 80.5% were accurate - most accurate compared to all other biopsies. The highest number of biopsies taken in HSB (25.9%) were for carcinomas and 56.9% were accurate. However the best correlation for HSB was seen in ulcer biopsies where 76.5% were correct. The highest inconclusive results (34.5%) were given for the endoscopic suspicion of cancer in HSB. In HKL, the highest inconclusive biopsy reports (14.7%) were also seen in cancer suspicion. The overall accuracy for HSB is 58% whereas for HKL is 64%.

CONCLUSION

The endoscopic impressions were correct most of the time. However, the accuracy rate is not very high. This depends not only on the visual experience of the endoscopists but also on the ability to take biopsy on the right spot. Good training with supervision is essential in coming to an accurate diagnosis where the treatment instituted immediately post-endoscopy would be effective and an unnecessary delay can be avoided.

FACTORS ASSOCIATED WITH THE RECURRENCE OF COMPLICATED DIVERTICULAR DISEASE

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INTRODUCTION

Asymptomatic diverticula are a common entity in the western society especially in the aged over 80. Of these, 20 – 30% is symptomatic and will eventually develop a complication with many going on to develop recurrent complications. The natural history and postulations regarding the etiology of colonic diverticula has been well described. However, predictive indicators of complicated diverticular disease have not been well established thus preventing the ability to correctly predict and prophylactically treat this subset of patients. The aim of this study to search for factors to predict recurrent colonic diverticular complications.

METHODS

Between January 2005 to December 2008 all hospital admissions for a complication of diverticular disease namely diverticulitis, diverticular bleed or other complications were analyzed. Using logistic regression, we analyzed factors such as demographic data, clinical presentation and nature of complication, lifestyle and concomitant medical illness that may be associated with recurrent complication episodes.

RESULTS

A total of 121 patients were diagnosed with complicated diverticular disease during the study period with 24 patients having recurrent complications. Smoking and concomitant diabetes mellitus are associated with a statistically significant risk of developing recurrent complications. A logistic regression analysis was then performed and after controlling for confounders, active smoking ($p=0.006$), alcohol consumption ($p=0.036$) along with underlying diabetes ($p=0.031$) and dyslipidemia ($p=0.039$) were significantly associated with increased risk of recurrence of complications.

CONCLUSION

Smoking, alcohol consumption, diabetes mellitus and dyslipidaemia are factors that are associated with recurrent complicated colonic diverticular disease. These are modifiable factors and should be sought for during presentation of first attack. Aggressive control of these factors will help reduce the risk of recurrent attacks of complication.

THE ASSOCIATION OF INSULIN-LIKE GROWTH FACTOR I (IGF-I) WITH PATTERNS OF COLORECTAL ADENOMAS – A CROSS SECTIONAL STUDY

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Insulin-like growth factors (IGF)-I is a growth factor, which is stimulated by growth hormone. IGF-I has been found to be elevated in patients with colorectal adenomas, precursors of colorectal cancers.

The objectives of the study were to identify the relationship of serum IGF-I levels with patterns of colorectal adenomas (low-risk and high risk) and its association with risk factors of developing colorectal malignancy.

Symptomatic patients with no previous history of colorectal malignancy or surgery underwent full colonoscopy. Colorectal polyps were biopsied and serum IGF-I taken for analysis. Risk factors for carcinoma such as diabetes and smoking were obtained. Body mass index (BMI) were also measured and analysed.

Out of total of 153 individuals, 87 of them were included for statistical analysis. Those who fulfilled the inclusion criteria (n=87) were divided into adenoma group (n=28) and non-adenoma group (n=59). Further classification were performed by stratifying the adenoma group into two, low-risk adenoma (n=18) and high-risk adenoma (n=10). Comparisons were made between the initial two groups (adenoma vs. non-adenoma) and across all three groups. A trend of higher median IGF-I level was seen in the adenoma groups i.e. high-risk and low risk adenoma with medians of 103.1 ± 90.62 and 98.6 ± 71.5 respectively as compared with the non-adenoma group, ($p > 0.05$). Interestingly increasing age is associated with the presence of adenoma ($p=0.008$). There was no significant difference between the patterns of adenoma and the levels of IGF-I, history of diabetes, smoking and body mass index (BMI). Patients with adenoma tend to have a higher level of insulin-like growth factor-I (IGF-I). There is a tendency too for the IGF-I levels to be higher in high-risk adenoma as compare to low-risk adenoma.

