Poster Papers Presented at the XXII ISUCRS Biennial Meeting
A MODIFICATION IN LONGO’S TECHNIQUE SIGNIFICANTLY IMPROVES THE RESULTS OF STAPLER ANOPEXY IN HIGHER GRADE HEMORRHOIDS, Pankaj Garg MS, Fortis Super Speciality Hospital, Mohali, India

Purpose- High recurrence rates in patients with higher grade hemorrhoids are being reported with Stapler anopexy. The prime reason for this is the limiting capacity of stapler PPH03 to excise the adequate amount of mucosa which leads to residual prolapse and recurrence. So in these cases, stapler anopexy converts higher grade of hemorrhoids into a lower grade which subsequently require banding or injection sclerotherapy for treatment. In our study, we assessed the patient on the operating table immediately after completing the stapler anopexy. If the residual prolapsing hemorrhoids were found, they were ligated with 2-0 vicryl and cut. So a procedure required later on for treating recurrence was done with primary procedure only.

Methods- A total of 42 patients were recruited over 2 years. 19 patients with grade 3&4 (Standard group) and 12 patients with grade 2 hemorrhoids (Gr 2 group) were operated by standard Longo's technique to serve as controls and compared with 11 patients with grade 3&4 hemorrhoids operated by modified technique in which the residual prolapsing hemorrhoids were ligated and cut (Ligated group). The three groups were matched for age and sex. The patients were assessed on satisfaction scale and checked for recurrence at 3, 6 and 12 months.

Results- The mean age was 46.1, 51.3 and 48.7 years and the mean follow up was for 412, 464 and 405 days in three groups, Grade 2, Standard and Ligated groups respectively. The hospital stay (mean-1.42, 1.21 and 1.3 days), painful days in post-operative period (mean-10.3, 7.05 and 8.68 days) and days required to resume normal work (mean-17.0, 8.4 and 12.7 days) were not significantly different in the three groups, Grade 2, Standard and Ligated groups respectively [p>0.05, ANOVA]. Recurrence rates were significantly lower in Ligated group (1/11, 9.1 %) compared to Standard group (12/19, 63.2 %) [p<0.0067, ANOVA]. Percentage of patients highly satisfied by the procedure was significantly higher in Ligated group (10/11, 90.1 %) compared to Standard group patients(6/19, 31.2%) [p<0.0024, ANOVA]. Incontinence (urge, gas or liquid) and anal stenosis was similar in all three groups.

Conclusions- In higher grade of hemorrhoids, compared to doing stapler anopexy alone, performing ligation and cutting of the residual hemorrhoids on the operating table after doing stapler anopexy significantly reduced recurrence rates and improved satisfaction rates. Larger long term studies are needed to substantiate this.
CONDYLOMA ACUMINATUM IN THE RECTUM, Sonny S Wang MD, Sefik Gokaslan MD, Yomi Fayiga MD, Saul Sokol MD, University of Texas Southwestern Medical Center, Dallas, Texas, USA

Introduction
Anal condylomas are usually found in the distal anal mucosal tissue, anoderm, or proximal perianal margin. Human papillomavirus (HPV) is the cause of condyloma acuminata and is often associated with HIV infection. We present a rare case of condyloma acuminatum located in the rectum.

Method/ Case Report
A 43 year-old Caucasian male presented to our gastroenterology service with a chief complaint of bright red blood per rectum for several weeks. His past medical history is significant for HIV and hepatitis B diagnosed 20 years ago. There was prior history of anal receptive intercourse. Our patient was on highly active antiretroviral therapy (HAART) for HIV with a CD4 count of 138 cells/mL at the time of his evaluation. An ensuing colonoscopy revealed a 2 cm anterior midline mass at 5 centimeters away from the anal verge. Biopsy revealed rectal condyloma acuminatum with moderate (high grade) squamous dysplasia. Patient was subsequently referred to us for further management.

The diagnosis of rectal condyloma was a surprise because of its location. Further digital and proctoscopic examination confirmed the previous endoscopic findings. The mass, however, had fungating and friable features suggestive of neoplasm. We repeated the rectal biopsy due to the unusual condyloma location in the initial diagnosis but also to exclude neoplasm. We also undertook complete fulguration of the visible mass at the time of repeat biopsy. Final pathology was again high grade squamous dysplasia arising from condyloma acuminatum in the rectum.

On postoperative follow up, our patient recovered uneventfully. We plan to follow this patient closely and to re-biospy the area if the mass returns or neoplastic features arise.

Conclusion
Condyloma acuminatum in the rectum is an uncommon diagnosis. To our knowledge, only one other condyloma acuminatum located in the rectum has been reported. Patel et al reported a 66 year-old Caucasian heterosexual non-HIV male diagnosed with rectal condyloma.1 Clinicians need to be aware that such a diagnosis exists. The management of condyloma acuminatum in the rectum is similar to anal condyloma that includes local excision and destruction usually by fulguration.

Reference

http://services.bepress.com/wjcs/vol1/iss1/art4
DOPPLER-GUIDED HEMORRHOIDAL ARTERY LIGATION AND RECTOANAL REPAIR (DG-HAL & RAR) AS A TREATMENT OF INTERNAL HEMORRHOIDS, Sung Wook Cho MD, Soon Sup Chung MD, Ryung Ah Lee MD, Kwang Ho Kim MD, Ewha Womans University Medical School Department of Colorectal Surgery

Backgrounds: Hemorrhoidectomy is widely used as the procedure for the treatment of internal hemorrhoids. However, the problems with conventional hemorrhoidectomy consist of postoperative pains, and delayed wound healing. For this reason, minimally invasive procedure (ex. Rubber band ligation, sclerotherapy, laser treatment) or PPH were developed, but, they also have some fatal complications.

Purposes: To introduce Doppler-guided hemorrhoidal artery ligation and Rectoanal repair (DG-HAL & RAR) as a new treatment of internal hemorrhoids and report a preliminary experience of this procedure.

Methods: From November 2007 to January 2008, 23 patients who don’t have other anal problems (ex. Anal fisula, anal fissure) except internal hemorrhoid grade II-IV were treated by DG-HAL & RAR. Firstly, under the litotomy position, the proctoscope with an incorporated Doppler probe was inserted and identified location of hemorrhoidal artery. Once located, the artery was ligated with a ‘figure of eight’ absorbable suture into submucosa. And then prolapsed hemorrhoidal pile was lifted at rectal mucosa by continuously suturing to 5mm above dentate line and tying. The procedure was repeated at the 1, 3, 5, 7, 9, and 11 o’clock position. We analysed hospital day, postoperative pain, time of returning to work, and recurrence.

Results: The patient’s mean age is 48.3±14 and they consist of 23 (Grade II:8, Grade III:11, Grade IV:4). Ten patients were male and 13 female. The mean operation time was 35 minutes and postoperative hospital stay was 1.4 days. The mean time of returning to work was 1.8 days. There was no severe pain requiring injection of analgesics. Some patients had only tenesmus and minor bleeding. After one month, 2 patients still had prolaping symptoms.

Conclusions: Doppler-guided hemorrhoidal artery ligation and Rectoanal repair (DG-HAL & RAR) is safe and less painful procedure comparing with conventional hemorrhoidectomy. DG-HAL & RAR is an effective alternative for the treatment of internal hemorrhoids.
TRANSPOSITION OF GRACILIS MUSCLE IN THE TREATMENT OF RECTOVAGINAL FISTULA RECURRENT. REPORT A CASE. Carlos G Torres MD, Dina L Gil MD, Pedro Gonzalez MD, Luis A Suarez MD, Hospital Sor Juana Ines de la Cruz. Merida. Venezuela.


Background: The rectovaginal fistulas recurrent are communication to invest with mucosa between the rectum and the vagina. There are many treatments by location, size and etiologies. They may be inflammation, infection, iatrogenic, neoplasia or trauma.

Objective: Give to know experience of a case with transposition of gracilis muscle in the treatment of the rectovaginal fistula recurrent in the type I Hospital the Sor Juana Ines of Cruz in Merida Venezuela.

Methods: Is a descriptive study a clinic case of a female patient with 29 year old, who the patient referred transit of gas and feces into the vagina of three months after genital trauma. She referred had three preview surgery. This case is a technique of transposition of gracilis muscle how definitive option in the treatment of the rectovaginal recurrent. The patient evolution good after closure colostomy after comprobation closure of fistula.

Key words: rectovaginal fistula, muscle gracilis.
Introducing: Whitehead’s operation provides the only chance of removing all hemorrhoids, giving the least possibility to relapse and is highly cost effective. Analyzing personal data, we were to answer the question: whether the Whitehead operation should be abandoned or not.

Patients and methods: From March 1991 to January 2007, 210 patients with grade 4 hemorrhoids underwent Whitehead’s hemorrhoidectomy by the author. The grade 4 means the complex of internal and external hemorrhoids occupying entire perimeter of anal verge, which are always prolapsed. All patients were complaining additional symptoms such as tenesmus, narrow or deformed stool, or the sense of blockade during the defecation. The outcome of the operation was retrospectively assessed by reviewing medical records with regard to total blood loss during the procedure, operation time, hospital stay, and types of complications. On the second visit (4 weeks postoperatively), degree of the anal stricture was measured with Hegar dilator. On April 2007, 196 of all patients (93.3%) were contacted. The patients were asked if there were any long-term complications and to choose a point of satisfaction from 0 (the worst) to 10 (the best).

Results: Average operating time was 20.9 minutes and blood loss was 51 cc. No patient required transfusion. Urinary dysfunction (83.3%) and mild fecal incontinence (85.7%) were noted. In average, the fecal incontinence disappeared by the second week in all patients. All patients pointed out the pain was the most notable complication and in fact the parenteral opioids were required for all patients. Ten patients complained some defecation difficulty but patients who had passed more than 12 months after the operation did not complain defecation difficulty whatsoever. For the objective assessment of anal stricture, Examining by Hegar dilators, mean diameter was 7.8 +/- 5.5 mm. Mean satisfaction score was 7.0 +/- 2.3. Two patients (0.95%) complained recurrent hemorrhoid. Four patients complained difficulties in the defecation revealed pinpoint narrowing. They were admitted again and were successfully treated by stricturotomy. One patient underwent anoplasty.

Conclusion: We think the hemorrhoid is the benign disease and therefore, it should be treated as conservative as possible. However, when it reaches the end stage in which anal dysfunctions are combined, we must decide the optimal type of surgical treatment. Radical, circumferential hemorrhoidectomy should remain as one of the operative choices.
COMPLETE CLEARANCE OF INTRA-ANAL CONDYLOMA ACUMINATUM : PODOPHYLLIN APPLY THROUGH ANOSCOPY COMPARED WITH SURGERY, Seok-Gyu Song MD, Woo-Jung Nam MD, Do-Yeon Hwang MD, Jong-Kyun Lee PhD, Proctology Department, Song-Do Medical Center, Seoul, South Korea

PURPOSE: Condyloma acuminatum which is usually sexual transmitted and caused by Human Papilloma Virus. The incidence of anal condyloma acuminatum has been increasing because homosexual and bisexual behavior are not uncommon. Condyloma acuminatum has been known for high recurrence rate after treatment. Especially condyloma acuminatum affected to intra-anal area has been higher recurrence and complication. Despite the perianal condyloma acuminatum has been managed by many different methods, main treatment for intra-anal condyloma acuminatum is still surgery. The aim of this study is to investigate the outcomes after podophyllin apply through anoscopy to intra-anal condyloma acuminatum.

METHODS: From June 2006 to December 2007, total 105 patients visited our clinic for anal condyloma acuminatum. Among these patients, the focus of the present study was the 62 patients who had intra-anal condyloma acuminatum confirmed by pathology department and who had follow up at least 4 weeks after treatment. Of the 62 patients, 39 patients underwent surgery and 23 patients received podophyllin treatment. The treatment method was selected by patients. The surgical treatment was excision and electrocoagulation under local or spinal anesthesia. The podophyllin was applied to intra-anal lesion through the anoscopy with no anesthetics or mucosal protective agent. We performed one time per week at outpatient clinic. Comparison between the treatments were analysed by the Chi-squared test. Significance was defined as P<0.05.

RESULTS: The complete clearance were 26 for 39 patients in the surgery and 14 for 23 patients in the podophyllin treatment (surgery: 66.7%, podophyllin: 60.8%, P>0.05). There was no significant difference in complete clearance rate between the two groups. Age and sex distribution were similar in the two groups. The mean follow up periods were 9.5 weeks after surgery and 8.7 weeks after podophyllin treatment. In treated with podophyllin, the mean frequency of treatment were 4.2 times. There was no specific complication after podophyllin application, but four patients underwent surgery had anal fissure which were resolved with conservative treatment.

CONCLUSIONS: Podophyllin application is safe and effective office based procedure for intra-anal condyloma acuminatum. It has less complication and acceptable recurrence rate compared to surgery. Our results support podophyllin application can be an alternative treatment method for intra-anal condyloma acuminatum.
STRAINING DIAGNOSIS FOR HEMORRHOIDAL DISEASES, Naoto Saigusa PhD, Jun-ichi Saigusa PhD, Sumio Saigusa PhD, Saigusa Clinic of Coloproctology

Purpose: The examinations for anorectal diseases are customarily performed with the patient lying down on an examining table. However, usually internal hemorrhoids are classified if they are prolapsed or not during defecation. Therefore, in order to make a correct diagnosis for hemorrhoidal diseases it would be ideal to inspect the buttocks during straining in accordance with gravity while the patient is in a position of squatting or sitting on a toilet seat. We determine the usefulness of this diagnostic method which was introduced 80 years ago in our clinic.

Methods: Following four data on our examination flow were prospectively investigated at the patients' first office visit at Saigusa Clinic during the period from January 2003 to May 2007; 1) voluntarily expressed chief complaints of patients, 2) interviewed subjective degree of hemorrhoids by questioning whether they are aware of their prolapse ani or not, 3) objective degree of hemorrhoids observed under conventional proctoscopy with the patient in a spine lithotomy position, 4) objective degree obtained at an inspection of the buttocks using a hand mirror during the patient straining in toilet (straining diagnosis). This diagnostic procedure was carried out by three senior proctologists who have more than 15 years of clinical experience. Paired t-test was applied for statistical analysis.

Results: We had 1000 patients who presented symptomatic hemorrhoids of more than the first degree during that period. Among them, 570 patients had two or more subjective complaints. Only 592 patients (59%) voluntarily complained prolapse ani. Anal bleeding and pain were presented in 494 (49%) and 202 (20%) patients respectively. The value of subjective degree of hemorrhoids carefully interviewed at office was significantly higher than that of self-stated one with their mean of 2.24 vs. 1.97 (p<0.01). The objective degree diagnosed at straining was significantly higher than that of under anoscopy with their mean of 3.02 vs. 2.97(p<0.01).

Conclusions: A considerable number of patients were not aware of their prolapse. The conventional examination only by use of anoscope is not sufficient. Even if the physicians were well clinically trained and experienced, they could not always make a correct diagnosis without using the straining technique. Affirmative questioning to the patients and straining diagnosis are essential for accurate evaluation of hemorrhoidal diseases in order to choose adequate treatment.
THE METHOD OF TREATMENT EXTRA- AND TRANSSPHINCTER RECTAL FISTULAS, Tengiz F. Bochoidze MD, Iuri D. Tavadidchvili MD, K. Eristavi National Center of Surgery, Tbilisi, Georgia

The goal of the work is improvement of surgical treatment results of extra- and transsphincter fistulas in ano.

Methods. The method of closed intrafistular coagulation includes introduction of proper sized silver probe through the external opening up to internal opening of the fistulous tract. The probe is connected with coagulator and under the visual control electro cauterization with definitive regime is carried out. After coagulation and excising of the internal opening Latex drainage is placed through the all length of the fistulous tract. The internal opening is closed with suture and plastic operation on rectal mucous wall by Judd - Robles is performed. External opening is excised and kept open. In case of multichannel fistula, separate cauterization of each channel is indicated. Drainage stays for 2 - 4 days, after what washing of the wound by antiseptics and antibiotics is done. Healing of the fistula takes 7 - 10 days.

Results. Postoperative period passes without complications. 32 patients underwent surgery be abovementioned method. The patients have no compliance, complication and recurrence after 2 years of operation.

Conclusion. The method is less invasive and allows eradicating the fistula in ano without compromising anal sphincter function which is restored just after removing of gas derivation tube and tampons from the rectum.
SPECTRUM OF ANORECTAL DISEASES IN AN INDUSTRIAL TOWNSHIP, Sunil Kumar Gupta MS, Main Hospital, Bharat Heavy Electricals Limited, Ranipur, Haridwar, Uttarakhand, India

Spectrum of anorectal disorders prevalent in industrial township population where the author is practising as consultant surgeon is analysed for a period of two years. 481 patients afflicted with anorectal problems attended special weekly clinic. 43.8% (n=211) presented with haemorrhoids of varying degrees. 25.1% (n=121) had fissure-in-ano. Fistula-in-ano constituted 12.6% (n=61). 6.4% (n=31) patients presented with perianal suppuration. Pilo-nidal sinus comprised 4.9% (n=24) in the study group. 4.5% (n=22) patients had pruritis ani. Rectal prolapse was encountered in only 1.45% (n=7) and rectal cancer was seen in only 0.83% (n=4) patients. Anorectal injuries were not included in the study due to non availability of proper information about these patients.

Patients were questioned about their bowel and food habits. Spicy food stuff and straining at stools were found to be main causative factors in patients with piles, fissure-in-ano and rectal prolapse while poor hygiene, straining at stools were chiefly responsible for pilo-nidal sinus, perianal suppuration, fistula-in-ano and pruritis ani. Management of all the patients who comprised the above mentioned group depending upon the disease entity and extent of the disease is discussed along with their follow-up and outcome. Various treatment modalities in patients with haemorrhoids, pilo-nidal sinus and fistula-in-ano are discussed.
BANDING? NO. HIGH MACRO BANDING., JOSE A REIS NETO PhD, JOSE A REIS JUNIOR MD, ODORINO KAGOHARA MD, JOAQUIM SIMÕES NETO MD, SERGIO BASSI MD, CRN (CLINICA REIS NETO)

Since the last decade the idea of intervening higher in the anal canal to impede the downward displacement of the hemorrhoidal cushions, acting at its origin, has become more and more accepted. The strategy of removing a segment of the anal canal to eliminate the zone with degeneration of the collagen and elastic tissue stroma and suspending the lower anal canal has shown to be effective for hemorrhoidal disease grades II and III. Based on the same principle a new technique of ligature was developed based in two aspects: 1. to promote a better fibrosis and fixation by banding a bigger volume of tissue; 2. to perform this fixation at the origin of the hemorrhoidal cushion displacement, preventing the cushion to slip through the anal canal.

Technique: No especial preparation is necessary. If properly performed the High Macro banding is painless. However to facilitate the banding is recommended to inject 1.5 ml of lidocaine at the submucosa of the anal canal with a fine needle. This injection must be performed, higher in the anal canal, 4 to 5 cm above the pectinate line, according to location of internal piles. If the patient has more than one pile, two or more areas could be injected. This maneuver facilitates the suction of the mucosa. The banding instrument for High Macro ligature consists of a double drum thirty millimeters (3 centimeters) in length and fifteen millimeters (1.5 centimeters) in diameter. The bands are 2 millimeters in diameter when unexpanded and 1.5 cm when loaded onto the drum. The suction device is adapted to a suction pump and the pile is drew downward by sucking the mucosa of the anal canal; with this method the surgeon can hold the anoscope with one hand and use the other one to release the bands. It is recommended to utilize a longer and wider anoscope to obtain a better view of the anal canal which will facilitate to inject the submucosa higher in the anal canal and to insert the rubber band device. The pile must be banded higher in the anal canal (4 to 5 cm above the pectinate line). The mucosa, previously injected, is gently suctioned at the same time that the rubber band device is slowly moved downward, parallel to the anoscope, for just a small distance. It is preferable to treat all the hemorrhoids in one single session (maximum of three). When using the macro rubber-band, it is preferable to band the existent piles at different levels, to avoid stricture of the anal canal. Sequential single banding can be performed, but at least 30 days should elapse between the sessions.

Results: it was observed the following complications in 825 patients treated: edema in 1.57%, tenesmus in 0.6%, pain (need for parenteral analgesia) 1.57%, small bleeding in 5.45%, profuse bleeding in 0.6% and urinary retention in 0.12% of the patients. None of the patients needed hospitalization for the observed complications. Recurrence of the symptoms occurred in 3.87% of the patients, all of them treated by a new banding.
AMBULATORY ANAL SURGERY FOR BENIGN DISEASE: SEDATION WITH LOCAL ANESTHESIA. Jose Q. Reis Neto PhD, Jose Q. Reis Jr, Odorino Kagohara, Joaquim Simoes Neto, Sergio Banci, CRN

Introduction: the aim of this paper is to evaluate the results obtained with this technique in XXX patients operated on from 2002 to 2007. Technique: Sims (left lateral) position with the pelvis raised on a sandbag is the best position for the procedure. The lithotomy position should be avoided. Sedation is achieved with Midazolam (2 to 5 mg), Petidine CI. (50 to 100 mg) and Propofol (10 to 20 mg). Local anesthesia is performed Ropivacaine CI. 0.75% (20 to 40 ml, according to patient weight). Naloxone CI. (0.1 to 0.4 mg. is used to revert the effect of Petidine CI., at the end of the procedure. Meloxicam (or similar) is used at the end of the surgery to prevent immediate post-operative pain.

Results: evaluation of 1805 patients operated on this scheme showed that all of them had a post-operative without immediate complications and needed hospitalization. Of these patients, 79% were operated on hemorrhoidal disease, 8.4% of chronic anal fissure, 5.4% of anal fistula (fistutomy) and the others from various benign anal disease.

