Pure laparoscopic restorative proctocolectomy is a technically challenging procedure that is time consuming, costly and has a considerable learning curve. Although the authors state that an 18 per cent relaparotomy rate is not alarming, most of the serious complications were related to the laparoscopic approach: two iatrogenic small bowel perforations and three compartment syndromes (probably secondary to the length of the procedure). Even with the presence of a covering ileostomy in all but one patient, an overall morbidity rate of 30 per cent is reported.

In a randomized trial comparing hand-assisted laparoscopic and open restorative proctocolectomy, three of 30 patients (10 per cent) in the laparoscopy group needed relaparotomy, two secondary to anastomotic leakage. After the end of the trial, a consecutive series of 15 complete laparoscopic restorative proctocolectomies was performed; the reintervention rate doubled compared to the hand-assisted laparoscopic procedure, mainly because of anastomotic failure. Additionally, it is questionable whether patients who are immunosuppressed should undergo a three-stage procedure rather than primary pouch surgery.

At present no available laparoscopic stapling device enables a good cross stapling transaction as low as the very distal rectum. This could explain the rather high leak rate (17 per cent) reported after laparoscopic rectal resection even in expert hand. Also in the present series multiple (four or five) firings were needed to obtain a distal stapling. The length of the retained rectal cuff is important; using a technique of implemented reality, we calculate that an inclination of at least 60° is needed to perform a straight distal stapling at the level of the levator plate.

Quah et al. reported an increased risk of autonomic nerve damage after laparoscopic total mesorectal excision for cancer, probably because of a combination of limited exposure and the use of ultrasonic or ligasure dissection. There may be a similar problem with the laparoscopic approach in pouch surgery.

Finally, we cannot agree with the authors that a transumbilical incision is cosmetically superior to a (low) Pfannenstiehl incision. Currently, we consider a partly open rectal dissection and distal stapling at the level of the upper anal canal through a Pfannenstiehl incision the safest method to perform a double stapled ileoanal anastomosis and to avoid a rectal cuff.

Purpose: The aim of this study was to assess the effect of age and sex on the rectal filling sensation and anal electrosensitivity and to explore the relation between anal electrosensitivity and the parameters of the rectal filling sensation.

Methods: Anal mucosal electrosensitivity and anorectal manometry, including the rectal filling sensation test were performed in 19 control subjects; 10 were younger than 60 years and 9 were older than that. Altogether, there were 11 men and 8 women.

Results: Anal electrosensitivity did not differ between the two age groups. Women had a significantly lower electrosensitivity 4 and 5 cm from the anal verge than men, as well as a significantly shorter anal high-pressure zone. The rectal filling sensation did not differ between sexes. In the older age group, the rectal volumes required to induce filling sensations were smaller than those observed in the younger age group, but rectal pressures were comparable; as a consequence, rectal compliance was lower in older subjects. Anal electrosensitivity at different anal levels did not correlate with the rectal volume or pressure parameters of successive rectal filling sensations. The pressure recorded in the proximal anal canal at the consecutive rectal filling sensations strongly correlated with the rectal balloon pressure needed to elicit them.

Conclusions: The zones of high anal electrosensitivity and high pressure seem to coincide. The fact that both are shorter in females did not influence the parameters of the rectal filling sensation. Lower rectal volumes but comparable rectal pressures were needed to induce the rectal filling sensation in the older age group. Rectal sensation did not correlate with anal electrosensitivity, probably because the receptors are not stimulated by the type of anal stimulation used or because different receptors are involved. Hence, the rectal filling sensation test cannot be replaced by the simpler anal electrosensitivity test.

Biliothoracic fistulas, including biliopleural and biliobronchial fistulas, are rare complications of biliary tract diseases. Biliopleural fistulas have been reported after percutaneous transhepatic procedures such as percutaneous transhepatic drainage (PTD) and liver biopsy. Prolonged external biliary drainage with formation of a fistulous tract, and catheter dysfunction by either blockage or by dislocation, should predispose to a biliopleural communication. Percutaneous transhepatic cholangioscopy (PTC) is most frequently carried out in patients with biliary lithiasis. It requires the creation of a transhepatic tract by progressive dilation and maturation for a period of about 2 weeks. Although both conditions for the development of a biliopleural fistula are present, i.e. biliary obstruction and a prolonged biliary drainage period, the development of pleurobilia has not previously been reported.


Over half the patients with Crohn’s disease present with distal ileal involvement with or without extension into the adjacent colon. Recent progress in conservative treatment of active Crohn’s disease relies on immunosuppressive drugs. Once the disease becomes symptomatic, it tends to progress and develop the well-recognized complications of obstruction, local sepsis, and fistulas. Within the ten years of diagnosis, between 80 and 90% of the patients will face surgery.