A larger prospective study would be needed to elucidate the role of IGF-I in the development of colorectal adenomas.

OUTCOME OF LIGATION OF INTERSPHINCTERIC FISTULA TRACT (LIFT) PROCEDURE

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OBJECTIVE

This audit was designed to look into the advantage of LIFT procedure in fistula-in-ano including complete healing rate, rate of recurrence & post-op incontinence.

METHODS

We performed a prospective observational study for patients with transphincteric fistula-in-ano treated with ligation of intersphincteric fistula tract (LIFT) procedure from March 2009. The surgery was performed only by the colorectal surgeon following standard operating technique for LIFT procedure. We looked into clinical presentations, anatomy of fistula, definitive role of pre-op EUS, complete healing rate, healing time, recurrence rate, and post-op incontinence during standard follow-up protocol.

RESULTS

Thirteen patients were included in this observational study. Median age was 41.0 years. Perianal discharge and pain were among the commonest presentation at first encounter (92.3% and 36.5% respectively). Five patients (38.5%) had previous perianal surgery with two had incision and drainage of perianal abscess (15.4%), and three others had fistulectomy performed (23.1%). Majority of our patients (76.9%) have had an endo-rectal ultrasound (EUS) performed preoperatively to confirm the fistula anatomy. The complete healing rate was 84.6% with median time taken for complete healing ranging from 6 to 8 weeks. Only two of them (15.4%) had partially healed wound and recurrent of fistula-in-ano requiring subsequent surgery. None of our patients had post-operative incontinence during routine follow-up assessment. There was no significant correlation between the clinical anatomy and recurrence rate ($p=0.577$). We also found that the role of pre-operative EUS does not significantly determine the success rate of surgery ($p=0.577$). However, it is essential in determining the anatomy of transphincteric fistula because LIFT procedure cannot be performed on interphincteric, suprasphincteric and extrasphincteric fistulas.

CONCLUSION

Ligation of intersphincteric fistula (LIFT) procedure, a sphincter-preserving technique for fistula-in-ano is proven to be safe, easy to perform, and ensures good outcome provided proper training was obtained before embarking on this surgery.

LAPAROSCOPIC COLORECTAL SURGERY IN UNIVERSITY OF MALAYA MEDICAL CENTRE (UMMC): COMPARISON OF SHORT TERM OUTCOMES BETWEEN COLORECTAL AND GENERAL SURGICAL UNITS

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BACKGROUND

The laparoscopic approach should be an option for patients requiring colorectal surgery, given its benefits. In Malaysia, laparoscopic colorectal surgery is still in its infancy, with few institutions performing these procedures on a regular basis. As such, there are no strict criteria at present dictating who should perform such procedures. In UMMC, they are performed by both colorectal and general surgical units.

OBJECTIVE

To compare short term outcomes of laparoscopic colorectal surgery between a colorectal unit and a general surgical unit with an interest in minimally invasive surgery in UMMC.

METHODS

Records of patients undergoing laparoscopic colorectal surgeries in UMMC for both benign and malignant conditions from January 2007 to January 2010 were retrospectively reviewed. Data retrieved included demographics, operative time and post-operative stay. Data was analyzed with a standard statistical software package, using the Mann-Whitney test. $P < 0.05$ considered statistically significant.

RESULTS

60 patients (38 male, 22 female, mean age 63.2 years) underwent laparoscopic colorectal surgery for benign ($n = 8$) and malignant ($n = 52$) diseases. Case-mix was similar. The median operating time overall was 215 minutes (range of 75 – 570 minutes); [colorectal: 208 minutes (range 120 – 570 minutes), general surgery: 250 minutes (range 75 – 519 minutes) $P < 0.05$]. The median hospital stay post-operatively was 4 days (range of 2 – 25 days); [colorectal: 3.71 days (range 2 – 9 days), general surgery: 6 days (range 2 – 25 days) $P < 0.05$]. Conversion rates were noticeably different i.e. 14.3% (colorectal) and 25.0% (general surgery) but this did not achieve statistical significance.

CONCLUSION

In UMMC, better outcomes in laparoscopic colorectal surgery are achieved by the colorectal unit. Given constraints in finances, theatre availability and patient volume, it may prove to be more cost-effective in the long run to consolidate this service within the colorectal unit.