Complication: it was observed: late post-operative hemorrhage in two patients (0.11%) operated on of hemorrhoids, urinary retention in three patients (0.16%) patient and wound infection in four patients (0.22%). However, none of those patients required hospitalization.

Conclusion: the procedure of sedation with local infiltration proved to be an excellent method for treatment of benign anal diseases. Ambulatory surgical procedure, independently of the etiology, but of the surgical care and surgeon expertise, with adequate selection of patients, is nowadays one better cost/benefit approach for most of the benign anal diseases.
Four-step Injection Technique

ALTA Injection is directly administered into hemorrhoids by the 4-step method injection. Since this procedure is important for the efficacy and safety of ALTA Injection therapy, and you need a sufficient experience and practice of proctology.

The 1st step is injection into the submucosal layer of the upper polar region of a hemorrhoid, giving usually a total of 3ml.

The 2nd step is injection into the submucosal layer of the central region, giving about half volume of the 2nd step, while slowly pulling back the needle tip following the 2nd step. The 4th step is injection into the submucosal layer of the lower pole. The needle tip is inserted at the region 0.1-0.2 cm above the dentate line, giving 1-3ml.

After the completion of the injection into all major hemorrhoids, all injected regions are massaged well for a few minutes to fully diffuse the drug solution.

Cautions:
1) Follow to comply with 4-step method by dose and injection regions with 2% solution.
2) Avoid complications; the following points should be paid attention to.
   gProstatitis, epididymitis, orchitis
   gHemorrhoids necrosis
   gPain of the anus
   gGinduration
   gRectal ulcer/ necrosis
   gRectal stenosis
3) Appearance rate of adverse reactions occurred in 19% in OC-108 group at phase III protocol and 10.25% (462 cases in 337/3287) at PMS of ALTA.
XANTHOGRANULOMATOUS INFLAMMATION OF COLON: TWO CASES REPORT. SH Jung MD, JS Hwang MD, HJ Kim MD, JH Lee, JH Kim, MC Shim, Department of Surgery, College of medicine, Yeungnam University, Daegu, Korea

Xanthogranulomatous inflammation (XGI) is a chronic inflammatory condition characterized by aggregation of lipid-laden foamy macrophages (xanthoma cells). This entity was first described by Christensen and Ishak in 1970 and has attracted particular attention in recent years, especially regarding the clinicopathological aspects. Clinically, it can be difficult to differentiate from infiltrative cancer because XGI might present as an irregular mass-like lesion with a severe extension of fibrosis and inflammation to the surrounding tissues, and thus, often mimics infiltrative cancer. This disease entity is well recognized in the kidney and gallbladder, and three cases involving the colon have been reported. We report two cases of XGI involving the colon considering for diagnostic and therapeutic challenges. One, a 55-year-old woman presented with fever, right lower abdominal pain, and a huge mass-like lesion on CT scan. En bloc resection (right colon, abdominal wall, retroperitoneal soft tissue, ovary, and lateral femoral nerve) was performed and finally, cecal cancer (T3N0M0) with XGI was confirmed. She suffered from right thigh flexion limitation for 6 months postoperatively. Two, a 66-year-old man presented with fever, upper abdominal mass during 10 days. The T-colon mass with severe adhesion to upper abdominal organs was identified and transverse colectomy was performed. Finally, XGI originating from transverse colon serosa was demonstrated and he suffered from postoperative pancreatitis for 20 days. XGI may rarely arise in the large bowel. However, like gallbladder and kidney, XGI could be clinically and radiologically misinterpreted as an infiltrative cancer and is indistinguishable from inflammatory colon lesions with/or perforation. Therefore, any excessive operative stress and morbidity are difficult to avoid and need diagnostic and therapeutic challenges.
The ZIONE (ALTA) is a novel sclerosing agent, and ALTA Injection therapy for prolapsed internal hemorrhoid shows good results compared with surgery, Milligan-Morgan hemorrhoidectomy.

What is ALTA?
The ALTA is a novel sclerosing agent with aluminum potassium sulfate and tannic acid and an abbreviation of it as active components, which was the Xiaozhiling in China researched and modified by Mitsubishi Tanabe Pharma Corporation, Japan. Mechanism and Fundamental Examination of OC-108, ALTA

The main component, aluminum injection into hemorrhoids controls bleeding by reducing blood flow and induces acute inflammation. Repairing reactions post-inflammation scleroses hemorrhoids and resolves prolapsed hemorrhoids. Tannic acid inhibits excess acute inflammation induced by aluminum potassium sulfate, and reduces secondary tissue injury. Fundamental studies in rats by microscopic observation show that all blood flow arrest within 10 minutes and without conspicuous change in blood vessel diameter by OC-108 (phase III protocol solution of ALTA). And repairing reactions post-inflammation shows that formation of fibrosis and epithelioid granuloma in hist-pathological examination.

Methods of ALTA injection:
ALTA Injection is directly administered into hemorrhoids by the 4-step method. Since this procedure is important for the efficacy and safety of ALTA Injection therapy, and you need a sufficient experience and practice of proctology.

Efficacy and Results of ALTA Injection Therapy:
ALTA Injection is effective for prolapse, the main symptom of developed hemorrhoids, which were previously surgically treated. In the phase III study, verification of the efficacy of ALTA Injection on prolapsed hemorrhoids and a survey of surgery (Milligan-Morgan hemorrhoidectomy) was performed and the outcomes were compared. Disappearance rate of prolapse on the 28th day, recurrence rate in 1 year after treatment and postinjection complications were checked.

As for hemorrhage, ALTA Injection exhibited a high effect earlier than surgery. Release from prolapse is similar to surgery. The mean duration of hospitalization was shortened, compared to surgery. However the recurrence rate 1 year after ALTA administration was 16%, mainly occurred in cases of third degree hemorrhoid of Goligher classification, and some abnormalities were reported.

Summary:
Sclerosing therapy with ALTA Injection was evaluated, effective and useful treatment in patients with prolapsed internal hemorrhoids.
THE INFECTED MUCINOUS CYSTADENOMA OF APPENDIX MISDIAGNOSED INTRA-PELVIC ABSCESS, Ji Hoi Koo PhD, Sung Hoon Yang MD, Dept. of Surgery, Incheon Medical Center, Incheon, Korea

Appendiceal mucinous cystadenoma is a rare entity found in only 0.3% of appendiceal specimens. It is the most classification of what has been generally termed ¡°mucocele¡± of the appendix. A mucocele of the appendix is an obstructive dilatation of the appendix caused by intraluminal accumulation of mucoid material. It may caused by 1 of 4 processes: retention cyst, mucosal hyperplasia, mucinous cystadenoma, or mucinous cystadenocarcinoma. The most presenting symptom has been abdominal pain, however, one-fourth of patients are asymptomatic and are found incidentally. Other reported symptoms are bleeding, intussusception, and local invasion into surrounding structures are described. But the abscess formation of the mucinous cystadenoma is extremely rare. A 80-year-old women presented with a 3-days history of pain in the right lower quadrant of the abdomen. On physical examination, tenderness and rebound tenderness were checked, and palm-sized mass was palpable in the right lower abdomen. Computed tomography presented a huge intra-pelvic abscess measuring 110 X 113 mm. At laparotomy a huge infected cystic mass involved cecal wall of appendix was found, and an right colectomy was perfomed. The final pathologic diagnosis was atypical mucinous cystadenoma consistent with borderline mucinous neoplasm with inflammation. The patient was discharged at 10th post-operated day without any complications.
ZIONE (ALTA) INJECTION THERAPY FOR HEMORRHOID & PROLAPSE; OUTCOME OF SCLEROSING THERAPY BY THE ALTA INJECTION: PHASE III PROTOCOL AND POST-MARKETING SURVEILLANCE (PMS), MITSUYO KOSUGI MD, HIROYUKI IRIE, TOSHIHIRO ONO, TAKASHI ONO, Chief of Proctology Center, Saitoh Clinic, Toyama &#1289; Japan

Phase III Protocol and Post-Marketing Surveillance (PMS)

We show the outcome of sclerosing therapy by the OC-108 (clinical study solution of ALTA for Phase III Protocol) and PMS of ALTA after 3 years marketing in Japan.

Phase III Protocol:

Aims: Patients with prolapsed internal hemorrhoids were treated with OC-108 and results were compared with surgery.

Objectives: Patients were studied by OC-108 (n=105) and surgery group (n=87) during Oct.2000-Oct.2002 by totally 16 colorectal surgeons in Japan.

Results and Conclusion

1) OC-108 was effective for bleeding at defecation early after treatment.
2) The recurrence rate 1 year after treatment was 16% (12/73 OC-108 group).
3) Hospital stay (mean) was 3.6 days, shorter than 10.9 days in surgery group.
4) Some adverse reactions occurred in 19% in OC-108 group.

PMS:

Objectives and Surveillance: Patients (n=2500) with prolapsed internal hemorrhoids, treated by ALTA Injection were surveyed by central registration and prospective method during March, 2005 to March, 2007 at Pharmacovigilance & Quality Assurance Division of Pharmacovigilance Department, Mitsubishi Tanabe Pharma Corporation.

Injection Dose: Injection dose was <=20mL (64%), <=40mL (34%) for second degree (24%), third degree (67%), forth degree (7.6%) hemorrhoid in Goligher classification.

Results and Conclusion:

1) ALTA injection was effective for prolapse in 98.2% at evaluation time of 28 days after injection.
2) The recurrence rate more than 2 years after treatment was 5.6% (2/36 in the second degree), 17.3% (26/156 in the third and forth degree) and totally 15% (28/192).
3) Appearance rate of adverse reactions occurred in 10.25% (462 cases in 337/3287).

Summary: Sclerosing therapy with ALTA Injection was evaluated, effective and useful treatment in patients with prolapsed internal hemorrhoids to a similar extent as surgery. It is spreading in nationwide in Japan as an important treatment for hemorrhoids and used for more than fifty thousand cases.
INCIDENCE OF RECTAL PROLAPSE AND OUR EXPERIENCE IN DELORME'S OPERATION, Dr.PONNIAH SIVALINGAM MS, Dr.K.S. MAYILVAGANAN MS, Dr. VADAMALAYAN SIVALINGAM MD, Dr. SABARETNAM MAYILVAGANAN MS, GOVERNMENT RAJAJI HOSPITAL and VADAMALAYAN HOSPITALS, MADURAI, INDIA

Many operative procedures were reported for the treatment of rectal prolapse which perhaps indicated unsatisfactory result. Search is on for a better one. The experience with 111 operations performed with Delorme's surgical technique is presented here.

Between January 1983 and September 2007, 214 patients reported with complete rectal prolapse at Govt. Rajaji Hospital and as private patients of authors.

One hundred and thirty six patients were below 41 years. The youngest patient was a girl of 12 years and oldest a woman 85 years. Male/Female ratio was 3:1.

All 214 patients presented with a complaint of mass protruding through the anus. Mucous discharge was present in 50 (23.36%) bloody discharge in 47 (21.9%) pruritus ani in 20 (12.1%) and constipation in 12 (5.6%).

Of these 141 patients were operated, 111 Delorme and 28 per abdomen (Roscoe - Grahams Repair 24: Charles Wells Ivalon sponge technique - 4) and perineal rectosigmoidectomy - 2.

Of 111 cases operated by Delorme's procedure, 77 patients were below 41 years.

Pre operative preparation surgical technique and post operative care will be discussed.

Post operative complications were encountered in 18 out of 111 operated cases. Two had secondary haemorrhage and four had infection (Collection of pus in the submucous plane of rectum). In 6 cases there was gross stenosis. Recurrence has occurred in 6 cases.

Discussion:

In our series the occurrence of complete rectal prolapse in males versus females was 3.4:1 which is in fair contrast to Western reports of 1:6. In the Western countries prolapse rectum is a disease of the old in the 6th decade, whereas as we found 63.6% of our patients below 40 years. Constipation, a common symptom in Western reports was present only in 12 cases (5.6%) of our cases.

Delorme's operation is a simple procedure, which gives comparable results as of abdominal operations advised for prolapse. Presacral dissection to mobilize the rectum from the sacral curvature either per abdomen or by perineal route may cause damage to the nerves resulting in bladder and sexual dysfunction.

Conclusion:
The incidence of prolapse is more in male, it occur more in the younger age (below 40 years) and so a surgery which does not require the pre sacral dissection is more desirable. Constipation associated with prolapse is only 5.6% of cases.
PERIPARTUM DIVERTICULITIS- A HORMONAL CAUSE?, E D Wietfeldt MD, Jan Rakinic MD, Southern Illinois University Dept. of Surgery, Section of Colorectal Surgery

Question: Colonic diverticulitis is uncommon in the peripartum period, with fewer than five cases reported in the English literature. Therefore, when we were faced with this problem twice in the same patient, questions were raised about possible causes and safest therapy.

Our patient had two episodes of uncomplicated diverticulitis during two separate peripartum periods, but has not had any related symptoms at any other time. This raised questions about the possible effects of pregnancy on diverticulosis. Constipation is a common complaint during late pregnancy. Female sex hormones exert significant influence on intestinal function. Fluctuations in intestinal transit time (TT) can be related to the human menstrual cycle. The longest TT is shown to be during the luteal phase, when progesterone is high, as it is during pregnancy. Progesterone decreases colonic muscle contraction by a regulatory effect on G proteins. When treated in vitro with progesterone, normal human colonic myocytes exhibit down-regulation of the contractile G-alpha q and G-alpha i proteins and up-regulation of G-alpha s proteins which mediate relaxation. Overexpression of progesterone receptors appears to be a key component. This is similar to observations in women with chronic constipation. The oxytocin-mediated inhibition of colonic muscle contraction in the rabbit colon via generation of nitric oxide is also potentiated by progesterone.

We postulate that the effects of both progesterone and oxytocin may contribute to increased constipation during pregnancy and the peripartum period. With an increasing number of women bearing children in their 40s, we postulate that this could lead to an increased, although still small, incidence of diverticulitis in the peripartum period. We urge physicians to include this entity in the differential diagnosis when evaluating peripartum women with lower abdominal pain. We also urge proper fluid intake and fiber supplements in pregnant women in an attempt to keep the diverticulitis risk from constipation at a minimum.
INTRODUCTION: Over 160 different procedures have been described to treat rectal prolapse. Recent studies favor anterior fixation over simple posterior rectopexy. In our institution the gold standard operation consists of a laparoscopic posterior dissection with simple suture fixation of the rectum. From January 2003 to December 2006 we performed a comparative randomized study between posterior rectopexy without mesh (PR) and anterior mesh promonto-fixation (AMP). Inclusion criteria: patient consent to participate in the study, female with total rectal wall perineal prolapse, clinical signs and defecography or MRI imaging. Exclusion criteria were recurrent prolapse, emergency situations, associated utero-vaginal prolapse and/or bladder prolapse.

MATERIAL AND METHODS: We included 53 patients in group PR, median age 69.2 y (34-94) and 53 patients in group AMP, median age 69.4 y (20-96). 26 patients in PR and 27 in AMP had a previous hysterectomy.

RESULTS: Median operative time was 94 min for PR and 132 min for AMP with a difference of 38 min. Surgical approach was open in 2 patients PR and 6 patients in AMP; laparoscopy for the other procedures. Conversion rate was 1 per group. Complications- PR (1.9%): 1 bleeding of the presacral veins with conversion, AMR (5.7%): 1 parietal haematoma, 1 anterior rectal perforation with re-operation on day 2 (Hartmann), 1 small gut laceration with peritonitis and re-operation on day 1. Recurrences at one year after the procedure were 1 in PR, and 2 in AMP.

CONCLUSION: Simple rectopexy (PR) with sutures is a safe and quick procedure. Complications are rare (1.9%), with no re-operations. Promontofixation (AMP) leads to a longer operating time and more complications (5.7%) with 2 re-operations. There is no need for a mesh when not indicated.

Introduction: DNA hypermethylation is described in SA and sporadic MSI-H CRC. DNA hypermethylation translates in loss of expression of the MLH gene protein product. This alteration may occur in HP although its frequency is unknown. Although no malignant potential has been ascribed to HP there is some evidence that on occasion these “innocent” polyps could be the precursors to adenocarcinoma.

Objectives: The purpose of this study was to compare the differential expression of a set of morphological and immunohistochemical properties between HP polyps of the right and left side.

Material and method: 75 patients with hyperplastic polyps, diagnosed between 2005 - 2006 were selected retrospectively from a pathology database. The polyps were divided according to the location into right and left side of the colon. The following histomorphological parameters were recorded: size, thickness, serration, dilatation, basal membrane thickness, nuclear stratification, goblet cell, nuclear atypia and apoptosis. Paraffin blocks were cut and stained by immunohistochemical techniques for hMLH1 and hMSH2, CEA and Ki 67.

Results: A total of 99 polyps were obtained. The average age was 59.5 years and a mean of 1.45 polyps per patients. Right-sided polyps have increased thickness more glandular dilatation and more nuclear stratification when compared to left sided polyps. There was no difference noted for either intensity or distribution when samples were stained by any of the functional markers.

Conclusion: Right and Left sided HP are distinguishable on basis of morphological features identified through examination of routine diagnostic slides but do not differ with respect to potential functional markers usually associated with malignant neoplasms suggesting that when strict morphological criteria are applied right sided hyperplastic polyps may not be different from left side polyps.
NEO-ADJUVANT RADIOTHERAPY FOR LOCALLY ADVANCED RECTAL CANCER: DOES IMRT (INTENSITY MODULATED RADIATION THERAPY) IMPROVE OUTCOMES AS COMPARED TO 3-D CONFORMAL RADIOTHERAPY?

Hao Wang MD, Bashar Safar MD, Steven D Wexner MD, Badma Bashankaev MD, Dana Sands MD, Juan Nogueras MD, Eric Weiss MD, Mariana Berho MD, Christopher Chen MD, Cleveland Clinic Florida

Purpose: Neoadjuvant radiotherapy may adversely affect anal function after restorative proctectomy or low anterior resection. The recently developed IMRT technique applies more fields than traditional 3D technique. It delivers the same radiation dose to the rectal cancer and pelvis and spares the adjacent organs, mainly small bowel and bladder. The aim of this study is to investigate whether IMRT has any sphincter sparing effects in addition to its other advantages.

Methods: From 1998 to 2007, patients with primary rectal carcinoma and standard neoadjuvant therapy were identified. The neoadjuvant therapy consisted of a total dose of 50.4 Gy of radiation and 5-Fu based chemotherapy. The tumor regression grade (TRG) was identified by reviewing postoperative pathological slides (TRG 1-5: TRG 1 = complete pathological response and TRG 5 = no response). The anal function was assessed for the cases with coloanal anastomosis by the Cleveland Clinic Florida Fecal Incontinence Score (CCF - FIS) and evacuation parameters by telephone questionnaire. Statistical analysis was performed using Mann-Whitney Test and Student's T-test.

Results: A total of 114 patients were identified including 33 cases in the IMRT group (starting from 2003) and 81 cases in the 3D group. There were no significant differences in either TRG (P = 0.785, n = 114) or in lymph node harvest between the IMRT and 3D groups (P = 0.475, n = 64). Forty-four patients (16 cases in IMRT group and 28 cases in 3D group) answered the anal function questionnaire with a mean follow-up of 17 months (range, 2-52). The follow-ups between two groups were similar (P = 0.640). There were no significant differences in either fecal incontinence scores (P = 0.293) or evacuation scores (P = 0.293). IMRT resulted in less alteration in life style (component of FIS) compared with 3D (P = 0.038) and was also associated with tendency to have fewer bowel movements (P = 0.057), which may indicate better small bowel function.

Conclusions: IMRT had similar therapeutic outcomes as 3D. Moreover, IMRT had minimal advantage over 3D with respect to anal sphincter preservation and function. Further prospective research is warranted.
DIFFERENTIAL EXPRESSION OF MLH1 AND MSH2 PRODUCTS IN ADENOCARCINOMAS OF THE LEFT AND RIGHT COLON, M Oviedo MD, R Mather MD, H Wang MD, D Sands MD, E Weiss MD, S Wexner MD, J Nogueras MD, M Berho MD, Cleveland Clinic Florida

Mucinous adenocarcinoma (MA) is a histologic subtype of colorectal carcinoma characterized by pools of extracellular mucin representing more than 50% of the tumor body. It accounts for 10 to 15% of colorectal carcinomas and appears to occur more often in the right colon and rectum than other parts of the colon. Mucinous carcinomas are commonly seen in hereditary non-polyposis colorectal cancer (HNPCC) associated tumors as well as in sporadic colorectal neoplasms showing microsatellite instability (MSI). The hallmarks of HNPCC are abnormalities in the mismatch repair gene products MLH and MSH and others. Expression of these proteins and underlying molecular pathways in mucinous carcinomas that occur outside the setting of HNPCC has not been clearly defined.

Aim: To evaluate the differential expression of MLH1 and MSH2 products in adenocarcinomas of the left and right colon.

Material and Methods: After IRB approval, 45 consecutive patients with mucinous carcinomas were identified retrospectively from a pathology database. Twenty three cases correspond to the right colon and 22 cases from the left colon. Paraffin blocks were selected and stain with antibodies against MLH and MSH. Results were being scored as positive, negative or equivocal. Cases with negative or equivocal were evaluated for BRAF-1 mutation and hypermethylation of the MLH1 promoter. Patients fulfilling criteria for FAP and HNPCC were excluded.

Results: Females represented 51.1% of the cases. The mean age was 57 years in the group from the right sided tumors and 67 years in the patients from the left (p< 0.02). Pathological TN stage was not significant different between right and left side tumors. All tumors stained with MSH. Overall, MLH1 protein expression was absent in 14 of 45 carcinomas (31.1%), 8 from the right and 6 from the left colon. Five of the 8 right side tumors (62.5%) and 1/6 cases (16.6%) of the left side tumors showed hypermethylation of the MLH promoter and BRAF mutation.