A 21-year-old man presented with pitting edema at both ankles, persisting hypoproteinemia, and iron-deficiency anemia, for which he had been treated in another
hospital with regular infusions of human albumin and iron sucrose. For the past 4 years, Crohn’s disease had affected his entire gastrointestinal tract and had been treated with aminosalicylates, prednisolone, oral budesonide, azathioprine, methotrexate, and, after exclusion of tuberculosis, infliximab. At presentation, he was on oral budesonide and he had no gastrointestinal symptoms. Blood analysis showed lymphopenia, hypoproteinemia with hypoalbuminemia, hypochromic anemia with possible iron deficiency, and normal liver and kidney function without proteinuria on a urine sample.

A stool collection after administration of $^{51}$Cr-chloride-radiolabeled albumin intravenously was used to confirm our hypothesis of protein-losing enteropathy: 49% of the administered dose was found in a 4-day stool collection, suggestive of major protein loss in the gastrointestinal tract (normally < 1%). Magnetic resonance angiography showed no large-vessel vasculitis. A radiologic barium follow-through performed 1 year earlier was reviewed and showed severe ulcerative ileitis and jejunitis, without strictures or bowel dilatation. We continued oral budesonide and supportive treatment with iron sucrose and human albumin monthly.

Three months later the patient was hospitalized with signs of subacute obstruction. Indices of inflammation had increased and the patient still was hypoalbuminemic. A plain radiograph of the abdomen showed multiple air-fluid levels and dilated small-bowel loops. A barium enteroclysis showed segmental enteritis and 2 or 3 significant short strictures with prestenotic dilatation. During laparoscopic exploration, a severely affected loop of about 60 cm length was found 2 meters proximal to the ileocecal valve, and some smaller skip lesions more proximally in the jejunum. The proximal jejunum was dilated. Dispersed areas of dilated lymphatics were apparent on the serosal coat, without evidence of lymphangiomata but with multiple large lymph nodes in the mesentery of these loops. A partial jejunal resection was performed.

Pathologic examination confirmed the diagnosis of stricturing Crohn’s disease with dilated lymphatic vessels suggestive of lymphatic obstruction and granulomatous vasculitis. The resected mesenteric lymph nodes showed non-caseating epithelioid granulomas. After the resection, the patient was free of edema without further need for human albumin infusion, albumin and lymphocyte levels had normalized, and serum iron levels improved.

The precise role of chemokines in neovascularization during inflammation or tumor growth is not yet fully understood. We show here that the chemokines granulocyte chemotactic protein (GCP-2/CXCL6), interleukin-8 (IL-8/CXCL8), and monocyte chemotactic protein-1 (MCP-1/CCL2) are co-induced in microvascular endothelial cells after stimulation with pro-inflammatory stimuli. In contrast with its weak proliferative effect on endothelial cells, GCP-2 synergized with MCP-1 in neutrophil chemotaxis. This synergy may represent a mechanism for tumor development and metastasis by providing efficient leukocyte infiltration in the absence of exogenous immune modulators. To mimic endothelial cell-derived GCP-2 in vivo, GCP-2 was intravenously injected and shown to provoke a dose-dependent systemic response, composed of an immediate granulopenia, followed by a profound granulocytosis. By immunohistochemistry, GCP-2 was further shown to be expressed by endothelial cells from human patients with gastrointestinal (GI) malignancies. GCP-2 staining correlated with leukocyte infiltration into the tumor and with the expression of the matrix metalloproteinase-9 (MMP-9/gelatinase B).

Together with previous findings, these data suggest that the production of GCP-2 by endothelial cells within the tumor can contribute to tumor development through neovascularization due to endothelial cell chemotaxis and to tumor cell invasion and metastasis by attracting and activating neutrophils loaded with proteases that promote matrix degradation.


Aim: To determine the differences in downstaging, local control (LC), disease free survival (DFS) and overall survival (OS) between combined pre-operative chemoradiation and pre-operative radiotherapy alone in the treatment of resectable rectal cancer.

Methods: One hundred and ten patients who underwent pre-operative radiotherapy or chemo-radiotherapy were reviewed. Fifty-seven patients were treated with radiotherapy (30Gy/3Gy) alone and 53 patients with chemo-radiotherapy (bolus 5FU+45Gy/1.8Gy). The median interval between the end of neo-adjuvant treatment and surgery was 28 and 46 days for the patients treated with radiotherapy alone and chemo-radiotherapy.