Conclusion: Loss of MLH expression was not significantly different in right vs left side tumors; however hypermethylation of the MLH promoter and Braf-1 mutation appears to be more common in right side lesions compared to the left side tumors. Although the significance of this finding is unclear, the possibility of different molecular pathways between right and left side lesions that result in loss of MLH expression needs to be considered.
EFFICIENCY OF Sentinel LYMPH NODE BIOPSY FOR Ultra-STAGING OF COLORECTAL CANCER PATIENTS,
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PURPOSE: Accurate staging of colorectal cancer patients is prognostically and therapeutically important to identify those patients who would most benefit from adjuvant chemotherapy. Lymphatic mapping and sentinel node analysis enable a focused review of the lymph nodes which are most likely to harbor metastases. It may be feasible to apply ultra-staging techniques, such as immunohistochemistry to sentinel lymph node (SLN). The aim of this study is to evaluate efficiency of sentinel lymph node biopsy (SLNB) to detect nodal micrometastases of colorectal cancer.

METHODS: Between 2000 and 2004, twenty-seven colorectal cancer patients who underwent curative surgery and SLNB, were diagnosed as no nodal metastasis based on hematoxylin-eosin stained specimen. A total of 624 lymph nodes from the 27 patients were examined to detect micrometastases by immunohistochemistry. About SLNB, Indian ink was injected intraoperatively to 3 patients, and 99mTc Tin colloid was injected 20-24 hours before operation to 24 patients. Five 4-micrometer-thick serial sections were obtained from each lymph node. One section was stained using the hematoxylin-eosin method for routine histopathological examination and the other four sections further stained for AE1/AE3 anti-cytokeratin antibodies. We defined micrometastases as metastases not detectable by routine histological examination with hematoxylin-eosin staining but detected by immunohistochemistry evaluation with AE1/AE3.

RESULTS: There were 15 colon cancer patients and 12 rectal cancer patients. A total of 98 SLNs were harvested (3.6 SLNs per a patient). Micrometastases were detected by immunohistochemistry in 8 lymph nodes (8/623, 1.3%) from 6 patients (6/27, 22.2%). Of all 8 micrometastatic lymph nodes, 7 nodes were SLNs and one was non SLN (87.5% vs. 12.5%, p=0.010).

CONCLUSIONS: Majority of micrometastatic lymph nodes were included to SLNs. SLNB may be a useful technique to efficiently detect micrometastases for ultra-staging of colorectal cancer.
INTERSPHINCTERIC RESECTION WITH QUADRANT RESECTION OF UPPER EXTERNAL SPHINCTER IN CASES OF THE VERY LOW RECTAL CANCER, Nahmgun Oh PhD, Hyuk-Jae Jung MD, Hyunsung Kim MD, Department of Surgery, Pusan National University Hospital, Busan, South Korea

Purpose: In the treatment of rectal cancer, sphincter saving operation is increased but low anterior resection is limited in treatment for low rectal cancer situated below 4cm from the anal verge. In other reports intersphincteric resection for T2 cancer can allow an oncologically safe resection margin and have good functional results in very low rectal cancer. The purpose of this study is to evaluate the morbidity, mortality, oncological and functional results of intersphincteric resection for T2 and T3 rectal cancer situated below 4cm from the anal verge.

Methods: Between 2000 and 2004, 62 patients (mean age 52 years, range 34-74) with adenocarcinoma of the rectum underwent abdomino-intersphincteric resection with a colonic J-pouch and diverting ileostomy. After preoperative radiochemotherapy, patient with overt T2 lesion was 24 cases and received traditional intersphincteric resection (Group I: simple intersphincteric resection), and patient with borderline cases or T3 lesion was 38 cases and received extended intersphincteric resection with quadrant resection of upper external sphincter and primary repair of the external sphincter (Group II: extended intersphincteric resection).

Results: The mean distance between the tumor and anal verge was 3.4 (range 2.4-4.0) cm. Over 3mm lateral surgical margin was 79.1%, 84.2% of Group I and II. 1 case of inferolateral recurrence (4.0%) was occurred in Group I and 1 case of pelvic recurrence (2.6%) in Group II. Systemic recurrence was 2 cases (8.3%), 3 cases (7.9%) in Group I and II. Perineal wound infection was 25.0%, 26.3%, and mild anastomotic stricture was 25.0%, 26.3% in Group I and II. The grade I, II of continence by Kirwan classification was 83.3%, 81.5% in Group I and II. Under 3 times stool frequency per day was 54.2%, 63.2% in Group I and II. There was no postoperative mortality.
OPTIMAL LIGATION LEVEL OF THE PRIMARY FEEDING ARTERY AND BOWEL RESECTION MARGIN IN COLON CANCER SURGERY: THE INFLUENCE OF THE SITE OF THE PRIMARY FEEDING ARTERY, Jin-ichi Hida MD, TAKEHITO YOSHIFUJI MD, FUMIAKI SUGIURA MD, MASAKO TAKEMOTO MD, TAKASHI HATTORI MD, KAZUKIUEDA MD, EIZABURUO ISHIMARU MD, TADAO TOKORO MD, MASAYUKI YASUTOMI MD, HITOSHI SHIOZAKI MD, KIYOTAKA OKUNO MD, Department of Surgery, Kinki University School of Medicine, Osaka, Japan

Purpose: In colon cancer surgery, it is recommended that en bloc resection involving extended lymphadenectomy, characterized as a hemicolectomy, be performed by ligating the primary feeding artery at a high position and resecting proximal and distal with 5-cm to 10-cm bowel margins. However, there is little evidence to unequivocally support such extensive lymphovascular resection.

Methods: The distribution of nodal metastases was obtained by the clearing method in 164 patients with colon cancer. Results: For pericolic spread, for pT1 tumors, the distance from the primary tumor to a diseased node was 2.5cm; for pT2, the distance was less than 5cm; for 97.0% of pT3 tumors and 93.3% of pT4 tumors with nodes involved, the distance was less than 7cm. For central spread, for pT1 tumors, the rate of spread to central nodes was 0%; for pT2, the rate of spread was 20.0% to intermediate nodes (for tumors more than 5cm from the feeding artery, the rate for central nodes was 0%); for pT3, the rate was 30.6% to intermediate nodes and 15.3% to main nodes; for pT4, the rate was 44.4% to intermediate nodes and 22.2% to main nodes. For curative resection cases with pT3 tumors more than 7cm from the feeding artery, the rate to central nodes was 0%.

Conclusions: In T1 tumors, central node dissection is not required, but resection with proximal and distal 3-cm margins are required; in T2, central node dissection that includes the intermediate node should be performed in addition to resection with proximal and distal 5-cm margins. In T3 and T4, central node dissection that includes the main node should be performed in addition to resection with proximal and distal 7-cm margins. However, for T2 more than 5cm from the primary feeding artery, and for T3 more than 7cm from the primary feeding artery, proximal and distal resection alone may be adequate.
VALUE OF INTRAOPERATIVE SENTINEL MAPPING, Krasimir Ivanov MSc, Valentin Ignatov PhD, Nikola Kolev PhD, Anton Tonev MD, University Hospital "St. Marina", Medical University - Varna, Bulgaria

BACKGROUND/AIMS: The presence of metastasis is the most important prognostic factor for the patients with colorectal cancer. In about 30% of those without metastases which have been radically operated recurrences are observed and these patients die from cancer. This requires improvement of the surgical methods as well as a more accurate determination of the indications for adjuvant chemotherapy administration.

MATERIAL AND METHOD: Between August 2004 and April 2007 we assigned 472 consecutive patients with colorectal cancer. We applied routinely the method intraoperative sentinel mapping in 336 patients that intraoperavely was evaluated as I and II clinical stage. We used the dying method with Patent Blue V. An algorithm, proposed and applied by us was worked out for the entire group of patients.

RESULTS: The 159 men and 177 women had a median age of 62 years. Localization was spread as 172 patients with colon carcinoma and 164 with rectum carcinoma. The median number of SNs and total lymph nodes examined were 3 and 14.5, respectively. The sensitivity of lymphatic mapping and SN analysis was 97% and the false-negative rate was 3%. We increased the volume of the surgical intervention in 24 (7%) of the patients and upstaged 37 (11%) of patients by means of ultrastaging with immunohistochemistry. We followed a group 152 patients for a period of 2 year with recurrence incidence of 47 (14 %) of the patients.

CONCLUSIONS: Intraoperative sentinel lymph node mapping in colorectal cancer is a diagnostic method which is convenient for the surgeons allowing them for an individualized approach toward each patient. The method shows good results and has its own significance for decreasing the recurrence rate and eventually increasing the survival rate in patients with colorectal cancer.
HEPATIC LYMPH NODE INVOLVEMENT IN PATIENTS WITH SYNCHRONOUS LIVER METASTASIS OF COLORECTAL CANCER, Keiichiro Ishibashi PhD, Kouki Kuwabara MD, Masatsugu Ishii MD, Toru Ishiguro MD, Tomonori Ohsawa PhD, Norimichi Okada PhD, Masaru Yokoyama PhD, Tatsuya Miyazaki PhD, Moriyuki Matsuki PhD, Hideyuki Ishida PhD, Department of Digestive Tract and General Surgery, Saitama Medical Center, Saitama Medical University

Background and Purpose: This study was performed to examine the status of hepatic lymph node metastasis in patients with synchronous liver metastasis of colorectal cancer, and to consider the significance of the presence of metastasis in the treatment of those patients. Patients and Methods: Hepatic lymph nodes were removed from 61 patients (17: resectable, 44: unresectable) with synchronous liver metastases of colorectal cancer during resection of the primary tumor. The relationships between the incidence of hepatic lymph node metastases and various clinicopathological factors and overall survival were examined. Results: Hepatic lymph node metastasis was detected in three patients (18%) with resectable lesions and 13 patients (30%) with unresectable lesions. For the resectable cases, the serum level of CA 19-9 (p<0.01), and the numbers of lymph node metastasis of the primary lesion (p=0.08) were higher in patients with hepatic lymph node metastases (n=3) than in those without (n=14). There were no significant relationships between hepatic lymph nodes metastasis and other clinicopathological factors. The median overall survival for patients without metastasis was better than that for patients with metastasis (43 months vs 11 months, p=0.06). For the unresectable cases, the serum level of CEA (p=0.08) was higher in those with than in those without (n=31). The median overall survival for patients without metastasis was better than that for patients with metastasis (16 months vs 8 months, p=0.04). There were no significant relationships between hepatic lymph nodes metastases and other clinicopathological factors, including the volume of liver metastases. Conclusion: The incidence of hepatic lymph node metastases should be considered in selecting the optimal treatment of liver metastases of colorectal cancer, regardless of the respectability of hepatic lesions.
SPHINCTER PRESERVING SURGERY IN PATIENTS WITH RECTAL CANCER LOCATED WITHIN LESS THAN 3 CM OF THE ANAL VERGE, S.-C. Park MD, D.-W. Kim MD, S.-Y. Jeong MD, J.-G. Park MD, Department of Surgery, Seoul National University Hospital, Seoul, Korea

Aims.
To evaluate the current status of sphincter preservation for distal rectal cancers located within less than 3 cm from the anal verge.

Methods.
Between January 2001 and December 2007, 120 patients underwent surgery for primary rectal adenocarcinoma located within less than 3 cm of the anal verge at the Department of Surgery, Seoul National University Hospital and the Center for Colorectal Cancer, National Cancer Center by single surgeon, J-G Park. Clinical data were retrospectively reviewed, including pathologic stages, operation types, and preoperative chemoradiotherapy (CRT).

Results.
Of 120 patients with rectal cancers located within less than 3 cm of the anal verge, 73 underwent preoperative CRT followed by surgery (CRT group), and 47 underwent surgery first (non-CRT group). Overall sphincter preservation rate was 38% (47/120 patients). In CRT group, sphincter preservation was 51% (37/73) and non-CRT group was 21% (10/47) (p = 0.02). Operation types were transanal excision (n=9), low anterior resection with double-stapled anastomosis (n=2), low anterior resection with upper sphincter excision and colo-anal anastomosis (n=27), low anterior resection with intersphincteric resection and colo-anal anastomosis (n=9), and abdominoperineal resection (n=72). Recent 3 years, the sphincter preservation rate was 62% (31/50 patients). Combining preoperative chemoradiation and low anterior or intersphincteric resection with colo-anal anastomosis may contribute to increase the sphincter preservation rate. But this retrospective study is hard to analyze the effect of the each contributing factor for sphincter preservation.

Conclusion.
During 7 years, overall sphincter preservation rate was 38%, and recent 3 years the sphincter preservation rate was 62% for the rectal cancer located within less than 3 cm from anal verge.
OUTCOMES OF LATERAL LYMPH NODE DISSECTION IN DUKE'S C LOW RECTAL CANCER, Harunobu Sato MD, Koutarou Maeda MD, Tsunekazu Hanai MD, Yoshikazu Koide MD, Hidetoshi Katsuno MD, Masuo Funabashi MD, Department of Surgery, Fujita Health University

Purpose: This study was performed to identify patients who benefit from lateral lymph node dissection (LND) for Duke's C low rectal carcinoma according to the number, the side and the site of positive lateral node (PLN).

Patients and methods: The study comprised 146 patients with Duke's C low rectal carcinoma undergoing LND. Three parts of lymph nodes, area A, B and C, were dissected for grade T2 or more advanced tumors. The area A is corresponding to TME area. The dissection of area B (the space between the autonomic nerve and the internal iliac artery) and C (the obturator space) was defined as LND. The patients were retrospectively divided into two groups: patients without PLN (group I) and patients with PLN (group II). Furthermore, group II was subdivided into two groups respectively according to the number, the side and the site of PLN: group IIA1 (patients with less than 4 PLN) and group IIA2 (patients with more than 4 PLN), group IIB1 (patients with PLN in unilaterally) and group IIB2 (patients with PLN bilaterally), group IIC1 (patients with PLN in either area B or area C) and group IIC2 (patients with PLN in both area B and C). Clinical outcomes were studied in terms of recurrence and prognosis.

Results: Recurrence (RR) and 5-year survival rate (5SR) were 37.8% and 70.3% in group I. RR rate and 5SR were significantly worse in group IIA2 (100% and 0%) than IIA1 (55.8% and 46.5%), in group IIB2 (93.8% and 11.2%) than IIB1 (54.2% and 45.7%), and in group IIC2 (90.9% and 11.2%) than IIC1 (50% and 50.7%). Group IIA2, IIB2 and IIC2 were thought to be high risk groups for LR and poor prognosis. RR rate and 5SR were 44.7% and 54.2% in patients who do not belong to any high risk groups (group NR). Although RR rate and 5SR were significantly better in group NR than in patients who belonged to only one high risk group (92.3% and 12.3%), there were no significant differences in RR and prognosis between group I and NR. There was no 5-year survivor in patients who belonged to equal to or more than two high risk groups.

Conclusion: LND for low rectal carcinoma was effective for patients with PLN in patients who do not belong to any high risk groups. However, LND gave no survival benefit for patients who belonged to equal to or more than two high risk groups.
ANALYSIS OF REGIONAL LYMPH NODE METASTASES FROM RECTAL CARCINOMA BY THE CLEARING METHOD: JUSTIFICATION OF THE USE OF SIGMOID COLON IN J-POUCH CONSTRUCTION AFTER LOW ANTERIOR RESECTION, Jin-ichi Hida MD, Takehito Yoshifuji MD, Fumiaki Sugiura MD, Masako Takemoto MD, Takashi Hattori MD, Kazuki Ueda MD, Eizaburou Ishimaru MD, Tadao Tokoro MD, Masayuki Yasutomi MD, Hitoshi Shiozaki MD, Kiyotaka Okuno MD, Department of Surgery, Kinki University School of Medicine, Osaka, Japan

PURPOSE: It has been reported that functional outcome following low anterior resection of rectal cancer is improved by construction of a colonic J-pouch compared with straight anastomosis. Hence, we tried to justify use of the sigmoid colon in the construction of a J-pouch by the analysis of regional lymph node metastases.

METHODS: A total of 198 patients underwent resection for rectal cancer. Node metastases were examined by the clearing method. According to Japanese General Rules (JGR), nodes were classified into the perirectal nodes (PR-N), pericolic nodes (PC-N), central intermediate nodes (C-IM-N), central main nodes (C-M-N).

RESULTS: Metastatic rate (number of patients with node metastases/total number of patients) of PR-N was 56.6%. Metastatic rate of C-IM-N was 19.2% and that of C-M-N was 8.6%. Metastatic rate of PC-N was only 1.0%.

CONCLUSIONS: In low anterior resection, high ligation of the inferior mesenteric artery and dissection of C-M-N, C-IM-N and PR-N are necessary. Resection of sigmoid colon is not required, and therefore, a J-pouch can be constructed using the sigmoid colon.
SHORT TERM RESULTS OF LOWER RECTAL CANCER ACCORDING TO PROCEDURE. Toshimasa Ishii MD, Shigeki Yamaguchi MD, Jo Tashiro MD, Takahiro Sato MD, Syutarou Ozawa MD, Yoshihide Otani MD, Isamu Koyama MD, Saitama Medical University International Medical Center

[Purpose] Since April 2007 of hospital opening, we tried to perform intersphincteric resection (ISR) and laparoscopic resection (Lap) for lower rectal cancer. This study was assessed short term results for recent 10 months.

[Patients] Nineteen patients of curative lower rectal cancer resection were included in this study. There are 13 males and 6 females. Each number of procedure was; low anterior resection (LAR) 6, ISR 5, Abdomino-perineal resection (APR) 8. Five patients underwent laparoscopic resection and 12 patients received lateral lymphadenectomy (LLA). All cases of LAR and ISR had diverting stoma.

[Results] Mean operating time, mean blood loss count, and mean postoperative hospital stay were LAR 291min., 204g, 10.8days, ISR 400min., 387g, 11.4days, APR 332min., 501g, 19.7days, respectively. Regarding postoperative complication rates, anastomotic leakage, intestinal obstruction, and wound infection were LAR 0%, 20%, 0%, ISR 0%, 20%, 0%, APR 0%, 22%, 33%. There were no difference of postoperative complications between open and Lap in LAR and ISR. However mean postoperative hospital stay and mean blood loss count were 12.2days, 419g in open and 10.0days, 172g in Lap. Lap was shorter hospital stay and less blood loss than open resection.

[Conclusion] Short term results of ISR were similar to that of LAR, and wound infection was seen more in APR. Lap was less invasive than open resection concerning hospital stay.
VARIOUS APPROACHES TO TREATMENT OF PATIENTS WITH THE COMPLICATED CURRENT OF A CANCER OF THE LEFT HALF OF LARGE INTESTINE. S.V. Vasilyev, D.E. Popov, A.V. Semenov, V.A. Kiselev, St.-Petersburg State Pavlov’s Medical University, Center of coloproctology, St.-Petersburg, Russia.

The purpose. To estimate experience of surgical treatment in patients with colorectal cancer complicated with intestinal impassability.

Materials and methods. 240 patients with obstructing left colonic and rectal cancer were operated in period of last 5 years. All patients were divided into three groups depending on the degree of expressiveness of intestinal impassability: compensated, subcompensated and decompensated. To all patients have been executed various surgical interventions: diverting colostomy (laparoscopic or from miniapproach) - 32; obstructive resection of large intestine with a tumor - 115; subtotal colectomy - 21; primary - reconstructive resections of large intestine with use of the technique of intraoperative intestinal lavage - 72.

Results. Various complications were developed in 25%. Mortality has made 3.2%. In 95 cases (39.6%) the intestinal continuity is restored primarily. Anastomotic leakage was not in one case. All patients with preliminary formed diverting stomas operated in the scheduled order in two-four weeks.

The conclusion. The choice of operative intervention depends on localization of the tumor, prevalence of tumor process, the general condition of the patient and degree of expressiveness of intestinal impassability. Use of the set for intraoperative irrigation of large intestine, which realization occupies about 20-50 minutes, relieves of necessity to provide any multistep surgeries.
STANDARDIZED LAPAROSCOPIC INTRACORPOREAL RIGHT COLECTOMY FOR CANCER: SHORT-TERM OUTCOME IN 111 UNSELECTED PATIENTS, A D Dippolito MD, R Bergamaschi MD, Lehigh Valley Hospital, Allentown, Pennsylvania

OBJECTIVES: This study was performed to evaluate the impact of a standardized laparoscopic intracorporeal right colectomy on short-term outcome of patients with neoplasia. METHOD: Consecutive patients with histologically proven right colon neoplasia underwent standardized laparoscopic intracorporeal right colectomy with medial-to-lateral approach encompassing ten sequential steps: 1) ligation of ileocolic vessels, 2) identification of right ureter, 3) dissection along superior mesenteric vein, 4) division of omentum, 5) division of right branch of middle colic vessels, 6) transection of transverse colon, 7) mobilization of right colon, 8) transection of terminal ileum, 9) ileocolic anastomosis, 10) delivery of specimen. Values were medians (range). RESULT: From January 2002 to June 2005, 111 laparoscopic intracorporeal right colectomies were attempted with a 5.4% conversion rate. 57 women and 54 men aged 64.9 (40-85) years had BMI 33 (20-43), ASA score 2 (2-4), 36.9% co-morbidities, and 37.8% previous abdominal surgery. Indication for surgery was cancer in 109 patients. Operative time was 120 (80-185) minutes. Estimated blood loss was 69 (50-600) ml. Overall skin incision length was 66 (60-66) mm. 29 (2-41) lymph nodes were harvested. Length of stay was 4 (2-30) days. Complication rate was 4.5%. CONCLUSION: Standardized laparoscopic intracorporeal right colectomy resulted in favorable short-term outcome in unselected patients with neoplasia of right colon.
A CASE OF ASCENDING COLON CANCER IN A PATIENT WITH HYPERPLASTIC POLYPOSIS OF THE COLON.
Kazuhiro Sasaki MD, Giichiro Tsurita PhD, Shinsuke Saito PhD, Hirokazu Tsuno PhD, Hirokazu Nagawa PhD, Department of surgical oncology graduate school of medicine, the university of tokyo

Here, we report a case of ascending colon cancer, which was suspected to be originated from hyperplastic polyposis, and describe the genetic and histopathologic findings.

The patient was a 75-year-old man, without familial history of colonic diseases. He had a past history of surgical treatments for appendicitis and cholelithiasis. The colonoscopic examination at 55-year age revealed no abnormalities. Complaining of abdominal pain and diagnosed as anemia, he was introduced to our surgical department for investigation. Colonoscopy revealed type 2 tumor of the ascending colon, occupying all the luminal circumference. The histopathology revealed well-differentiated adenocarcinoma. Multiple hyperplastic polyps, as well as tubular and serrated adenomas were found in the total colon. Distant metastases were not found by CT. Subtotal colectomy and ileo-sigmoid colon anastomosis was indicated, in an attempt to preserve the anal sphincter function. The polyps of the remaining colon were colonoscopically removed immediately after the operation. The removed specimens were genetically, immunohistochemically and histopathologically analyzed, and will be presented.
RETROSPECTIVE ANALYSIS OF PATIENTS TREATED WITH CETUXIMAB PLUS FOLFIRI FOR PREVIOUS IRINOTECAN COMBINED CHEMOTHERAPY IN METASTATIC COLORECTAL CANCER., Park Jae Woo MD, Moon Sun-Mi MD, Hwang Dae-Yong MD, Korea Cancer Center Hospital
Purpose: Many reports about the cetuximab efficacy of the prolongation of survival rate has been published. Especially, the combination of cetuximab and FOLFIRI has a high activity even in prior irinotecan refractory mCRC. Beside small number of patients, we would evaluated the efficacy and safety of cetuximab combined with FOLFIRI prior irinotecan chemotherapy failure patients. Methods: Retrospective analysis of 26 patients treated with cetuximab with FOLFIRI from July 2006 to August 2007 was done. All patients were already treated with FOLFIRI chemotherapy in 1st line or 2nd line regimen for mCRC. Initial dose of cetuximab 400 mg/m2 at 1st week and next 250 mg/m2 weekly plus FOLFIRI biweekly was done. We defined 1 cycle as 8 weeks and studies were performed at this week. Results: Median follow-up period was 6.2 (1.1-13.9) months. After 8 weeks, 50% patients had partial response and disease control rate was 57.5%. median time to progression was 3 months. EGFR expression and tumor response had no correlation (P=0.07). Skin reaction and tumor response (median time to progression) had significant correlation (P=0.022). cetuximab did not increase the toxicity associated with FOLFIRI except acneiform rash. Conclusions: Cetuximab combined with FOLFIRI chemotherapy was effective in metastatic colorectal cancer, who progressed after FOLFIRI regimen chemotherapy.
INDICATIONS FOR COLONIC J-POUCH RECONSTRUCTION AFTER ANTERIOR RESECTION FOR RECTAL CANCER: DETERMINING THE OPTIMUM LEVEL OF ANASTOMOSIS, Jin-ichi Hida MD, Takehito Yoshifuji MD, Fumiaki Sugiura MD, Masako Takimoto MD, Takashi Hattori MD, Kazuki Ueda MD, Eizaburo Ishimaru MD, Tadao Tokoro MD, Masayuki Yasutomi MD, Hitoshi Shiozaki MD, Kiyotaka Okuno MD, Department of Surgery, Kinki University School of Medicine, Osaka, Japan

PURPOSE: Functional outcome after anterior resection for rectal cancer is improved by colonic J-pouch reconstruction compared with straight anastomosis. The indications for colonic J-pouch reconstruction have yet to be determined. Therefore, we attempted to determine the level at which J-pouch reconstruction provides an advantage over straight anastomosis.

METHODS: A total of 48 patients who underwent 5-cm colonic J-pouch reconstruction (J-pouch group) and 80 patients who underwent straight anastomosis (straight group) underwent functional assessment one year postoperatively.

RESULTS: The functional outcome in the J-pouch group was significantly better than that in the straight group when the distance of the anastomosis from the anal verge was less than 8cm. The difference was particularly obvious when the level of the anastomosis was below 4cm. However, functional outcome in the straight group when the anastomosis was between 9 and 12cm from the anal verge was also satisfactory and did not differ from that in the J-pouch group when the anastomosis was between 5 and 8cm from the anal verge.

CONCLUSIONS: Colonic J-pouch reconstruction is indicated when the distance of anastomosis from the anal verge is less than 8cm, and it is essential when the distance is less than 4cm.
EXAMINATION OF NODAL METASTASES BY A CLEARING METHOD SUPPORTS PELVIC PLEXUS PRESERVATION IN RECTAL CANCER SURGERY, Jin-ichi Hida MD, Takehito Yoshifuji MD, Fumiaki Sugiura MD, Masako Takemoto MD, Takashi Hattori MD, Kazuki Ueda MD, Eizaburo Ishimaru MD, Tadao Tokoro MD, Masayuki Yasutomi MD, Hitoshi Shiozaki MD, Kiyotaka Okuno MD, Department of Surgery, Kinki University School of Medicine, Osaka, Japan

Purpose: In rectal cancer surgery preservation of urinary and sexual function is attempted by means of operations preserving the autonomic nerves of the pelvic plexus. Emergence of residual cancer because of a more shallow plane of dissection is a problem of concern with these methods, so we examined indications for pelvic plexus preservation.

Methods: We studied 198 patients with rectal carcinoma who underwent abdominopelvic lymphadenectomy. Lymph nodes along the superior hemorrhoidal artery and middle hemorrhoidal artery medial to the pelvic plexus were defined as perirectal nodes, and nodes along the middle hemorrhoidal artery lateral to the pelvic plexus and along the internal iliac artery represented lateral intermediate nodes. Node metastases were examined by the clearing method.

Results: Metastasis to perirectal nodes occurred in 12.5% in patients with pT1 tumors, 28.9% of those with pT2 tumors, and 50.0% of those with rectosigmoid junctional cancer. Metastasis to lateral intermediate nodes was absent in patients with pT1 or pT2 and was as low as 2.5% in patients with rectosigmoid junctional cancer.

Conclusions: In patients with T1, T2, and rectosigmoid junctional cancer, perirectal node dissection is necessary, but chances of residual cancer should remain minimal when the pelvic plexus is preserved.
PSEUDO-MEIG’S SYNDROME CAUSED BY OVARIAN METASTASIS FROM COLORECTAL CANCER: REPORT OF 4 CASES AND REVIEW OF THE JAPANESE LITERATURE, Masatsugu Ishii MD, Keiichiro Ishibashi PhD, Masaru Yokoyama PhD, Kouki Kuwabara MD, Toru Ishiguro MD, Tomonori Ohsawa MD, Norimichi Okada PhD, Tatsuya Miyazaki PhD, Moriyuki Matsuki PhD, Hideyuki Ishida PhD, Department of Digestive Tract and General Surgery, Saitama medical Center, Saitama Medical University

Pseudo-Meig’s syndrome is characterized by rapid improvement of ascites and hydrothorax, which is cured by removing ovarian or pelvic tumors, with the exception of ovarian fibroma. However, little is known about the characteristics of this syndrome when caused by ovarian metastases of colorectal cancer. We encountered four cases of pseudo-Meig’s syndrome caused by ovarian metastasis of colorectal cancer, three of which have been published elsewhere. Including our four cases, 17 cases were collected from the Japanese literature (11 from articles, and 5 from meeting abstracts, JMEDICINE: 1986-2007) and analyzed.

Patient ages ranged from 32 to 75 years, and the sites of the primary lesions were cecum in one, the ascending colon in one, descending colon in one, sigmoid colon in ten, and rectum is three. Histological examination demonstrated well-differentiated adenocarcinoma in seven, moderately differentiated adenocarcinoma in six, and unknown in four. Hypothorax was found bilaterally in three cases, right-sided in seven, left-sided in four, and unknown in three. Ovarian metastasis was detected synchronously in ten and metachronously in seven. Bilateral ovaries were involved in six, right in five, and left in six. All patients underwent colectomy and oophorectomy. Three-year survival rate after oophorectomy was 53%. Our findings indicate that surgical treatment for pseudo-Meig’s syndrome caused by ovarian metastasis from colorectal cancer can improve the prognosis.
CARCINOSARCOMA OF THE COLON: A CASE REPORT, Jung G Kang MD, Suh J Kim MD, Yoon J Choi* MD, Department of Surgery and *Pathology, National Health Insurance Corporation, Ilsan Hospital 1 Yonsei University

Introduction: Carcinosarcoma is a rare tumor that contains malignant epithelial and mesenchymal element. It was usually detected in the head and neck, the respiratory tract and the female reproductive tract. Carcinosarcoma is a rare case in GI tract, especially in colon and has very poor prognosis despite massive treatment.

Result: A 65 years old male patient admitted to our surgical department because of abdominal pain for 1 year. Preoperative evaluations revealed far advanced colon cancer involving the ascending colon and pneumopertoneum with ascites in right subhepatic space and perisplenic space, suggesting panperiitonitis on abdomen and pelvic cat scan and plain X-ray film. Emergency right hemicolectomy was carried out. At operation, the ascending colon showed a huge serosally protruding mass. On opening, an ulcerofungating and annular constrictive mass about 11x9cm was noted, which was 8cm apart from the ileocecal valve. On microscopic examination, the tumor showed areas of poorly differentiated adenocarcinoma partly covered by normal mucosa, and areas of pleomorphic giant and short spindle cells favoring sarcomatous differentiation. Conclusion: A carcinosarcoma is a rare malignant tumor in colon, composed of mixed malignant epithelial and mesenchymal cells, and also has poor prognosis. Early diagnosis and aggressive management of radical surgery with adjuvant chemotherapy and close follow-up should be considered.
QUALITY OF LIFE IN PATIENTS TREATED WITH ABDOMINOPERINEAL RESECTION OR ANTERIOR RESECTION FOR RECTAL CANCER, Jin-ichi Hida MD, Takehito Yoshifuji MD, Fumiaki Sugiura MD, Masako Takemoto MD, Takashi Hattori MD, Kazuki Ueda MD, Eizaburou Ishimaru MD, Tadao Tokoro MD, Masayuki Yasutomi MD, Hitoshi Shiozaki MD, Kiyotaka Okuno MD, Department of Surgery, Kinki University School of Medicine, Osaka, Japan

PURPOSE: Patients with rectal cancer who undergo abdominoperineal resection (APR) are physically burdened by the presence of a permanent colostomy. We compared physical conditions of patients treated by APR with those of patients treated by anterior resection (sphincter-saving operation) and found out whether the choice of operation technique had any influence on their social and psychologic conditions.

METHODS: Using a questionnaire, we compared the postoperative physical, social, and psychologic conditions of 40 patients who underwent APR with those of 116 patients who underwent anterior resection.

RESULTS: Physical conditions in the APR group were significantly worse than those in the anterior resection group. There were no significant differences in social conditions between the two groups, and social conditions were satisfactory in both groups. However, the will to live in the APR group was significantly less than that in the anterior resection group.

CONCLUSIONS: Although most patients who undergo APR return to their normal level of social condition after surgery, their will to live is less because of physical discomforts, including bowel dysfunction, urinary dysfunction, and sexual dysfunction. The quality of life is influenced by multiple factors, one of which may be the presence of the colostomy.
EFFECT OF PREOPERATIVE VERSUS POSTOPERATIVE CHEMORADIOThERAPY ON FUNCTIONAL OUTCOME AFTER SURGERY FOR RECTAL CANCER. Alexis Grucela MD, Roger Li BA, David B Chessin MD, Randolph M Steinhagen MD, Mount Sinai Medical Center

Introduction: Until recently, the standard of care for stage 2 and 3 rectal cancer patients involved the administration of postoperative chemoradiotherapy. However, in recent clinical trials, preoperative chemoradiotherapy has been shown to result in equal long term survival with the potential for better functional results without an increase in perioperative complications. Therefore, we evaluated our experience with chemoradiotherapy and surgery for rectal cancer to evaluate functional results and postoperative complications.

Methods: We queried the prospectively maintained surgical database to identify all patients with rectal cancer treated between 1999-2007. Only those patients whose surgery consisted of radical resection with curative intent and reestablishment of intestinal continuity were included. A comprehensive chart review of the included patients was performed to evaluate the nature and frequency of postsurgical complications. In addition, symptoms regarding bowel function were recorded and a novel Bowel Dysfunction Score (BDS) was calculated for each patient.

Results: 43 consecutive patients meeting the inclusion criteria were identified. Data concerning the incidence of postoperative complications indicate that preoperative chemoradiotherapy results in fewer complications than does postoperative or no therapy. Preoperative patients had an average of 0.89 postsurgical complications, postoperative patients had 1.29, and patients with no therapy had 1.2. Patients that received neoadjuvant chemoradiation were found to have a lower BDS than postoperative and no therapy patients.

Conclusion: Preoperative chemoradiotherapy results in fewer postsurgical complications and leads to better bowel function than postoperative chemoradiotherapy or no therapy. Combined with equal long term survival, this adds additional evidence that neoadjuvant therapy should be considered the standard of care for the treatment of locally advanced rectal cancer.
DIETARY CHANGE AND THE INCREASE OF COLORECTAL CANCER IN KOREA AND JAPAN, Sun-Il Lee MD, Jung-Myun Kwak MD, Dong-Jin Choi MD, Sung-Soo Kim MD, Hwan-Soo Kim MD, Jun-Min Joe MD, Jin Kim MD, Byung-Wook Min MD, Jun-Won Um MD, Seon-Hahn Kim MD, Hong-Young Moon MD, Department of Surgery, Korea University College of Medicine

Epidemiologic studies showed that colorectal cancer is related to the dietary environment especially to meat consumption. The change to westernized diet has been found in many Asian countries including Korea and Japan, and it is supposed that the dietary change would influence on the incidence of colorectal cancer in these countries. In this study, we investigated the change of meat and cereal consumptions and the change of colon and rectal cancer between two countries. The consumptions of meat and cereal in Japan (1950 to 2002) and Korea (1970 to 2003), and the colorectal cancer incidences in Japan (1975 to 1998) and Korea (1992 to 2002) were collected from the national published data which were studied nationwide in those two countries. The age-adjusted incidences were compared with time differences. Meat consumption had been increased about 2.5 times during 1970 to 1980 and colorectal cancer had increased more than 2.5 times during 1992 to 2002 in Korea. We found that the changes in meat and cereal consumption as well as the increases in incidence of colon and rectal cancer were similar in those two countries with the 20 years of time difference. However, the increase of rectal cancer in Korea especially for women was higher than that of Japan, and further studies are required. The similarities and differences between Korea and Japan could be helpful to predict future colorectal cancer incidences for Korea and even for other Asian countries.
EPIDEMIOLOGY OF COLON & RECTAL CANCER IN IRAQ, Z. Al-Bahraini MD, Adil H Al-Humadi MD, State University of New York at Buffalo and University of Baghdad, Iraq

PURPOSE: This study evaluates the descriptive epidemiology and clinical aspects of colorectal cancer in the Iraqi population.

METHOD: Records of patients diagnosed with colorectal cancer for a period of thirty years from 1965 to 1994 in Baghdad Medical City Teaching Hospital were reviewed. The material was analyzed retrospectively to study the epidemiological increase of cancer of the colon and rectum in the Iraqi population.

RESULTS: There were 511 patients diagnosed with colorectal cancer between 1965-1994. The male/female incidence was 1.4/1 for colon cancer and 1.1/1.0 for rectal cancer. The highest incidence was seen at the median age of 50. A total of 21.1 percent of patients were younger than 40 years of age. The population of Iraq in 1993 was 19 million composed of 15.5 million Arabs and 2.5 million Kurds with the incidence ratio of 6/1 for colon cancer and 5.3/1 for rectal cancer. The most common symptom was change in bowel habits with obstructions for colon cancer (51%), rectal bleeding and change in bowel habits for rectal cancer (71.5%). The rectum was the most common site 47% followed by the left colon and sigmoid colon 27% and the right colon at 26%. The predisposing factors related to adenomatous polyps 3%, familial polyps 5% and ulcerative colitis 3%. Pathological classification was Duke's D lesion 56.9%, Duke's C lesion 71.3%, Duke's B and Duke’s A 7%.

DISCUSSION: Comparative studies in the Iraqi Cancer Registry during the 30 year period (65-94) showed an increased incidence of colorectal cancer from 25% to 50% and a decrease of gastric cancer from 78% to 50%. The incidence of colorectal cancer in Iraq is 2.6% compared to 6-13% in the developed countries and 17-51.1% in the industrialized nations. CONCLUSION: Iraq shares the epidemiological characters of developing countries in the Middle East. There is a shift towards the western-style of living that has probably lead to the increase of colon and rectal cancer in the Iraqi population. This increased incidence in colon and rectal cancer coincides with the decreased incidence in gastric cancer. The expected change in pattern of this disease in Iraq is probably related to the rapid change in dietary habits.
PATIENTS DELAY IN THE DIAGNOSIS OF SYMPTOMATIC RECTAL CANCER. Fidel Ruiz Healy MD, Marta G Vargas Saldaña MD, Abel Jalife Montaño MD, Service of Coloproctology, Dept. of Surgery, Centro Hospitalario "Sanatorio Durango", Mexico City, Mexico.

Introduction. Despite modern diagnostic tools and protocols, symptomatic patients with rectal cancer continue to delay diagnosis. As a result, patients are treated during advance stages of disease. Patients’ delay plays an important part in late diagnosis.

Methods. A retrospective chart review of patients with rectal cancer was performed. Parameters include age, patient behavior during initial symptoms, diagnosis, treatment and time from onset of symptoms to a first visit to physician.

Results. Forty patients (m/f 24/16) of a mean age of 62.3 (range, 27-90) years were included. The most common symptom was rectal bleeding (72.5%). Other symptoms included rectal pain (30%), constipation (7.5%) and diarrhea (5%). Weight loss, rectal secretion and fecal impaction were also reported. Several patients presented multiple symptoms. Patients responded to symptoms in two ways. The first group with three patients (7.5%) went to a physician. Patient delay mean average was 19 days. (range 4 - 35 days). The second group with 37 patients (92.5%) diagnosed themselves as hemorrhoidal diseases in 29, colitis in 3, intestinal amebiasis in 2, intestinal constipation in 2 and anal fissure in 1 patient. Treatment consisted with over-the-counter medications. They included hemorrhoidal creams and suppositories, laxatives, medication for colitis and intestinal amebiasis. In this group, patient delay mean average was 31 weeks. (range 2 weeks to 3 years).

Conclusions. This study showed that most patients presenting rectal cancer symptoms, erroneously credited them to common colorectal diseases. Self treatment resulted in a patient delay average of over 7 months. Delayed diagnosis of rectal cancer has remained a world wide constant for decades. The principal cause appears to be a lack of knowledge in the meaning of rectal cancer symptoms. Health education regarding rectal cancer, needs to be more emphasized in the general population.
MALE URINARY DYSFUNCTION AFTER TOTAL MESORECTAL EXCISION. Hideyuki Ike MD, Yoshio Fujii MD, Satoshi Hasegawa MD, Akio Ashida MD, Kenichi Matsuzu, Saiseikai Yokohama City Nanbu Hospital

Purpose: To investigate urinary dysfunction after total mesorectal excision using electric cautery for rectal cancer.

Patients and Methods: A total of 67 patients with lower rectal cancer who underwent total mesorectal excision between April 2005 and December 2007 at our department were included. Of these, 28 underwent low anterior resection, 10 Hartmann’s operation, and 29 abdomino-sacro-abdominal resection. Lateral lymph node metastases were found in 7 patients. Pelvic autonomic nerves were completely preserved macroscopically during operation. Post-operative urinary status was evaluated.

Results: Average age was 65 years, and number of male patients was 43 and female was 24. Average operation time was 3 hours and 51 minutes, average blood loss was 353 ml and no patients received blood transfusion. There was no patients who needed clean intermittent catheterization, however 12 patients (17.9%) received medicine for urinary dysfunction. Urinary dysfunction was found in only male patients. Incidence of urinary dysfunction according to the operation were 14.3% in low anterior resection, 20% in Hartmann’s operation, and 20.7% in abdomino-sacro-abdominal resection, respectively.

Conclusion: Urinary dysfunction may occur in male patients with lower rectal cancer after total mesorectal excision using electric cautery.
TOTAL PELVIC EXENTERATION FOR LOWER RECTAL CARCINOMA ASSOCIATED WITH VON MEYANBURG COMPLEX, Ryoei Watanabe MD, Y Saida MD, Y Nakamura MD, T Enomoto MD, K Takabayashi MD, A Otsuji MD, M Katagiri MD, S Nagao MD, S Kusachi MD, M Watanabe MD, J Nagao MD, Toho University Ohashi Medical Center Third Department of Surgery

Lower rectal carcinoma, as it has no serosa, often infiltrates neighboring organs including seminal vesicle, prostate gland, urinary bladder and vagina. In this study, we report a case of rectal carcinoma with a suspicion of direct invasion to the prostate gland and urinary bladder based on the preoperative imaging.

A 75-year-old male with chief complaint of melena came to our clinic. Colonoscopy detected a circumferential type 2 lesion in the lower rectum. Abdominal CT and MRI described the swelling of regional lymph nodes (No.251) and direct invasion to the prostate and bladder as well as diffuse cystic lesion in the liver. The cystic lesion was diagnosed as von Meyenburg complex, which was to be examined by intraoperative biopsy. Preoperative diagnosis was lower rectal cancer (Rb) with metastasis to other organs (Ai: bladder and prostate), N0, H0, P0, M0; Stage ‡Vb. The patient was determined to undergo total pelvic exenteration with lateral lymph node dissection, ileal conduit and stoma creation on February 15 2007. Intraoperatively, white and yellow nodules diffusing on the surface of the liver was observed. The lateral segmental branch of the liver was biopsised, which was diagnosed von Meyenburg complex by intraoperative pathology. As H-factor is negative, we performed the operation mentioned above. Intraoperative pathology revealed inflammatory episode of the bladder and prostate that had been suspected to be direct invasion according to preoperative CT and MRI. In addition, in the prostate gland, small cancerous lesions of prostate were observed. Postoperative diagnosis was A, N0, H0, P0, M0; Stage ‡U and the patient is alive with no recurrence for 12 months after the surgery.