Results: The groups were homogeneously distributed for all characteristics except for cN-stage with more clinically node positive patients in the combined modality treatment group (47 vs 73%). A significant downstaging for tumour and/or lymph node status was observed in both groups. More ypT0-x-is were observed after
chemoradiation than after radiotherapy alone (26 vs 7%; p=0.02). The local control rate at 3 years was 94% for both groups. DFS after radiation and chemoradiation was comparable with a 3-year DFS of 83 and 88%, respectively.

Conclusion: Both pre-operative schemes have similar outcomes concerning DFS, OS and LC. Tumour downstaging is associated with improved survival.


In the recently published RCT of inguinal hernia repairs performed at U.S. Veterans Administration hospitals, the investigators found that recurrence rates after laparoscopic repair were significantly higher than after the open Lichtenstein procedure for primary (but not for recurrent) inguinal hernias. We believe it needs to be stressed that laparoscopic inguinal hernia repair is not a bad technique, but a difficult one, and appropriate training is crucial. Our goal must be to train surgeons and surgical trainees in (open and) laparoscopic inguinal hernia surgery in order to obtain results comparable with those in so-called specialized centers.

The number of procedures needed to overcome the steep learning curve in laparoscopic inguinal hernia repair is thought to be between 40 and 80. In the article by Neumayer et al. the authors report that only after 250 procedures did recurrence rates decrease significantly. Thus we wonder why the authors took only 25 as a cut-off for surgical expertise to be included in this trial. Because the learning curve in open mesh repair must be lower than for the laparoscopic repair, we might be comparing apples with pears. This, together with the low patient volume (78 surgeons performed 989 laparoscopic repairs during a 3 year period = 4 interventions/year/surgeon!) might not only explain why so many patients assigned to laparoscopic repair underwent open repair (9.8%), but also the high recurrence rate and the increased rate of perioperative complications in the laparoscopic group. Were any surgeons excluded to participate after submission of a videotape of the laparoscopic procedure? In addition, we would like to know some important details of the laparoscopic procedure such as the dimensions of the prosthesis and the type of fixation, especially in large direct hernias. The video by Drs Smith/Fitzgibbons on the totally extra peritoneal/transabdominal pre-peritoneal (TAPP) repair can only be seen via the Internet at a cost of $150 for non-American College of Surgeon members.

If a plaidoyer has to be given, it indicates that there still is controversy. This controversy is due to the fact that no single prospective randomized trial has been performed in order to compare conventional strategy with on-demand relaparotomy if necessary (ODR) and the planned relaparotomy or Etappenlavage strategy (PR) that I will defend in selected patients. As a consequence there are no (multidisciplinary) guidelines related to the management of critically ill patients with severe peritonitis. There is no standardization of surgical and non-surgical care in these patients. Also, it has been suggested that a PR approach may be harmful to the patient. I will handle each of these aspects. Technical details of Etappenlavage or about using Velcro in patients with abdominal hypertension will not be discussed. The aim of this plaidoyer is to summarize actual indications for a PR approach.


Vele patiënten met inflammatoire darmziekten (IBD) zijn niet zonder reden bevreesd voor een stoma. Het aanleggen van een stoma kan levensreddend zijn. Maar, hoe dan ook, de aanwezigheid van een stoma heeft, naast vele andere factoren zoals frequente ontlasting, aantasting van aars en/of endeldarm, extra-intestinale aantasting, bloedverlies, werkonbekwaamheid en persoonlijkheid, een negatief effect op hun levenskwaliteit. Bij 20 à 30% van de patiënten die omwille van de ziekte van Crohn een heelkundige behandeling dienen te ondergaan, wordt een tijdelijk of definitief stoma aangelegd. Het is niet steeds uit te sluiten dat een stoma die in eerste instantie als tijdelijk bedoeld was, uiteindelijk definitief wordt. Ook bij colitis ulcerosa kan een tijdelijk of definitief stoma aangewezen zijn.

De levenskwaliteit van IBD patiënten wordt bepaald door verschillende aspecten van fecale continentie (frequentie der ontlastingen, de aanwezigheid van anorectale aantasting, aanwezigheid van een stoma) naast andere factoren zoals extra-intestinale aantasting, bloedverlies, werkenbekaamheid en persoonlijkheid. Een vaginale bevalling gaat gepaard met een onmiskenbaar risico voor trauma ter hoogte van het perineum, de anale sluitspieren, de bekkenbodemspieren en hun bezenuwing. De medische en heelkundige behandeling van incontinentie resulteert zelden in normale incontinentie. Naar onze mening is een keizersnede aangewezen in geval van:

- ontsteking van de dikdarm (colitis) of van de endeldarm (rectitis),
- ziekte van Crohn ter hoogte van aars en/of endeldarm, reeds suboptimale continentie (aanwezigheid van beperkte incontinentie),
- chronische diarree of een reële mogelijkheid dat chronische diarree zou kunnen optreden in de toekomst,
- ileale pouch-anale anastomose,
- vroeger herstel van een sfincterscheur. Een keizersnede wordt best gepland en niet uitgevoerd in dringende omstandigheden wanneer de arbeid en de indaling in het geboortekanaal reeds is ingezet.