In this case, adhesion and induration of rectal peripheral tissue was remarkable so that en-bloc resection was applied to improve curability. As von Meyenburg complex was difficult to distinguish from diffuse hepatic metastasis preoperatively, not only preoperative MRI but also pathological diagnosis utilizing intraoperative liver biopsy would be feasible.
In general, metastatic rate of ovarian cancer to large intestine is about 30%. As large intestine neighbors to ovaries, it is not rare. However, many cases of metastatic colorectal cancer especially in cases of disseminated metastasis, have macroscopically demonstrated nodular lesion on serosal surface and rubber and focal hypertrophy on mucosal surface, and few cases have demonstrated mucosal tumor and Type-1 or Type-2 tumor.

In this study, we report a case of colonoscopically detected disseminated metastasis of ovarian carcinoma during the examination of submucosal carcinoma in lower rectum.

A female patient in her late sixties was indicated positive occult blood reaction at medical check-up. In addition, a surface smooth subumucosal tumorous lesion was colonoscopically detected in the rectum. It was diagnosed as adenocarcinoma by biopsy. Under the suspicion of rectal cancer, the patient was referred to our hospital. Endoscopic Ultrasonography (EUS) demonstrated a depressed image throughout all the layers. Abdominal Computed Tomography (CT) and pelvic Magnetic Resonance Imaging (MRI) described a 4x4x8cm tumor located in the right side of lower rectum, which compressed rectum. In right ovary, there was a solid tumor, 2cm in size. Tumor markers were high level; Carbonhydrate antigen (CA) 19-9: 53.4; CA125: 788, though Carcinoembryonic Antigen (CEA) was in normal level. Based on these results, although there could be a possibility of rectal cancer and intrapelvic mass, we performed an open procedure under the preoperative diagnosis of metastatic ovarian carcinoma of rectum. Intraoperatively, a tumor 2cm in size was observed in right ovary. Intraoperative pathology determined it was ovarian carcinoma. In the omentum, many small nodular peritoneal disseminated lesions were observed. So, we performed total hysterectomy, bilateral adnexectomy and omentectomy. Submucosal tumor in lower rectum was identified as an erastic hard surface smooth tumor 8cm in size, which located on the caudal to peritoneal reflection and on extrinsically right rectal posterior wall. We performed Hartmann's operation with the inclusion of tumor. The patient's prognosis has been well and she has undergone chemotherapy at gynecology department.
Aims. Pre-operative radiotherapy as adjuvant treatment for cancer of the Lower Rectum, although recognized as effective on controlling the interval-free of rectal cancer, has not been utilized as frequently as expected. The objective of this trial is to analyze the results of radiotherapy as adjuvant treatment for Cancer of the Lower Rectum.

Methodology. From 1978 to 2007, a total of 358 patients with rectal cancer were submitted to preoperative radiotherapy. Only patients with rectal adenocarcinoma situated in the lower rectum (between the pectinate line and 10 cm above it) classified as TNM stages II and III were included in this study. There was no gender, race and age distinction. Preoperative radiotherapy was performed according to the following scheme: 200 cGy / daily for 4 consecutive weeks up to a total of 4000 cGy, by means of a Linear Megavoltage Accelerator (25 MeV), in anterior and posterior pelvic fields. All patients were operated on after conclusion of the irradiation according to tumor stage observed post-irradiation. According to the anatomopathological finding on surgical specimen, patients classified as TNM stages I received no further treatment; those considered as stages II or III after surgery, were submitted to adjuvant therapy (5FU and leucovorin - 8 cycles).

Results. Of the 358 patients, 64.5% were classified as TNM stage I at surgery. Statistical analysis of the whole group showed that pre-operative RDT does decrease the incidence of local recurrence: 3.48 %. Moreover, the frequency of undifferentiated cells diminished after irradiation. Pre-operative RDT reduces tumoral volume and wall invasion, as well as the mortality rate due to local recurrence (2.43 %) and alters long-term survival rate (80.17%).

Preoperative radiotherapy is really effective in reducing the number of undifferentiated cells and in diminishing the carcinomatous infiltration of the rectal wall. Consequently local recurrence rate is decreased and mortality due to local recurrence declines.
GASTROINTESTINAL STROMAL TUMOR (GIST) IN THE COLON AND THE RECTUM CLINICAL CHARACTERISTICS AND THERAPY IN SIX CASES. Toshihiro Fujita MD, Michio Itabashi MD, Shingo Kameoka MD, Department of Surgery II, Tokyo Women's University School of Medicine

Gastrointestinal stromal tumors (GIST) in the colon and rectum are relatively rare. We experience 6 cases of GIST in the colon and rectum between 1993 and 2008. There are four men and two women with a median age of 53 years (range: 43-81) at the diagnosis. 4 cases in the rectum, one in the sigmoid colon, one in the retroperitoneum. The most frequent symptoms were abdominal pain. The median tumor size was 6 centimeters (range: 3 cm-20 cm). Two patients underwent abdominoperineal resection (APR), one underwent transanal endoscopic microsurgery (TEM). One had a resection of sigmoid colon. 4 patients received imatinib treatment before or after operation. Two cases having local recurrence or distant metastasis, 48 months and 92 months after surgery, respectively. The former died 63 months after the operation. One died of tumor rupture 9 months after diagnosis. One died of other disease 1 month after surgery. On the occasion of these six observations, we will investigated the clinicopathologic characteristics of them.
SELF-EXPANDABLE METALLIC STENT COLON AND RECTUM, Y Saida MD, Y Nakamura MD, T Enomoto MD, K Takabayashi MD, M Katagiri MD, S Nagao MD, S Kusachi, M Watanabe MD, Y Sürüm Yama MD, J Nagao MD, Toho University Ohashi Medical Center

Purpose: In the treatment of obstructive colorectal cancer, we first should relieve ileus in the same time that we pursue improvement of operative curability and safety when we could perform the curative surgery. To avoid emergency operation and stoma creation, and improvement of patients' general condition, we use self-Expandable Metallic Stent (EMS) placement. We report the result of this therapy in our institution.

Methods: Since 1993, we have proactively performed EMS placement for the treatment of obstructive colorectal cancer associated introducing a guide wire under radiographic guidance and utilizing colonoscopy.

Results: A total of 116 patients underwent EMS placement for colorectal stenosis during October 1993 and January 2008. Those included 84 bridge to surgery cases, 28 palliative purpose cases for unresectable malignant diseases and 5 anastomotic stricture cases. The stent insertion was able to be successfully performed in 108 cases (successful rate: 93%). Complications at the time of insertion were; 3 perforation cases in sigmoid colon (3%) and 2 migration in descending colon and rectum (2%).

The surgery enabled 98% of total case to EMS insertion of bridge to surgery. The duration of preoperative EMS placement was 3-27 days (mean: 6.7 days). Postoperative complications included 1 wound infection, 1 ileus, 1 abdominal abscess and 1 leakage. These results are considered to be relatively favorable. The rate of stoma creation after bridge to surgery insertion was 12%, which is lower than the rate of 70% from the cases that EMS could not be placed. Circumferentially obstructive colorectal cancer often gives us difficult preoperative treatment, risk of contaminated operation and the need for secondary operation. But EMS enables us to obtain wider lumen to decrease the pressure of proximal intestine. For palliative purpose, all patients ileus were released quickly. But we have 10% of re-obstruction required re-stent.

Conclusions: To treat colonic obstruction, EMS placement therapy gives us significant meanings in the improvement of surgical results due to preoperative insertion, or the avoidance of excess invasion and the improvement of patients' EQOL in palliative treatment. Therefore, we believe that this procedure should be more and more employed and improved.
IS ONE-STAGE PROCEDURE IN THE EMERGENCY LEFT COLECTOMY SAFE?  J.O Kim MD, S.K Kee MD, O.K Kwon MD, S.Y Nam MD, Department of Surgery, Kumi Cha Hospital, Pochon Cha University

Background: It is well known that the emergent left colon surgery increases morbidity and mortality. The paradigms in the surgical management of the emergent left colon surgery like obstruction and perforation are changing. The aim of this retrospective study is to define whether one stage colectomy without intraoperative colon preparation and/or protecting stoma is acceptable in low risk patients.

Methods: From March 2006 to January 2008, the cases of a total 14 patients (5 men and 9 women) with a mean age of 66 (18-91 years old) underwent the emergency left colectomy. 6 cancer obstructions (2 descending colons, 3 sigmoid colons, and 1 rectum), 4 cancer perforations (1 sigmoid and 3 recta), 2 sigmoid diverticular perforations, and 2 sigmoid stercoral perforations were included.

Results: 6 cancer obstruction patients and 5 perforation (3 cancers and 2 diverticulars) patients with localized peritonitis received resection and anastomosis (2 hemicolecotomies, 5 anterior resections, 2 low anterior resections, and 2 segmental sigmoid resections) without colonic irrigation and/or protecting stoma. These patients had good general conditions and stable vital signs before surgery. Malecot catheter was introduced per anus for decompression in case of 3 sigmoid colon cancer and 1 rectal cancer obstructions. 1 total colectomy and ileorectal anastomosis (stercoral perforation) and 2 Hartmann's procedures (1 rectal cancer and 1 stercoral perforation) were performed. These 3 patients were already septic and had massive fecal contamination with generalized peritonitis and died postoperative day 1, 7, 16 respectively. Of 11 resection and anastomosis, there was no anastomotic leakage and mortality. Only one patient had partial intestinal obstruction who improved with conservative treatment. They started sip $i^{-}$ of water on mean postoperative day 4.5 (3-7th day).

Conclusion: One stage resection and anastomosis without colonic lavage and/or protecting stoma in emergency left colectomy can be safely performed in patients with low anesthetic risks (ASA 1 and 2). But our series are small. Large prospective trials are needed to confirm these results.
Purpose
This Study was indicated factors to treatment in the acute and chronic phase
and long term follow-up .
Methods:
Retrospective study of 23 patients with ischemic colitis after endoscopic biopsy or medical treatment from 1997 to 2007.
Female 13, and 10 males.
Results:
All patients presented intestinal bleeding (10) or Diarrhea (13). Two patients underwent immediate surgery.
One patient died from cardiovascular disease.
The treatment shock in three patients. For patients with acute colitis, 19 with chronic colitis.
Conclusions:
Multivariate analysis identified three factors: the age over 70 years, radiations for other cancer uterus, ovarias, prostat, cancer rectum colon. Anticoagulation or antiarrhythmic therapy in 58% of patients.
The therapy: treatment cardiac ad medical disease
and solution fenol 5% enema.
EFFECT OF MOSAPRIDE CITRATE ON POSTOPERATIVE ILEUS AFTER SURGICAL RESECTION OF COLON CANCER, Akira Tsunoda PhD, Yuko Tsunoda PhD, Makoto Watanabe PhD, Nobuaki Matsui MD, Kohji Takenaka MD, Kazuhiro Narita PhD, Mitsuo Kusano PhD, Department of General and Gastroenterological Surgery, Showa University School of Medicine

PURPOSE: Mosapride citrate (mosapride) is a serotonin 5-hydroxytryptamine 4 receptor agonist that is known to promote gastric emptying and large intestine motility. We assessed the effect of mosapride on postoperative ileus (POI) following colon surgery.

METHODS: The subjects were colon cancer patients who underwent hand-assisted laparoscopic colectomy (HALC). The subjects were randomly assigned to a mosapride group (M group) or control group (C group). The M group was given mosapride with 50 ml of water three times a day starting on postoperative day (POD) 1. The C group was given only 50 ml of water on the same schedule. Patients were allowed to resume oral feeding following on the evening of POD 2. Postoperative gastric emptying was evaluated by the [13C]-acetate breath test.

RESULTS: The maximal gastric emptying rate as determined by the breath test 48 hours postoperatively was significantly earlier in the M group than in the C group. Resolution of bowel movement was significantly earlier in the M group than in the C group.

CONCLUSIONS: Gastric emptying was improved by mosapride. The results suggested that the period of POI following HALC can be shortened by treatment with mosapride.
AMENDMENT OF ROME III F. FUNCTIONAL ANORECTAL DISORDERS, Masahiro Takano BA, Coloproctology Center, Takano Hospital

Purpose: Newly published Rome III is improved in F. Functional Anorectal Disorders regarding the adoption of physical findings and the data of laboratory examinations. However, it still has the following drawbacks in 1. F2a1. Levator ani syndrome and 2. F2b. Proctalgia fugax and the amendments are necessary in the following revision.

Subjects: 1. One hundred and ten cases of chronic anorectal pain were examined to define tender areas in their pelvis with digital examination.
2. Sixty-eight cases of proctalgia fugax were examined to find tender areas when they were free of pain attack.

Result: 1-1. Naming of levator ani syndrome is delusive because the same name is used to express the pathological status of hypertrophy of the levator resulting in difficult evacuation as stated by Wassermann.
1-2. According to the diagnostic criteria of F2a1. Levator ani syndrome, tenderness is cased by posterior traction on the puborectalis. However, when I tried the procedure, cases with tenderness limited on the puborectalis were only 4 among the 110 cases (4%), cases with tenderness overlapping the muscle and pudendal nerve were 28 (24%) and cases with tenderness only on the latter were 84 (78%). The above-mentioned data show the tender areas are mainly not the levator but the pudendal nerve.
2. In Rome III, the pathology of F2b. Proctalgia fugax is not clarified but only estimated to be abnormal contraction of the smooth muscle, induced by stress or anxiety for which no effective and curative measures are found. However, when I examined and palpated the pelvis, 55 of the 68 cases complained of tenderness on the pudendal nerve. The evidences show the origin of the pain is the pudendal nerve and the pathological entity is pudendal neuropathy.

Conclusion: Although new Rome III F item is better than that of Rome II in adoption of findings as the criteria, it is not complete in the pursuit of the pathogeneses. For example, pudendal neuropathy exists on the bases of F2a and F2b.
CROSS-MATCHING IN COLORECTAL SURGERY: A VALUABLE RESOURCE WASTED, J D Terrace MD, D N Anderson MD, Academic Unit of Coloproctology, University of Edinburgh

Introduction
Guidelines for blood cross-matching in surgery vary widely between centres. Increasing pressure on transfusion service resources mean that a consensus approach to blood ordering is overdue. This study aimed to examine the patterns of red cell cross-matching and transfusion in colorectal surgery, with the hypothesis that excessive cross-matching remains prevalent.

Methods
Regional transfusion service database and case note review of consecutive colorectal operations (one consultant) in a single centre over a 30 month period. Benign and malignant disease was identified histologically from resected specimens.

Results
277 cases were identified. 101 patients had benign disease (51% IBD, 27% diverticular disease). 176 patients had colorectal malignancy (52% left-sided and 32% right-sided colectomy). There were no significant differences in transfusion or cross-matching levels for benign versus malignant or left versus right sided lesions. However, significant differences were observed for ulcerative colitis compared with other benign or malignant disease (mean 2.4 versus 1.1 transfused units per operation; mean 5.2 versus 3.6 cross-matched units per operation). Similarly, significant variation was apparent when comparing emergency and elective surgery (mean 2 versus 0.9 u.p.o transfused; mean 4.7 versus 3.3 u.p.o cross-matched). Of the total 1086 units cross-matched, only 359 were transfused.

Conclusions
Although emergency and UC surgery had twice the transfusion requirement of other procedures, excessive crossmatching was prevalent in all operations, with serious financial and resource implications.
CLINICAL AND PHYSIOLOGICAL EVALUATION OF ANAL SPHINCTER RADIOFREQUENCY REMODELING - 12 MONTHS EXPERIENCE, Roman M Herman PhD, Piotr Walega PhD, Michal Nowakowski PhD, Katarzyna Smeder MD, Jerzy Salowka MD, Dorota Zelazny MD, Jakub Kenig MD, 3rd Department of General Surgery Jagiellonian University Collegium Medicum

BACKGROUND: The main doubt reducing enthusiasm for the radiofrequency remodeling technique (secca) was based on lack of physiological studies, which may explain the possible pathomechanism of improvement of symptoms.

AIM: The aim of this study was clinical physiological evaluation of the anorectal function prior and during 12 months follow-up after the secca procedure.

MATERIAL: 16 fecal incontinence (FI) patients (4 male and 12 female, mean age 59 ranged 41-78 years) have been enrolled into the study. The standard technique and secca device was used (Curon Medical, Freemont, CA USA). The following parameters were evaluated at baseline, 3, 6 and 12 months after the procedure: continence (CCF-FI, FI-SI scores), improvement (FI-QoL, patient diary, VAS), electromyography (EAS-superficial, IAS-needle), rectal electro- and thermosensitivity, barostat, anal manometry, morphology (endoanal ultrasound).

RESULTS: Comparing to baseline, 1, 3, 6 and 12 months average results were as follows: CCF-FI 12.1 - 10.4, 9.1 - 9.3 - 6.8; FI-SI 36.9 - 38.6 - 34.9 - 35.2 - 30.8; compliance 5.6 - 5.6 - 4.0 - 4.2 - 4.0; manometry BAP 30.6 - 34.23 - 39.3 - 42 - 43, SAP 73.15 - 75.53 - 86.07 - 96.69 - 96.3; electrosensation 23 - 53 - 52 - 41 - 37, thermosensation 0.7 - 0.28 - 0.3 - 0.4 - 0.4, respectively. In FI-QoL scale significant improvement in 4 of 4 measures was observed, as well as IAS and EAS electromyography improvement.

CONCLUSIONS: Secca remodeling is safe and seems to be effective method of FI treatment. It reduces the frequency and severity of FI symptoms, and improves patient's quality of life. This effect seems to be related to restored anorectal sensitivity and recto-anal coordination, however effect on IAS morphology and function is also detectable.
NEOSTIGMINE INJECTION FOR THE TREATMENT OF PARTIAL FECAL INCONTINENCE, Ismail A. Shafik MD, Cairo University

Background/Aim. The treatment of partial fecal incontinence (PFI) after internal anal (IA) sphincterotomy for chronic anal fissure (CAF) is problematic. Prostigmine (PROS) (neostigmine methyl sulphate) inhibits acetylcholine destruction and thus prolongs the physiological actions of AC, and facilitates impulse transmission across the myoneural junction. Therapeutically, PROS stimulates muscle contraction. The current study investigated the hypothesis that PROS effects cure of PFI following IA sphincterotomy for CAF.

Methods. Forty-eight patients with FI following IA sphincterotomy for CAF received PROS injection into internal anal sphincter (IAS) once/2 weeks for 12 weeks. Eighteen patients with PFI after IA sphincterotomy for CAF acted as controls. Subjects were administered IAS injections at 3 and 9 o’clock position of 0.25 mg prostigmine in almond oil (patients) or placebo (almond oil) (controls). Anorectal manometry was performed before and after injection. Results. PROS effected significant elevation of both maximal resting and maximal squeezing pressures and of IAS EMG activity in all PROS-injected patients up to the 18th post-injection week with no effect in controls. All PROS-injected patients became continent. At the 24th week, patients were divided into 3 scores: score 1 (complete continence) comprised 39 patients. Score 2 included 9 patients who were incontinent to flatus; they were re-injected and are now continent in score 1. No patient had score 3 (incontinent to fluid stools and flatus). Conclusion. Prostigmine injection into IAS significantly increased maximal resting and maximal squeezing pressures as well as IAS EMG and effected fecal control in patients with PFI.

References:
1. Shafik A. A new concept of the anatomy of the anal sphincter mechanism and the physiology of defecation. XVIII. The levator dysfunction syndrome. A new syndrome with report of seven cases. Coloproctology 1993; 5:159-165
ARTIFICIAL SOFT ANAL BAND - RESULTS OF METHOD APPLICATION IN POLAND. Roman M Herman PhD, Piotr Walega PhD, Michał Nowakowski PhD, Katarzyna Smider MD, Jerzy Salowka MD, Dorota Zelazny MD, Jakub Kenig MD, 3rd Department of General Surgery Jagiellonian University Collegium Medicum

BACKGROUND: For patients with severe, irreparable fecal incontinence, the surgical options are limited. The last-step procedure is Artificial Bowel Sphincter (ABS) implantation.

AIM: The aim of this study is to present preliminary results of artificial bowel sphincter (A.M.I.) implantation in Poland, around the natural anus and around the ostomy.

MATERIAL: Eight patients (3 female and 5 male, age 27-55) with IVth grade fecal incontinence were qualified to the procedure and two patients with an ostomy: (1 female after the Miles procedure and 1 male after perinaeal injury).

Between January 2006 and December 2007 in 8 patients the anal band was implanted around the natural anus. In two patients the band was implanted around the ostomy in the abdominal wall. Soft Anal Band (SAB) is a modified bowel sphincter physiological shape and with modified connections with pump.

RESULTS: No intraoperative complications were observed. In two patients SAB was removed due to the local infection after 15 weeks and 6 weeks, respectively, one with subsequent reimplantation. In two patients the system needed to be re-calibrated after 4 and 5 months. In one patient, 4 weeks after the surgery, due to perineal suture line dehiscence, additional stitches were placed with satisfaction outcome. Comparing to baseline, 3 and 6 months average results were as follows: CCF-FI 12 - 9,2 - 7,8; FI-SI 47,33 - 34,8 - 32,8; manometry BAP(deflatedSAB) 31,4 - 53 - 52; SAP(inflatedSAB) 57,3 - 86 - 94. In FI-Qol scale significant improvement in 4 of 4 measures was observed.

CONCLUSIONS: Artificial anal band implantation is the effective procedure for majority of patients with IVth stage sphincters injury and improves QoL. Anal band implanted around the ostomy allows controlling the time and place for intestine emptying.
ROLE OF SACRAL NERVE STIMULATION (SNS) IN ILEO-ANAL POUCH INCONTINENCE.
N Srinivasaiah MD, P Waudby RN, G S Duthie MD, 1. Academic Surgical Unit, University of Hull, Cottingham, UK.

Introduction: Sacral nerve stimulation has revolutionized the treatment of various pelvic disorders. The remit of its use has been increasing. An ileo-pouch anal anastomosis (IPAA) has become the gold standard procedure for ulcerative colitis and familial adenomatous polyposis. However, the operation may adversely impact the patient's continence and quality of life. Studies have shown deterioration of continence and soiling. Treatment of ileo-anal pouch incontinence can be difficult. The reports of the use of SNS in the treatment of ileo-anal pouch incontinence are limited. We reviewed our experience in an isolated individual case in order to determine whether it is a worthwhile procedure.

Methods: We aim to describe an isolated case of pouch incontinence who had a successful outcome with SNS. A prospectively maintained SNS database, was used for gathering the data.

Results: Case report: A 53 year old male, was referred from a tertiary unit to consider SNS for pouch incontinence. He had undergone subtotal colectomy in 2001 and ileo-anal pouch reconstruction in 2002. He was troubled with increased frequency of bowel movements from his ileo-Anal Pouch and also faecal incontinence associated with urgency, frequency and leakage. All these were affecting his quality of life significantly. Having failed the conservative treatments and collagen injections, he was referred for considering SNS. Having undergone assessment for SNS, he had a temporary SNS on the left S2 nerve root. Bowel diaries showed good response with reduction in frequency of bowel movements from 9-10 times/day to 2-3 times/day and on 3 days no leakage of stool. Patient described improved quality of life. Patient is awaiting a permanent SNS.

Conclusions: Although results might be far less predictable since there is no benefit from parasympathetic neuromodulation (subtotal colectomy), there may be a direct contact effect on the pouch. We conclude that SNS for pouch incontinence with our limited experience offers a satisfactory outcome, when other treatments have failed. However, we would like to see the long term outcomes.
ROLE OF SACRAL NERVE STIMULATION FOR INCONTINENCE AFTER RECTAL PROLAPSE REPAIR. Joan Robert-Yap MD, Guillaume Zufferey MD, Karel Skala MD, Bruno Roche MD, Unit of Proctology, University Hospital of Geneva

INTRODUCTION: Fecal Incontinence is the most common symptom of a full thickness rectal prolapse. One year after surgery, 20% of patients may continue to have symptoms of incontinence. Management of persistent symptoms of incontinence is difficult consisting of conservative therapy and/or surgery. One of these new treatments is sacral nerve stimulation (SNS), which stimulation of the sacral nerve by an electronic pulse generator, similar to a cardiac pacemaker. This results in a sensory and motor effect on the pelvic floor and its organs, which can improve bowel function in incontinence and/or constipation.

MATERIALS AND METHOD: From January 2003 to December 2007, 9 female patients median age 62 years, range 42 - 86 years have been tested. Patients had incontinence symptoms despite rectal prolapse repair. Inclusion Criteria: Fecal incontinence occurring 7 days or more in a 21 day period, intact external anal sphincter +/- surgical repair, failed medical therapy, failed biofeedback/physiotherapy and, minimum 1 year after procedure. We reviewed all 9 SNS test operations performed in post rectal prolapse repair patients in the University of Geneva Hospital, Unit of Proctology. Of these 9 patients, 4 had Wells rectopexy procedures, 5 had Marti-Zaccharin procedures (Rectopexy + total perineal repair). Additional previous procedures included 1 sphincteroplasty and 1 sigmoidectomy. 7 on 9 patients tested with incontinence had a positive result: 78% success rate. Wexner incontinence score decreased from 14 in pre-implantation to 5 in post-implantation.

CONCLUSION: SNS is a minimally invasive procedure. It shows 78% success rate in 9 cases of incontinence in failed rectal prolapse repair. SNS has the advantage of testing to assess efficacy. It is a good treatment option to offer patients who have ongoing symptoms after rectal prolapse surgery.
ROLE OF SACRAL NERVE STIMULATION (SNS) IN VULVODYNIA. N Srinivasaiah MD, P Waudby RN, B Culbert, G S Duthie MD, 1. Academic Surgical Unit, University of Hull, Cottingham, UK. 2. Department of Anaesthetics, Castle Hill Hospital, Cottingham, UK.

Introduction: Vulvodynia is difficult to treat seriously affecting QOL. There are no reports of SNS in vulvodynia. We have reviewed our experience in two cases to determine whether it is a worthwhile procedure.

Methods: Patients were identified from our prospectively maintained SNS database and the notes reviewed.

Results: Case 1: A 62 yr female cook was diagnosed to have vulvodynia when she was aged 20. Symptoms affected her QOL significantly. She experienced high intensity spasms lasting for 1-2 mts with worsening pain. With insignificant past medical history, aetiology has not been ascertained. Having failed analgesics, antiepileptics, antidepressants, phenytoin infusions and caudal blocks (Short lived), she was referred by the pain team for SNS. Following assessment for SNS, she had a temporary SNS on the left S2 root. Spasms were less severe lasting only 30-40 seconds. On a PACS / BPI assessment there was 70% relief at the end of two weeks. Patient described improved QOL and is extremely happy with the outcome. The temporary wires were removed and the patient is awaiting permanent implant.

Case 2: A 43 yr female dress designer was diagnosed vulvodynia associated with left buttock and perineal pain. With insignificant past medical history, aetiology has not been ascertained. Having failed analgesics, gabapentin and caudal blocks, she was referred by the pain team for SNS. Following assessment for SNS, she had 3 temporary SNS procedures done. The first one was a temporary SNS placed on right S3 nerve root. Not entirely satisfied with the marginal improvement she had, a second temporary SNS was done on the left involving S3. Following the failure of second SNS, unsatisfactory assessment on the right S3 led to a repeat right S3 test, which was successful. PACS / BPI assessment showed a reduction in pain of 60% after day 1 and 80% improvement at the end of 1st and 2nd week. Patient is extremely happy with the outcome and is awaiting a permanent implant.

Conclusions: SNS for vulvodynia with our limited experience offers a satisfactory outcome, when other treatments have failed.
LAPAROSCOPIC RESTORATIVE PROCTOCOLECTOMY AND ILEAL POUCH ANAL ANASTOMOSIS; HAVE WE PROGRESSED?, A Belizon MD, S Shawki MD, E Weiss MD, J Nogueras MD, D Sands MD, S Wexner MD, Cleveland Clinic Florida

Restorative proctocolectomy and ileal pouch anal anastomosis (IPAA) is the procedure of choice for patients with ulcerative colitis. Laparoscopy has been applied to this procedure. This study set out to report our short-term results with laparoscopic restorative proctocolectomy and IPAA and compare it with a matched group of patients undergoing open surgery.

Methods:
All patients who underwent laparoscopic restorative proctocolectomy and IPAA were retrospectively reviewed using our prospectively maintained database. Charts were reviewed for demographics, operative time, blood loss, length of hospitalization, morbidity, and mortality. A group of 60 patients who underwent open restorative proctocolectomy and IPAA and were selected for comparison to the laparoscopic group. The patients were well matched for BMI, ASA, diagnosis, and age.

Results:
All 61 patients underwent laparoscopic restorative proctocolectomy and IPAA between 1991 and 2007. Including 5 patients in whom an operation was performed hand assisted. There were 4 conversions to laparotomy and fecal diversion was employed in all cases. The operative time in the matched group of 60 patients was significantly shorter than in the laparoscopic group (208 minutes vs. 276 minutes, P<0.05). However the major morbidity rate was similar (7.2% vs. 6.2%) and the length of hospitalization was significantly longer (7.6 vs. 5.9; P<0.05). There were no mortalities in either group.

Conclusion:
Laparoscopic IPAA may decrease the length of hospitalization and without increasing the morbidity. As technology improves and laparoscopic skills are refined this procedure may prove to be the treatment of choice for select patients. Further study is needed to evaluate the laparoscopic approach in a prospective randomized fashion.
ROLE OF SACRAL NERVE STIMULATION FOR CONSTIPATION AFTER RECTAL PROLAPSE REPAIR J. ROBERT-YAP, Guillaume Zufferey MD, Karel Skala MD, Bruno Roche MD, Unit of Proctology, University Hospital of Geneva

INTRODUCTION: Constipation is a common symptom after abdominal surgery for of a full thickness rectal prolapse. Management of persistent symptoms of constipation is difficult and consists of conservative therapy and/or eventual surgery. One of these new treatments is sacral nerve stimulation (SNS). It involves stimulation of the sacral nerve by an electronic pulse generator, similar to a cardiac pacemaker. It is a minimally invasive procedure which is performed in 2 stages. It results in a sensory and motor effect in the pelvic floor and its organs and has been shown to regulate bowel function in incontinence and/or constipation.

MATERIALS AND METHOD: From January 2003 to December 2007, 5 female patients median age 67 years, range 53 - 86 years had been tested. Patients had constipation symptoms despite rectal prolapse repair. We reviewed all 5 SNS test operations performed in post rectal prolapse repair patients in the University of Geneva Hospital, Unit of Proctology. Of these 5 patients, 3 had Wells rectopexy and 2 had Marti-Zaccharin procedures (Rectopexy + total perineal repair). Additional previous procedures included 1 sigmoidectomy and 2 vaginal suspensions by promontofixation.

RESULTS: 4 on 5 patients tested with constipation had positive results: an 80% success rate. The Wexner constipation score decreased from 18 in pre-implantation to 10 in definitive implantation. There were no complications.

CONCLUSION: SNS is a minimally invasive procedure. Our results show an 80% success rate using SNS in 5 cases of constipation after rectal prolapse repair with no complications. SNS has the advantage of a test phase to assess efficacy. It is a good treatment option to offer patients who have ongoing symptoms after rectal prolapse surgery.
Appendicitis is one of the most common diseases of the abdomen, and the diagnosis often can be difficult to make in atypical presentation. Periappendicular abscess, as a common complication to appendicitis, (2-6%) often requires long hospitalization. Colonoscopic diagnosis and treatment of asymptomatic acute appendicitis and periappendicular abscess are exceedingly rare.

We present an atypical case of periappendicular/pericecal abscess that was drained during colonoscopy.

Case report:
The patient was an 80-year-old woman without obvious symptoms of appendicitis admitted for colonoscopic polyp control. Physical examination was non-remarkable, except for slight tenderness at palpation in the lower abdomen. Laboratory tests at admission showed a marginally high white blood cell count of 10,600/mm3 and a normal C-reactive protein level. Colonoscopy revealed a smooth- surfaced, ill-demarcated and sessile protrusion in the coecum. We attempted to obtain biopsies with regular instruments without success. Afterwards we managed to perforate the mass with the tip of a snare and a whitish fluid began to drain into the colon. The perforation was then dilated and a catheter was inserted to aspirate pus for bacteriological examination, which later yielded E.coli and Bacteriodes fragilis. Multiple biopsies were obtained for histological examination as well. These showed normal colonic mucosa without malignancies or inflammation.

After drainage the mass obviously disappeared. An acute abdominal ultrasound and CT scan was performed hereafter. Here the appendix was not visible and there was no free fluid or abscess formation. It showed a hypoecocic oblong process, approx. 3,5 cm. in the right fossa and inflammatory reaction around coecum.

The patient was hospitalized for 5 days for observation and and discharged without symptoms and with normal laboratory tests. Three months later a new ultrasonographic examination showed a thickened oblong process in relation to coecum, most likely the rest of the previous abscess cavity.

One-year follow up there was no sign of recurrence.

Conclusion:
Colonoscopic drainage, especially in combination with endosonographic examination seems to be a good option in the management of periappendicular or pericecal abscess in the elderly with surgical risk.
FEMORAL VENOUS CATHETER IS A MAJOR RISK FACTOR FOR CENTRAL VENOUS CATHETER RELATED BLOODSTREAM INFECTION IN COLORECTAL SURGERY.

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BACKGROUND: Central venous catheter related bloodstream infection (CVC-RBSI) is a major complication that is associated with CVCs. However, there are few studies on the risk factors for CVC-RBSI in the patients who underwent colorectal surgery (CRS).

PURPOSE: To disclose the risk factors for CVC-RBSI in CRS.

METHODS: CVC-RBSI was evaluated from the database of patients who underwent CRS retrospectively. Catheters were removed whenever fever (>38°C) occurred or if symptoms of infection were present, such as skin redness and pus discharge at the insertion point, and then blood culture and culture of the catheter tip were done to diagnose any CVC-RBSI. Either blood culture positivity or catheter culture positivity were defined as CVC-RBSI.

RESULTS: Three hundred-fifty patients received 423 CVCs for a total of 7760 catheter-days. Thirty-nine cases were diagnosed as CVC-RBSI (5.03, per 1000 catheter-days). There were no significant differences in the backgrounds between the cases with or without CVC-RBSI, except for the period of catheter insertion (24.6 ± 7.0 vs 17.7 ± 0.6, P = 0.0151). However, univariate analysis using the factors such as sex, age, troubles of insertion, length of inserted catheter, period of catheter insertion, performance of chemotherapy, performance of total parenteral nutrition (TPN), insults of operation and type of catheter revealed that femoral venous catheter (FVC) was an independent risk factor for CVC-RBSI (odds ratio, 4.706; 95% C.I., 1.008-1.062; P = 0.0156).

CONCLUSIONS: FVC is a major risk factor for CVC-RBSI in CRS.
INFLIXIMAB IN THE TREATMENT OF PERIANAL CROHN DISEASE. Roman M Herman PhD, Tomasz Cegielny MD, Jakub Kenig MD, Marcin Nowak PhD, Piotr Walega PhD, Jacek Sobocki PhD, IIIrd Department of General Surgery, Jagiellonian University Collegium Medicum

Introduction: Perianal fistulas are most frequent complication of Crohn's disease. Conservative therapy and surgical procedures showed little success in the treatment of perianal fistulas. Infliximab, monoclonal anti-TNFalpha IgG's has become more available method in therapy of complicated Crohn disease.

Aim: Present the preliminary report of the perianal fistulas treatment with infliximab.

Methods: 48 patients with Crohn's have been treated in the period of last five years. 16 patients had perianal Crohn disease with draining simple or complex perianal fistulas. 9 patients (4 females and 5 males, at the age of 16-45) have been enrolled to IFX treatment. 7 patients underwent surgical procedures before or during IFX therapy. Endorectal ultrasound examination (ERUS) with the use of H2O2 have been used as diagnostic procedure.

Results: Every patient involved in the study showed clinical response to therapy with IFX. Acute phase reactants (CRP) were normalized, as well as Crohn Disease Activity Index. CDAI reduced by 109 (+/-16,4) points. More than 50% of fistulas tract closed spontaneously in 8 patients (88%). Non-cutting setons were taken off by 5-8th week of therapy. In 5 of the patients there was no fistula visualized in ERUS in 10th week. 7 patients were qualified for further maintenance therapy with IFX.

Conclusions: The use of IFX is indicated in patients showing no response to standard therapeutic procedures. The use of IFX should be used as the bridge to immunosuppressant therapy. The results of clinical experience will be presented in future as the study on the use of IFX in patients with Crohn's continues.
ENDORECTAL ULTRASOUND IMAGING IN EVALUATION OF CROHN’S PERIANAL FISTULAS. Roman M Herman PhD, Marcin Nowak PhD, Tomasz Cegielny MD, Jakub Kenig MD, Piotr Walega PhD, IIIrd Department of General Surgery, Jagiellonian University Collegium Medicum

Introduction: The three-dimensional ultrasound imaging enables evaluate the topography of the fistula. Endorectal ultrasound imaging is very useful in patients selection to both: surgical procedures and biological therapy with infliximab.

Aim: To evaluate efficiency of ultrasound imaging in the diagnosis and monitoring of perianal fistulas treatment.

Methods: 48 patients has been treated due to Crohn's disease since 2003. 16 patients presented perianal complications of the disease including fistulas. 2 female patients were diagnosed with recto-vaginal fistula. Fistulography, endorectal ultrasound examination (ERUS) with hydrogen peroxide were used in the diagnostic procedure. 9 patients (4 females, 5 males, at the age ranging 16-45) were involved into the study with IFX management. Images were performed before the onset and 10 weeks following therapy to assess the effectiveness of the treatment. ERUS was performed right before the administration of the first dose of IFX to rule out perianal retention. Ultrasound device BK Medical was used to perform the 2D and 3D ultrasound imaging.

Results: 9 patients (100%) treated with IFX responded to therapy. Closure of more than 50% fistula’s tract was observed in 8 cases (88%). In 5 (55%) of the patients there was no fistula on ERUS images 10 weeks after the onset of therapy. There was neither retention nor fluid visualized on ERUS. 7 patients were qualified for the further maintenance therapy with IFX.

Conclusions: Endorectal ultrasound imaging is an excellent tool in both: diagnosis and monitoring therapy of perianal fistulas in patients with Crohn's disease. Repeatability and 3D imaging makes it even more attractive regarding the complete visualization of the topography of fistula itself and its canal.
HEALING AFTER SURGICAL MANAGEMENT OF CROHN'S ANAL FISTULA/ABSCESS, KJ Park PhD, IS Lee MD, EK Choe MD, Seoul National University College of Medicine, Seoul, South Korea

(Background) Crohn’s anal fistula/abscess is notorious for delayed wound healing and high rate of recurrence after surgical management. However, few reports concerning the detailed analysis of healing time are available. In this study, we intend to review the healing rate and time for Crohn’s anal fistula and/or perianal abscess and access any determining factors. (Methods) We analyzed the follow-up data of 25 Crohn’s anal fistula patients (35 operations) who underwent operation by one surgeon. Anal fistula/abscess was into 2 groups simple (superficial, intersphincteric, low-transsphincteric) and complex (high transsphincteric, extrasphincteric, suprasphincteric, horse-shoe). (Results) Mean age of the patients was 26.8 +/- 7.1 years and there were 5 simple (14.3%) and 30 (85.7%) complex fistula/abscess. All patients with simple type healed without recurrence, and there was no difference in healing time compared with non-Crohn’s patients in the simple type group (42.4 +/- 21.4 vs. 41.9 +/- 16.8 days, P=0.969). Of the 30 in the complex group, only 22 (73%) healed and there was a significantly prolonged healing time compared with non-Crohn’s patients (207.2 +/- 159.3 vs. 96.5 +/- 74.2 days, P=0.004). The mean follow-up time for the unhealed patients (N=8) was 607.2 days (range 180 days – 1560 days) despite multiple surgical interventions. Neither Crohn’s disease activity index (CDAI) value (mean: 141.6) nor the extent of intestinal inflammation (including rectal inflammation) had relationship with healing time (P=0.392, P=0.911). All patients used azathioprine during treatment and infliximab nor prednisolone medication had no statistical significance in healing time (P=0.73, 0.59). After healing of primary surgical wound, four (4/22=18%) patients in the Crohn’s complex anal fistula/abscess group had recurrence (at a mean of 877 days) as compared to 1.7% (2/115) in non-Crohn’s patients with complex type anal fistula/abscess. (Conclusion) Postoperative course in simple type of Crohn’s anal fistula/abscess was same as that of non-Crohn’s anal fistula. On the other hand, there was delayed healing and more frequent recurrence regardless of extent of gastrointestinal involvement or medical treatment in the complex type of Crohn’s anal fistula/abscess.
ROBOTIC ANTERIOR RESECTION OF THE RECTUM, Slawomir J Marecik MD, Leela M Prasad MD, John J Park MD, Advocate Lutheran General Hospital, Park Ridge, IL, University of Illinois Medical Center, Chicago, IL

Purpose: Robotic surgery has gained wide acceptance in urology. This technology allows for fine dissection within confined pelvic space. There is growing literature on the use of the new generation robots in major colon and rectal resections. The authors’ goals were to assess the feasibility, safety and efficiency of robotic technology in 35 rectal dissections.

Methods: This is a retrospective study of patients undergoing robotically-assisted resections at a single institution from August 2005 to January 2008. Following IRB approval, the hospital and office charts of 36 patients were reviewed. Data extraction sheets were used to collect information on demographics, operative details, and postoperative course.

Results: There were 35 patients (20 female, 15 male), with an average age of 55.6 (range 28-86), and an average BMI of 29.8. Of these, 12 patients were operated for cancer, 4 for polyps (including 3 familial adenomatous polyposis cases), 12 for diverticulitis (1 colovaginal fistula, 1 abscess), 5 for rectal prolapse, and 2 for ulcerative colitis. There were 14 anterior resections (AR) with splenic flexure mobilization (SFM), 8 low anterior resections (LAR) with SFM, 5 AR with rectopexy (RPX), 5 total prococolecotomies (TPC, pouch procedures) and 3 abdominoperineal resections (APR). There were 14 total mesorectal excisions performed and 10 rectal reservoir reconstructions. The average operative times were 294 min (AR SFM), 364 min (LAR SFM), 195 min (AR RPX), 461 min (TPC) and 375 min (APR), respectively. The average blood loss was 120 cc. The average lymph node harvest from rectosigmoid was 15.7. The average length of stay was 5.5 days for AR, 6.9 for LAR, 4 days for AR RPX, 5.2 days for TPC, and 8 days for APR. There were no intraoperative complications or mortalities. There were 5 major postoperative complications (4 small bowel obstructions with one requiring reoperation and 1 pelvic abscess). Five patients (14%) developed superficial surgical site infections, including 3 cases of perineal wound.

Conclusion: In the authors’ experience, rectal resections using the current generation of robots can be safely performed without intraoperative complications. This technique is most applicable and very helpful for total mesorectal excision and resection rectopexy.
LAPAROSCOPIC SURGERY FOR COLORECTAL CANCER AT OUR INSTITUTE; CAN WE PERFORM A CODIFIED SURGICAL PROCEDURE? Kazuki Ueda MD, Haruhiko Imamoto MD, Tadao Tokoro MD, Eizaburo Ishimaru MD, Takehito Yoshifuji MD, Jin-ichi Hida MD, Kiyotaka Okuno MD, Hitoshi Shiozaki, Div. of laparoscopic & Colorectal Surgery, Dept. of Surgery, Kinki University School of Medicine

Introduction: We started performing laparoscopic colorectal surgery (LAC) in 1995, since then more than 221 cases have been done at our institution. For the first 3 years, we used laparoscopic procedure only for early stages of colorectal cancer until T1 and therefore we had expanded indications for advanced stage of colorectal cancer. Proposed here is our series of patients undergoing LAC and the description of the learning curve.

Method: All the patients undergoing LAC until December 2007 were entered into a database and the following parameters were collected: demographic, blood loss, complications, hospital stay and post-operative follow up. Only patients having all the parameters were then analyzed.

Results: Out of 220 patients 91 were analyzed. This corresponded to all cases were consecutively performed from January 2005 to December 2007 when a tighter data collection was adopted. There were 56 (61%) male and 35 (39%) female; the mean age was 66+/-10 y.o. (33-87 y.o.) The annual clinical data was indicated as for the table.

<table>
<thead>
<tr>
<th>Cases</th>
<th>Op. Time (min)</th>
<th>Establis twice (sec)</th>
<th>Post-op hospital stay (days)</th>
<th>Comp. rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>96</td>
<td>265 +/- 167</td>
<td>10.8 +/- 5.3</td>
<td>22 +/- 12.4</td>
</tr>
<tr>
<td>2007</td>
<td>34</td>
<td>243 +/- 124</td>
<td>15.7 +/- 9.1</td>
<td>14 +/- 7.7</td>
</tr>
<tr>
<td>2009</td>
<td>29</td>
<td>171 +/- 48</td>
<td>41 +/- 20</td>
<td>19 +/- 2.2</td>
</tr>
</tbody>
</table>

(mean +/- SD)

There were 3 cases (3.3%) of postoperative anastomotic leak in these 3 years, however, we did not experience any in 2007. The improved tasks were identified in: technical proficiency, understanding of local anatomy, codified procedure, environmental arrangement in the OR (the distribution of clinical engineer), and the education for scrub nurse.

Conclusions: Surgeons who perform laparoscopic surgery will need skills and anatomical understandings that improve with time and experience. Moreover, we believe that a good OR arrangement, the distribution of clinical engineer and a full education for scrub nurse will be mandatory to perform stress-free laparoscopic surgery.
LAPAROSCOPIC HAND-ASSISTED SURGERY IN THE MANAGEMENT OF COMPLICATED DIVERTICULITIS WITH COLOVESICAL FISTULA, Megan Brenner MD, James Yoo MD, UCLA

Introduction: Laparoscopic techniques are gaining popularity in the surgical management of colorectal diseases. Hand-assist devices have been shown to reduce operative time and conversion rates for laparoscopic procedures, and may play an important role in the surgical management of patients with complicated pathology. However, indications for its use are still being defined.

Objective: To investigate the use of hand-assisted laparoscopic surgery (HALS) in the surgical management of patients with diverticulitis and a colovesical fistula.

Participants: Five consecutive patients who presented with diverticulitis and a colovesical fistula over a 10-week period underwent a laparoscopic, hand-assisted sigmoid colectomy and takedown of a colovesical fistula by a single colorectal surgeon at UCLA Medical Center. Data was gathered prospectively.

Results: The mean age of the patients was 68.8 years. One patient had a BMI of 40, two patients had a history of prior lung transplant and were on immunosuppressive medications, and one patient was 90 years old with aortic stenosis and Waldenstrom's macroglobulinemia. Four of the five patients had a history of prior abdominal surgery. The diagnosis was suspected by pneumaturia and fecaluria, and confirmed by CT scan in all patients. In addition to sigmoid colectomy, simple closure of the cystotomy was necessary in three patients. There were no conversions. Mean operating time was 236.6 min; mean EBL 237 cc. Average length of stay was 7.2 days. One patient developed a wound infection. There were no deaths and no recurrences.

Conclusions: Laparoscopic hand-assisted surgery may play a role in the management of high-risk patients with diverticulitis and a colovesical fistula. Pure laparoscopic techniques for sigmoid diverticulitis are performed; however, the HALS technique may reduce operative times and conversion rates, and may be even more beneficial for complicated diverticulitis.
A CASE REPORT OF LAPAROSCOPIC EXCISION OF RETRORECTAL CYSTIC TERATOMA. Won-Kyung Kang PhD, Jong-Kyung Park PhD, Seong-Taek Oh PhD, Eung-Kook Kim PhD, Suk-Kyun Chang PhD, Department of Surgery, The Catholic University of Korea

Retrorectal or presacral tumors are rare masses. Its incidence is reported to be 0.01%. Generally, these tumors have non-specific symptoms, and are likely to be found incidentally on CT or MRI scans. Among all presacral masses about 2/3 are congenital, and also about 2/3 are benign. Benign presacral tumors are surgically resected. On the other hand, treatment modalities for pathologic proven malignant tumors include chemotherapy, radiation, or surgery. Based on careful preoperative studies and surgical planning, the anterior or posterior surgical approach is chosen. Although cystic teratomas usually involve the ovaries, few cases report their occurrence in the presacral area. To our knowledge and the references including the Pubmed, no case reports on the laparoscopic excision of presacral cystic teratomas were perceptible, and therefore we present this original case.

A 31 year old female patient complaining of right hip pain visited our orthopedics outpatient department. Although simple X-ray did not show any abnormality, MRI revealed a 6.6 x 5.7 x 6.5 cm sized cystic mass (T1; high, T2; low signal) in the right presacral region. Colonoscopy did not show any discernible intra-luminal lesion. Considering the benign nature indicated by imaging studies, the risk of cutaneous fistula and the young age, laparoscopic excision was performed. A ureteral catheter was inserted through a cystoscope just before the operation. Dissection to the presacral area was made in the same manner as the total mesorectal excision. Frozen section biopsy identified a benign mass. Tumor contents were then removed after the dissection of the presacral area. The cyst wall was removed employing an 11 mm port on Right lower quadrant. Permanent pathology confirmed cystic teratoma as expected. The patient recovered without any significant postoperative complication and was discharged in good condition.
Aim: Total abdominal colectomy (TAC) is the treatment of choice for patients with colonic inertia refractory to medical therapy. Laparoscopic segmental colectomy has been shown to have certain advantages over open colectomy such as decreased length of stay (LOS), however, its role in colonic inertia has not been well described. Therefore the aim of this study was to compare laparoscopic TAC as compared to standard open TAC.

Methods: After IRB approval, a retrospective review was undertaken of all patients prospectively entered into a database at our institution who underwent laparoscopic or laparoscopic attempted TAC (LTAC) for colonic inertia matched with patients who underwent open TAC (OTAC) for colonic inertia from the same registry. Age, gender, BMI, prior abdominal surgery, operative time, complication rate, and LOS were evaluated.

Results: 12 females underwent LTAC and were well matched with 12 patients who underwent OTAC. The mean age was 43.8 years for the LTAC vs. 39.4 years for the OTAC (p=0.53). The mean BMI for the LTAC was 21 vs. 21.8 for the OTAC (p=0.61). One person had prior surgery in the LTAC vs. 2 in the OTAC (p=0.56). The mean LOS was 8.25 days for LTAC vs. 8.33 days for OTAC. Mean operative time was 243.8 minutes for LTAC vs. 164.2 minutes for OTAC (p=0.0085). There were 3 complications in LTAC, none in OTAC and one operation was converted from laparoscopic to open.

Conclusion: LTAC can be safely performed for colonic inertia, however the operative time and complication rate is significantly higher than OTAC. LTAC for colonic inertia does not offer the advantages that laparoscopic colorectal surgery for other pathologies offers.
LAPAROSCOPIC PROPHYLACTIC COLECTOMY FOR FAMILIAL ADENOMATOUS POLYPOSIS PATIENTS. Tetsuro Higuchi MD, Hirotoshi Kobayashi MD, Masayuki Enomoto MD, Kenichi Sugihara MD, Department of Surgical Oncology, Tokyo Medical & Dental University, Graduate School

Introduction:
Familial adenomatous polyposis (FAP) is an autosomal dominant disease caused by a germline mutation in the APC gene located at chromosome 5q21. Patients with FAP develop hundreds to thousands of adenomatous polyps, and they are at a nearly 100% risk of colorectal cancer. Surgical management includes prophylactic proctocolectomy with ileo-pouch anal anastomosis (IPAA) or total colectomy with ileorectal anastomosis (IRA).

IPAA has been accepted as the standard operation for FAP patients. However, the operation requires extremely complex procedures, and has a high incidence of postoperative complications, compared with IRA. Moreover, this radical operation affects the stool habit of the patients and compromises their quality of life. To monitor the possible development of rectal carcinoma after IRA, it is important to continue periodic follow-up of the remaining rectum.

Aims and methods:
Between 1998 and 2006, laparoscopic prophylactic surgery was performed in 14 patients, 11 male, average age 26 years (range 20 - 65 years). We reviewed some clinical factors in the perioperative period.

Results:
We have performed 12 IRA and 2 IPAA. Among them, invasive carcinomas developed in the remnant rectal mucosa of 2 IRA cases, one patient had laparoscopic low anterior resection, another had laparoscopic IPAA.

We present the technique of laparoscopic prophylactic surgery for FAP.

Conclusion:
Laparoscopic prophylactic surgery for FAP is a technical alternative of conventional open surgery. By this technique, it is possible to provide a better quality of life in postoperative period and better cosmetic result.
CEREBRAL ISCHEMIA AFTER LAPAROSCOPIC OPERATION, Thomas Auer MD, Friedrich Herbst MD, B. Sima MD, G. Gruber MD, B. Salehi MD, KH der Barmherzigen Brüder Wien, Medical University of Graz

Case report: A 47 yrs old female patient was operated on lap. Ileo-cecal resection due to extended ileitis based on a years lasting crohn’s disease. A fistula was found from the ileum to the sigma. The patient was brought to Lloyd-Davis position for the procedure. The preparation of the cecum, ascending colon and sigmoid was performed in a 35° Trendelenburg’s position for approx. 90 minutes. After ileocecal resection, excision of the fistula, ileo-ascendostomy, cholecystectomy was performed due to gallstones. Duration of the operation was 190 minutes. In the early postoperative period, the patient experienced double vision, divergence of the bulb was observed. Since immediate CT-scan showed no change, MRI 3 days later showed ischemic lesions of the right thalamus. By MR angiography, dissection of the right vertebral artery was found in the V2 and V3 segment. Neurological examination after 8 hours found the patient symptoms free, so she was thereafter.

Discussion: Stroke, seizure, cerebral circulatory disorders are the mostly reported cerebral complications after laparoscopic operations. Venous blood congestion, reduction of cerebral tissue saturation, vasospasm could be the causes. Vascular risk factors, duration of pneumoperitoneum and Trendelenburg’s position should be serious factors of risk calculation.
LAPAROSCOPIC DIVERTING ILEOSTOMY IS USEFUL FOR THE SURGICAL TREATMENT OF PERIANAL PAGET’ DISEASE. Makoto Watanabe PhD, Akira Tsunoda PhD, Kentaro Nakao PhD, Nobuaki Matsui MD, Mitsuo Kusano PhD, Showa University School of Medicine Department of general & gastroenterological surgery

Perianal Paget's disease is a rare entity. The standard treatment for extramammary Paget's disease is surgical excision, and wide local excision of the skin and subcutaneous tissue in the perianal region is the recommended treatment for noninvasive intraepithelial perianal Paget's disease in vast majority of reported cases. When we performed reconstruction using skin flaps to cover these areas of tissue loss, we created a diverting ileostomy to avoid wound complication. Generally a mini laparotomy is needed to identify the terminal ileum surely in a diverting ileostomy. We used laparoscopic techniques to obviate the need for laparotomy while creating a diverting ileostomy. In this report we present our experience with laparoscopic diverting ileostomy that was performed for the surgical treatment of perianal Paget's disease.

Surgical technique
A pneumoperitoneum was established using a closed method with a blunt port, with CO2 insufflation at a rate of 6 L/min. The intra-abdominal pressure was maintained at 10mmHg. A diagnostic laparoscope was placed through the umbilical port for initial exploration of the abdominal contents. A 5mm trocar was placed in the left inferior abdomen for introduction of a blunt dissecting instrument to grasp the terminal ileum. After a segment of terminal ileum was identified, this bowel segment was raised against the right anterior abdominal wall at the site of the stoma. A 3cm incision was made in the skin which the ileum was raised against the abdominal wall. The ileum could be extracted under direct visualization through the abdominal wall to create a loop ileostomy. The ileostomy was then matured in the standard manner, and operation was completed.

We have performed laparoscopic diverting ileostomy in three patients with perianal Paget's disease. The mean time of the creation of diverting ileostomy by laparoscopic techniques was 30(25-35) minutes. The postoperative course was uneventful, and all the patients began a regular diet from the next day after operation. Laparoscopic approach for diverting ileostomy reduced postoperative discomfort and ileus, and is useful for the surgical treatment of perianal Paget's disease.
ANAL CYTOLOGY: EXPERIENCE OF THE COLOPROCTOLOGY UNIT FROM CARACAS UNIVERSITY HOSPITAL DURING 2007., Carlos Sardiñas MD, Patricia Bravo MD, Yaycira Guillen MD, Nahir Castillo MD, Carlos Rodríguez MD, Katyana Alvarez MD, Yuleiby Flores MD, Norma Oviedo MD, Coloproctology Unit, Caracas University Hospital, Central University of Venezuela

GOAL: Clinic and cytologic detection of malignat (M) and premalignat (PM) lesions of the anal conduct in patients assisting to the Coloproctology Unit.

PLACE OF ELABORATION: Examination ward of the Coloproctology Unit at the Caracas University Hospital.

METHODS: Cytomorfologic analysis of Cytologies taken after being processed with the Papanicolaou technique.

RESULTS: During 2007, 284 anal cytologies were processed. 217 Females and 67 males. 224 Resulted with no lesions. Samples inadequate were 25. Premalignant lessions resulted 31 and malignant resulted 4. In premalignant lessions, 4 were females and 27 males. In malignant lesions 2 were females and 2 males.

CONCLUSIONS: Anal cytology was usefull in detecting up to 14% of lessions from the hole population studied. 88% Of premalignant and 12% of malignant lessions. Innadequate cytologies were 9% which is accord with the experience during the act of taking and processing the sample. We would encourage the coloproctologists and even other specialists to make of the anal cytology a first line profilaxis instrument in anorectal premalignat and malignant deseases.
ROLE OF SACRAL LIGAMENT CLAMP IN THE PUDENDAL EUROPATHY (PUDENDAL CANAL SYNDROME): RESULTS OF CLAMP RELEASE, Olfat El Sibai, Menoufia University

Objectives. Pudendal canal syndrome (PCS) is treated by PC decompression. We investigated the hypothesis that failure of PCD to relieve anal and perianal pain could result from compression of pudendal nerve not only in PC but also in sacral ligament clamp (SLC), i.e. in space between sacrotuberous and sacrospinous ligaments. Methods. SLC release was performed in 21 patients with proctalgia who had not improved after PCD. Pudendal nerve terminal motor latency (PNTML) was higher than normal. SLC release operation comprised entering ischiorectal fossa through a paraanal incision, identifying PN and division of sacrospinous ligament. Results. Treatment was successful in 17 patients and failed in 4. The former showed pain disappearance and improvement in fecal incontinence, perianal sensation and anal reflex. Conclusions. Clinical manifestations and investigative results improved after SLC release in 80.9% of cases. Assumingly these results denote traumatization of the PN not only in PC but also in SLC.

References:
ADEQUACY OF PROPOFOL ALONE AS SEDATIVE AGENT FOR COLONOSCOPY. SHAHRUN NIZA ABDULLAH SUHAIMI MS.MD. LUKMAN MOHD MOKHTAR MD,MOHD ZAILANI MAT HASSAN MS, AZMI MD NOR MS, INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

BACKGROUND: The aim of this study was to assess the efficacy of propofol as sedative agent compared with a combination of tramadol and midazolam as sedo-analgesia for colonoscopy. We assess the degree of tolerance and satisfaction among patients with regards to both methods of colonoscopy using sedation or sedoanalgesia as well as the time needed to reach the caecum and post colonoscopy recovery period. METHODS: 65 patients underwent colonoscopy from 1st October 2006 till 30th April 2007. They were randomly assigned to 2 medication regimens. For the propofol group, an initial intravenous bolus of 0.5mg/kg was given, followed by an intermittent bolus of 10mg (1cc) when necessary. This drug was administered by an Anaesthetist. For tramadol and midazolam group, an intravenous tramadol 25mg and midazolam 2mg was given initially and then the dosage was increased depending on the patients tolerance towards the procedure. The drug was administered to its maximum dose according to the patients body weight. The colonoscopy time was calculated from the time the instrument entering the anus till it reached the caecum. Patient assessments of pain and tolerance were obtained at the time of discharge using visual analog scales of 1 to 5. (1= no pain and 5 worst pain imaginable). RESULTS: 65 patients were randomized in this study (34 propofol, 31 tramadol and midazolam). 41 (63.1%) of the patient were males and 24 (36.1%) of the patients were females. Malay comprised of 61.5% Chinese 29.2%, Indians 4.6% and others 4.6%. CONCLUSIONS: Using propofol a sedation in colonoscopy provide better tolerance in patients compared to conventional use of tramadol and midazolam. The time for the procedure is shorter when propofol is used. The recovery time from propofol is statistically shorter than the recovery time from tramadol and midazolam (p=0.044).
Anastomotic stricture is a complication which can be seen following intestinal anastomoses. The etiology includes anastomotic ischemia and tension. Splenic flexure mobilization and inferior mesenteric vessel division are methods which are often used to gain length and ensure a tension-free colorectal or coloanal anastomosis.

Objective: The study aimed to evaluate whether patients who developed anastomotic strictures after left sided colon resection had the splenic flexure mobilized and the inferior mesenteric vessels divided at the first operation.

Methods: Patients referred for reoperation for colorectal anastomotic stricture between 2001 and 2007 were identified through a prospectively-collected perioperative database. Operative reports were reviewed to identify the incidence of splenic flexure mobilization and inferior mesenteric vessel ligation.

Results: 22 patients were identified, with mean age of 61 years (29 to 78) and mean BMI of 25.6. Previous operations included anterior resection (8), sigmoid resection (8), and proctectomy with coloanal anastomosis (6). Previous diagnoses were rectal cancer (11), diverticulitis (8), radiation proctitis after prostate cancer (1), gunshot wound (1), and unknown (1). 18 patients had not had both splenic flexure mobilization and inferior mesenteric vessel ligation previously performed, while 2 patients had only had vessel ligation. Thus, 91% of patients with anastomotic stricture had incomplete left colonic mobilization. The operations performed included excision of the previous anastomosis with a colorectal anastomosis in 8, end-to-end or end-to-side coloanal anastomosis in 3, coloanal anastomosis with colonic pouch reconstruction in 6, and end colostomy in 5. 14 patients were diverted and 12 patients had pelvic drains placed.

Conclusion: While this study is limited by its retrospective nature, as only patients who developed strictures requiring surgery were evaluated, the data suggest that lack of complete mobilization of the left colon at the time of first operation is associated with anastomotic stricture formation. This retrospective study identified a 10:1 incidence of incomplete left colonic mobilization in patients with anastomotic stricture.
ARE THERE DIFFERENCES IN POLYP TYPE AND DISTRIBUTION IN MORBIDLY OBESE PATIENTS: A COHORT COMPARATIVE STUDY. B Bashankaev MD, M Khaikin MD, R Landmann MD, D Melero MD, Cleveland Clinic Florida

Data suggests an increased risk of colorectal cancer in the obese population. The aim of the study is to compare the incidence of colon polyps between obese patients undergoing bariatric surgery versus a non-obese patient cohort.

After IRB approval, a retrospective review of prospectively maintained bariatric surgery and endoscopy databases was performed identifying all patients who had bariatric surgery and colonoscopy between February, 2000 to April, 2007. This Surgical Morbidly Obese Group (SMOG) was matched to a Non-Obese Group (NOG) of patients undergoing colonoscopy by age and gender. BMI before surgery and at time of colonoscopy, age, gender, procedure, colonoscopic findings, and pathology were reviewed.

Seventy case-matched patients were gathered from the 2332 patient bariatric surgery (SMOG) and the 2165 patient endoscopy (NOG) databases. There was a statistically significant difference in BMI at time of colonoscopy (31 vs. 28, p<0.04). The SMOG and NOG were equally balanced for high-risk patients (21.4% vs 25.7%). SMOG colonoscopy was postoperatively performed after a mean period of 23 (1-55) months. Two-thirds of patients in both groups had no polyps (70% SMOG, 77% NOG). Most polyps were single and were equally distributed between the right and the left colon. Half of the polyps in both groups were hyperplastic measuring 3 - 4mm. No cancer was identified in the NOG; however, adenocarcinoma was found in 2 patients (8.3%) in the SMOG - 1 each in the cecum and sigmoid. Both patients were not high risk for colorectal cancer and postoperative colonoscopy was performed at 55 and 33 months, respectively.

The incidence of colorectal polyps and cancer was not significantly different between SMOG and NOG patients during a mean postoperative period of 2 years. Furthermore, polyp distribution and pathologic characteristics were similar between both groups. Though not statistically significant, this study shows a trend towards development of malignant polyps in morbidly obese patients. Long-term follow-up with preoperative and postoperative colonoscopy is needed to accurately determine any role of bariatric surgery in the development of colorectal cancer.
PREOPERATIVE STOMA MARKING WITH HENNA: IMPROVEMENT OVER PERMANENT TATTOOING. J Sanjay MD, B Safar MD, S Shawki MD, H Marquez MD, M Boyer MD, J Genua MD, D Sands MD, E Weiss MD, J Nogueras MD, S Wexner MD, Cleveland Clinic Florida

Stoma creation is a common surgical procedure. Preoperative stoma marking and education by an enterostomal therapist has been shown to decrease postoperative stoma related complications. We propose the use of henna as an improvement over permanent tattooing for preoperative stoma site marking.

Methods
A prospective non-randomized pilot study was performed in which 20 consecutive patients were preoperatively marked with henna. Patient satisfaction and the effectiveness of henna were evaluated.

Results
Twenty patients (10 females) were enrolled; mean age 55.1. Seventeen of 20 markings were visible at surgery. Two of the three failures were poorly visible; one was not visible at surgery. All patients stated henna was an improvement over permanent tattooing.

Conclusion
Preoperative stoma marking with henna is a safe and effective alternative to permanent tattooing with India ink. Henna use should strongly be considered for patients scheduled for surgery with possible ostomy creation within 2 to 14 days of preoperative stoma marking by enterostomal therapist.
NEW SKIN CARE ELEMENT FOR PERI-STOMAL SKIN ULCER WITH IBD. Katsuhisa Shindo, MD PhD, Satoru Numata BA, Tetsuji Iwasaki MS, Kinki University School of Medicine, Osaka Japan and Alcare Co.,Ltd., Tokyo Japan

PURPOSE: Ileostomy with IBD makes often the skin trouble that is not controlled by a dermatologist or an ET. Ceramide involved in the skin barrier is to be evaluated for the treatment of peristomal ulcer.

METHODS: Fundamental skin tests in five cases with normal peristomal skin of about 20 years history and in two IBD cases with ulcerated peristomal skin of several years history: Skin surface pH by F-15 pH meter with a skin probe (HORIBA), Trans-epidermal water loss (TEWL) by AS-TW2 (ASAHI BIOMED), and Macro/Derma-scopic inspection, before and after application of the ceramide vs. conventional skin barriers.

RESULTS: (1) Ceramide kept skin surface pH constant in all tested skins in spite of fecal contamination: PH 4.9 - 5.1, (2) Ceramide put TEWL lower value (16.4 - 19.6g/m²h) in all tested skin while reuse of the conventional skin barrier recovered the skin to the usual one (26.0 - 30.9g/m²h) in spite of wide range TEWL 10.5 - 84.7 before the ceramide application, (3) All peristomal skin ulcer healed completely with ceramide but reuse of the conventional skin barrier made ulcer recur.

CONCLUSIONS: Skin barrier with ceramide is effective for the treatment of peristomal ulcer by keeping skin pH normal and TEWL lower due to maintaining intercellular lipids intact.

Laparoscopic colectomy have been rapidly improved for advances of surgical technique and instruments. Although many Japanese medical institutes apply this surgery, several technical difficulties are still exist. For example lymphnodes dissection or intracorporeal anastomosis are difficult for beginner of laparoscopic surgery. These difficulties are related with operative complication of bleeding or anastomotic leakage.

Minilaparotomy approach for abdominal operation is one of less invasive surgery. This operation use several unique instrument and technique. Our institutes performed Laparoscopic colectomy combined with minilaparotomy for safety operation. We introduce this right hemicolecotomy technique for colon cancer.

(Operative method) i1) Insertion of laparoscopic trocher (4ports). i2) Ligation of Ileocecal artery under laparoscopic procedure. i3) Mobilization of the right colon from the retroperitoneum. i4) 4~5cm length median incision (minilaparotomy). i5) Division of oral and anal side intestine using moving window method (6) Lymphonodes dissection for the root of middle colic artery form minilaparotomy. (7) Intestinal anastomosis.

We have performed 20 cases of this operation for colorectal cancer. There was no complication without wound infection. This operation is less invasive similar to laparoscopic surgery. We recommend this operation for beginner of laparoscopic surgery.
THE CIRCULAR STAPLER IN COLORECTAL SURGERY - 30 YEARS ON. Bruce Waxman MSc, T C Nguyen, M Fisher, Dandenong Hospital, Southern Health

Background
Whereas Russian engineers and surgeons were the first to produce a circular stapler, with a single row of staples, that simultaneously created a circumferential row of staples, and resected two rings of bowel to produce an end to end inverted anastomosis, the USA version, with a double row of staples was released in 1977 and data first published in 1978, 30 years ago.

Discussion
This review will discuss the progress over the last 30 years with an emphasis on terminology, the effect of design on anastomotic healing and complications specific to the circular stapler (CS).

Terminology
We recommend the terminology described by Waxman et al in 1995.

Design
The original design of the bridge and has changed little over 30 years, as an identical anastomosis is produced now as 30 years ago, viz., an inverted anastomosis that heals by secondary intention, with fibrous scar tissue. Most design changes have been in the staples, the shape of the body and handle, the introduction of a spike and disposability.

Complications unique to the CS are:
1. Anastomotic stenosis
2. Failure of staple closure

Conclusion
Little has changed in the basic design of the circular stapler at the "firing line". Complications unique to the CS are related to the design and with regard to stenosis have not been addressed. A CS with a single row of absorbable staples would solve the problem. We may need to wait another 30 years.

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Clinical Characteristics of Hand-Sewn Circumferential Mucosectomy in Hemorrhoids. Jung G Kang, Hong J Shim MD, Jong T Park MD, Yoon J Choi* MD, Surgery and *Pathology, Ilsan Hospital, National Health Insurance Corporation, Yonsei University.

Purpose: Stapler hemorrhoidectomy (hemorrhoidopexy) does not excise hemorrhoid tissue, but instead repositions the prolapsed hemorrhoid. We introduced hand-sewn circumferential mucosectomy under direct vision as a new hemorrhoidectomy method and evaluated its safety and effectiveness for the surgical treatment of hemorrhoids.

Method: We performed 108 hand-sewn circumferential mucosectomies between June 2003 and December 2006. We evaluated the operating time, postoperative course, and complications. Pain was evaluated using a visual analog scale.

Results: The mean patient age was 48 years and the proportions of males and females were similar. The most common indication was third-degree hemorrhoids. The mean operating time was 37.7 minutes and most of the operations took between 20 and 40 minutes. The average postoperative pain score was 5.0 on the day of surgery and 3.9 on the second postoperative day. The time to the first bowel motion and the length of the hospital stay averaged 1.3 and 2.5 days, respectively. The mean time to return to work was 5.2 days. There were no serious complications with the hand-sewn circumferential mucosectomy. Postoperative complications occurred in 31.5% of cases. Urinary complications were the most common.

Conclusions: A hand-sewn circumferential mucosectomy is safe for the treatment of hemorrhoids and there are no serious complications. The operative pain, postoperative course, time to return to work, and nature of complications are acceptable, although the operating time is longer. A hand-sewn circumferential mucosectomy is considered an effective new alternative for the surgical treatment of hemorrhoids.
ONE CASE OF PRIMARY POSTERIOR PERINEAL HERNIA REPAIRED BY AN EXTRAPERITONEAL TECHNIQUE. T Wada MD, M Hisada MD, Y Mori MD, K Katsumata, A Tsuchida, T Aoki, Tokyo Medical University

Perineal hernia is a rare disease and, there are various surgical procedures for it, including laparotomy, episiotomy, and combination of laparotomy and episiotomy, and recently, laparoscopic surgery has also been performed. Herewith, we report that we experienced primary perineal hernia repaired by an extraperitoneal technique and a good outcome was obtained.

Case: A 63 year-old female. Paroxysmal spontaneous pain was noted in the left gluteal region, an approximately 10-cm tumor mass was detected in the left gluteal region with the patient in the upright position, which was elastic soft and could easily return to the pelvic cavity when pushed, and an approximately 4-cm hernial orifice was palpated. Under general anesthesia, an approximately 10-cm-long incision was made in the median lower abdomen with an upper margin on the pubis at the lower end, and subcutaneous fatty tissue was incised with an electric scalpel. Rectus abdominis fascia was incised in the median line to reach the anterior peritoneal cavity. Bluntly detaching below the left rectus along the left pelvic side-wall, a hernial sac penetrating the pelvic floor to prolapse in the left rectum was found. The adhesion between the hernial sac and surrounding tissues was sharply detached. Thereby, the levator ani muscle was exposed, and there was a gap in the ischial region and pubic region, and when the gluteal skin was pushed from outside, this gap was penetrated, which revealed this to be the hernial orifice. This gap was sutured and closed with 3-0 Vicryl. Moreover, a ø10-cm polypropylene mesh (Bard Modified Kugel TM Patch, Davol, Inc.) was placed to completely cover the hernial orifice, and the levator ani muscles above and below the gap were fixed with a 3-0 Vicryl stitches. The postoperative course was good, and the patient was able to walk the next day and take meals. Left gluteal pain disappeared, and no signs of recurrence have been detected to date.
OUTCOME OF DELORME PROCEDURE FOR TREATMENT OF RECTAL PROLAPSE, Mohammad Sadegh Fazeli MD, Amir H. Lebaschi MD, Ali Reza Kazemeini MD, Imam Medical Complex

Objective. To evaluate the outcome of Delorme procedure (transanal mucosal reefing) in treatment of patients with rectal prolapse.

Patients and Methods. In the department of colorectal surgery at Imam Medical Complex (Tehran University of Medical Sciences), in a prospective fashion, 48 patients with rectal prolapse underwent transanal mucosal reefing. After the procedure the patients were followed up.

Results. There were 26 males and 22 females. Then mean age was 39 years (range: 17-78 years). Thirteen (27%) patients had only a history of chronic constipation as the underlying condition. Nineteen (39%) had a history of previous colorectal/anorectal surgery. Twelve (25%) patients had fecal and/or gas incontinence. After the procedure, the patients were followed up for a mean period of 24 months. One patient (2%) reported recurrence of the prolapse, who then underwent perineal sigmoidectomy. There were 3 new cases of fecal and/or gas incontinence, and all resolved within 1 year post-procedure. Of the 12 patients with baseline incontinence, only 2 patients were still incontinence after 24 months. There were no cases of sexual or urinary dysfunction.

Conclusion. Although Delorme procedure is said to be useful only in selected cases of rectal prolapse, this study indicates a very high rate of success in unselected patients. Delorme procedure may be used as the initial surgery for these patients.
AN IRRIGATION TECHNIQUE TO AID IN THE MUCOSAL DISSECTION IN THE DELORME OPERATION, Bruce Waxman MSc, T C Nguyen, W M K Teoh, M Fisher, Dandenong Hospital, Southern Health

Background
The difficult part of the Delorme procedure is dissecting a plane between the mucosa and internal sphincter particularly if there is bleeding or scar tissue. Moreover, it is best to avoid full thickness dissection of the rectal wall. We have developed an irrigation technique to aid in this dissection.

Method
Patient is placed in the lithotomy position. The rectum is prolapsed with several Babcock forceps. The submucosa is infiltrated with 0.5% Marcaine with 1/200,000 adrenaline using a 23 gauge needle in a circumference 2 cm from the dentate line. Diathermy dissection with a needle point tip is commenced at the same site as the infiltration. The free edge of the mucosa is grasped with Babcocks and irrigation commenced with 1.5% glycine delivered with a urology giving set attached to a mixing cannula at body temperature. The irrigation fluid is directed at the line of dissection using the mixing cannula allowing diathermy without the problem of electrolysis. Clear views of the "white" line at the junction of the sphincter and the "pink" mucosa are obtained. Moreover, the gravity feed of the irrigation provides a degree of hydro-dissection which further opens up the planes.

Results
We have used this technique in the last 15 patients without any full thickness rectal defects

Discussion
We believe the advantages of this irrigation technique are:
1. Providing improved visualisation of the plane.
2. Hydro-dissection.
3. Washing away of any blood.
4. Potentially reducing the chance of a full thickness defect
RESEARCH AND APPLIANCE OF REUSABLE PPH STAPLER, Gang Ma MD, GuiSheng Liu MD, XiangLong Liu MD, Tianjin UMC, CHINA

The most difficult problem to popularize the use of PPH technique in developing country like China is the expensive cost owing to the gun is impossible to be re-used. China now has produced the PPH gun but they only produce the disposable gun, then it is still in relatively expensive price and the disposed gun is also a source of pollution. In order to avoid such defect, we designed a new reusable PPH gun and have used it to perform the PPH in 408 cases all with satisfactory result. The design of the reusable stapler has used metal EEA stapler of USSC as reference, it’s disposable cartridge and shape are similar to EEA gun, but its long central rod can be totally pull out from the body of stapler. The construction of this new PPH stapler is more compact, light in weight, easily handle, simply strip down and sterilize after usage, mounting of the new staples is not difficult, then one gun could be used repeatedly for many times. This new device is more feasible for developing country, even though for developed country.
Diagnostic Yield of Colonoscopy in Patients with Colorectal Symptoms, Zailani Mat-Hassan MD, Junaini Kasian MD, Khairussaleh Jalaludin MD, Yan Yang Wai MD, Harbhajan Singh MD, Kyaw Tin Hla MD, Nasser Muhamed-Amjad MD, Azmi Md-Nor MD, Department of Surgery, Faculty of Medicine, International Islamic University Malaysia (IIUM), Kuantan, Pahang, Malaysia

Background and study aims: Colonoscopy is the gold standard for the diagnosis of colorectal diseases. The clinician rely on patients symptoms, clinical signs, laboratory data, expert knowledge of the literature and personal experience to decide which patients require colonoscopic examination. Certain clinical indications produce a higher diagnostic yield at colonoscopy than others. We conducted a prospective study to evaluate the yield of colonoscopy in patients with colorectal symptoms and to determine which symptom(s) has a higher yield in detecting neoplastic lesion. Our study aims to determine the relationship between the colorectal symptoms with the colonoscopic findings and identify which symptoms have more weightage in term of clinical significance.

Patients and methods: A total of 583 patients with symptoms of colorectal neoplasm, namely; per rectal bleeding, altered bowel habit and abdominal pain were included in the study. 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 the study, 55.7% of patients were male. According to age, there were 48.4% of patients were between 50 and 70 years of age, 39.6% were between less than 50 years of age and 12.0% were more than 70 years old. According to the study, a combination of per rectal bleeding and alteration in bowel habit constitutes majority of cases who underwent colonoscopic examination (32.4% and 26.6% respectively). Among the patients who underwent colonoscopy, 53.7% of patients had positive findings and less than one third of them were diagnosed to have either malignant growth or polyps. Among those with positive findings, 29.4% presented with per rectal bleeding and 19.4% had alteration in bowel habits.

Conclusion: The symptoms of rectal bleeding and alteration in bowel habit have a higher diagnostic yield among symptomatic patients who underwent colonoscopic examination.
TRANSANAL ENDOSCOPIC LOCAL EXCISION OF RECTAL TUMORS - CLINICAL AND FUNCTIONAL RESULTS OF 90 PATIENTS., Piotr Walega PhD, Roman M Herman PhD, Jakub Kenig MD, Tomasz Cegielny MD, Marcin Nowak PhD, Michal Nowakowski PhD, 3rd Department of General Surgery Jagiellonian University Collegium Medicum

Transanal endoscopic excision of rectal tumors is an accepted sphincter preserving technique in rectum surgery. Detailed preoperative diagnostic procedures (histopathology, endosonography) and functional assessment (manometry, electromyography) are crucial for proper patients selection.

Aim:
To determine clinical and functional results of patients undergoing local excision for benign and malign lesions.

Material and Methods:
90 patients (54 male, 46 female, mean age 68.4) treated for rectal tumor with transanal endoscopic rectal microsurgery technique at Department of Surgery. To avoid postoperative sphincter dysfunction NO ointment was routinely applied.

Results:
75 patients were operated on for benign rectal tumors, 6 for malign disease (T1) and 4 patients due to miscellaneous reasons (solitary ulcers, rectum stenosis, rectovaginal fistula). Full-thickness excision was performed on 76 patients and submucosal local excision on 14. The mean distance from the anal verge was 10.6 cm. 34% of the lesions were located on the anterior wall, 40% on the posterior and 17% on the side wall. The mean operative time was 80 min (range 30-180 min). Average blood loss was 45 ml (range 0-150 ml). The mean length of stay was 3.6 days (range 1-11 days). Peri- and postoperative mortality was 0.0%. Complication included urinary retention (4), bleeding (2), wound dehiscence (1), rectocutaneous fistula (1). Postoperative fecal incontinence was observed in 3 patients. In the follow-up time between 6 and 46 months local recurrence rate reached 6.7% in the adenoma group and up to 30% in the malign diseases group.

Conclusions:
Transanal endoscopic rectal operation is a safe and cost efficient procedure for local excision of selected patients with rectal tumors. It significantly reduces the number of postoperative functional disturbances what allows to maintain good quality of life with acceptable local recurrence rate and postoperative morbidity. Sphincter protection using nitroglicerin ointment reduces also almost entirely possibility of sphincter damage due to introduction of operational rectoscope.
THE EFFICACY OF INTRAOPERATIVE COLONOSCOPY FOR STAPLED ANASTOMOSIS IN THE TREATMENT OF RECTAL CANCER, Toshiyuki Enomoto MD, Y Saida MD, Y Nakamura MD, K Takabayashi MD, R Watanabe MD, A Otsuji MD, M Katagiri MD, S Nagao MD, S Kusachi MD, M Watanabe MD, J Nagao MD, Toho University Ohashi Medical Center Third Department of Surgery

We have performed intraoperative colonoscopy for colorectal resection with transanal stapled anastomosis to eliminate intra- and postoperative complications since January 2006. In this study, we report the efficacy of this technique based on the evaluation of cases that could successfully avoid complications. Fifty-three cases of transanally stapled anastomosis from a total of 68 rectal cancer cases of our department during January 2006 and December 2007 were evaluated. We performed intraoperative colonoscopy for all of the 53 transanally stapled anastomosis cases. This technique is beneficial because staple line and bleeding of anastomosis can be examined under direct inspection. We experienced three abnormal findings (5.7%). We created diverting ileostomy for two cases with imperfect anastomosis. The other case with anastomotic lesion bleeding was treated with clipping.
RECONSTRUCTION OF ANAL CUSHION LIKES TO TREAT ANAL INCONTINENCE DEVELOPING AFTER TOO EXTENSIVE HEMORRHOIDECTOMY: REPORT OF A CASE, In-Geun Seo MD, Arumdaun Woori Clinic

PURPOSE: Fecal incontinence after hemorrhoidectomy may occur and is socially incapacitating. There has been no report of effective treatment for fecal incontinence caused by loss of the anal mucosal folds and cushions. The author reports a case, which underwent reconstruction of anal cushions for management of anal incontinence complication after too extensive hemorrhoidectomy.

A CASE REPORT

A 39-year-old male patient presented to my clinic with profuse foul-odor discharge and pain after hemorrhoidectomy, which was performed using laser under spinal anesthesia for prolapsing hemorrhoids at another clinic three days previously. Rigid proctosigmoidoscopy revealed an extensive operative wounds and multiple thrombi in the anus. To relieve painful anal symptoms, operative removal of thrombi was performed under local anesthesia by the author. He had no bowel movement after the hemorrhoidectomy, while he had regular bowel movement everyday before. Eleven weeks after the previous hemorrhoidectomy he visited my clinic and complained anal incontinence. Fecal soiling was noted 8 times since the previous hemorrhoidectomy. Digital examination and rigid proctosigmoidoscopy revealed flat extensive hard scar tissue without any prominent anal cushions or mucosal folds. Saline test revealed anal leakage of saline. Anal ultrasound revealed no defect in the internal and external sphincters. Therefore reconstruction of anal cushion like folds was performed under local anesthesia by the author. The reconstruction technique included longitudinal division of the mucosa and anoderm with transverse closure. He had not complained fecal soiling since the reconstruction surgery. There was no anal leakage of saline on saline test performed nineteen days after the reconstruction. Anal cushions are a part of normal anorectal anatomy and are important in the continence mechanism. Therefore, extensive removal may result in varying degrees of incontinence. The reconstruction of anal cushion likes is an effective treatment for anal incontinence resulting from loss of anal cushions after extensive hemorrhoidectomy.
A NEW STAGED APPROACH FOR THE THROMBOSED CIRCUMFERENTIAL HEMORRHOIDS WITH ANAL FISSURE TO AVOID COMPLICATIONS AND TO REDUCE OFF-WORK; REPORT OF A CASE, In-Geun Seo MD
Arumdaun Woori Clinic

PURPOSE: In an attempt to avoid devastating complications such as anal stricture, incontinence, and wet anus after the one-stage surgery, I utilized a simplified procedure in step-by-step approach. In a case of the thrombosed circumferential hemorrhoids with anal fissure, the one-stage hemorrhoidectomy can be associated with significant morbidity. The one-stage hemorrhoidectomy has been associated with severe postoperative pain, anal stenosis and deformity with widespread fibrosis, ectropion or incontinence. The author reports a case of ambulatory staged operation under local anesthesia, which avoided these problems.

A CASE REPORT: A 41-year-old man presented with severe anal pain, swelling and anal bleeding. Physical examination revealed thrombosed circumferential hemorrhoids and anal fissure. On the day of the first visit, anal fissure operation and extracting thrombi with a skin punch were performed under local anesthesia on outpatient basis. Seven days after this operation, the swelling was resolved. Therefore the second procedure including excision and ligation of the hemorrhoids was performed under local anesthesia on outpatient basis.

During and after these staged procedures, no parenteral analgesic were required. A few doses of oral analgesics were used. He could return to usual activity the next day after operation. The result after the staged procedure was an accurate reconstruction of a normal state with respect to anatomy and function. Staged approach is effective to avoid surgical complications. I recommend staged operation if there is any risk of complications after the one-stage operation or when a patient needs early return to work.