Some young and active patients requiring abdominoperineal resection for rectum cancer ask for an alternative of an abdominal colostomy. We analysed the results after a combination of a perineal colostomy and antegrade continence enemas (ACE). Fifteen patients have been operated between 1999 and 2004. Follow-up was >six months in 12 patients with a mean of two years and with a maximum of 55 months. The QLQ-C30 (version 3) and CR 38 questionnaires of the EORTC have been used to evaluate quality of life aspects. Five out of 15 patients presented complications: infection of the caecal conduit (2), small bowel obstruction (1), prolapse of the perineal colostomy (1), eventration (1), urologic complications (2). ACE are still used by all patients. The volume needed was 400 ml and duration of irrigation was 30 minutes (15-45 minutes). The median score for faecal incontinence was 0; faecal pseudocontinence was obtained by 7/12 patients. The scores for all aspects of functioning were excellent, as well as the score for body image. The general health status and quality of life were estimated at 75% from normal value. The procedure is simple and can be performed in one operative session. A perineal colostomy with ACE seems to be a valuable and less expensive alternative for an abdominal colostomy, and certainly for total anorectal reconstruction.
Background & Aims: Crohn’s disease almost inevitably recurs after ileocolonic resection, and effective prophylactic therapy has not been identified. We investigated the efficacy and safety of ornidazole, a nitroimidazole antibiotic, for the prevention of clinical recurrence of Crohn’s disease after curative ileocolonic resection in a placebo-controlled double-blind clinical trial.

Methods: Eighty patients were randomized to ornidazole 1 g/day or placebo started within 1 week of resection and continued for 1 year. The primary end point was the proportion of patients with clinical recurrence at 1 year. Secondary end points were endoscopic recurrence at 3 months and 12 months after resection.

Results: Two patients in the ornidazole group withdrew consent and were not dosed. Ornidazole significantly reduced the clinical recurrence rate at 1 year from 15 of 40 (37.5%) patients in the placebo group to 3 of 38 (7.9%) patients in the ornidazole group (Fisher exact test, 8.03; \( P = .0046 \); odds ratio, 0.14; 95% confidence interval, 0.037-0.546). Ornidazole reduced endoscopic recurrence at 12 months from 26 of 33 (79%) in the placebo group to 15 of 28 (53.6%) in the ornidazole group (\( \chi^2 \), 4.37; \( P = .037 \); odds ratio, 0.31; 95% confidence interval, 0.10-0.94). Endoscopic recurrence at 3 and 12 months predicted clinical recurrence. Significantly more patients in the ornidazole group dropped out from the study because of side effects (\( P = .041 \)).

Conclusions: Ornidazole 1 g/day is effective for the prevention of recurrence of Crohn’s disease after ileocolonic resection.

Aim: The amount of cancer cells disseminated during curative surgery for colorectal liver metastases (CRLM) may be responsible for recurrence. Haematogenous and intrahepatic cancer cell dissemination was evaluated, and its impact on cancer recurrence was assessed.

Method: Twenty patients with resectable CRLM were included in a prospective study. Twelve patients underwent curative resection for 21 metastases. Ten selected metastases in eight patients were treated with radiofrequency ablation (RFA) followed by resection at the same operative session. Cancer cell dissemination was determined before, during and after surgery using ‘real time’ quantitative RT-PCR assay, based on
detection and quantification of CEA and CK20 mRNA transcripts.

**Results:** Circulating cancer cells were detected in 80% and intrahepatic cancer cells in 37% of the patients, though without impact on cancer recurrence. The amounts of disseminated cancer cells were significantly increased after surgery. This increase was similar in patients treated with and without RFA. RFA caused complete tumour destruction.

**Conclusion:** Curative surgery for CRLM significantly increases the amount of disseminated cancer cells. Radiofrequency ablation can completely destroy selected resectable CRLM without excessive cancer cell dissemination. Neither haematogenous nor intrahepatic cancer cell dissemination were related to cancer recurrence in this small patient series.
Purpose: To compare the postoperative evolution and the long-term efficacy after stapled haemorrhoidopexy (PPH) and Milligan-Morgan haemorrhoidectomy (MM).

Methods: In a prospective randomized study, 40 patients requiring surgical treatment for prolapsing haemorrhoids grade II or III were assigned to either MM or PPH (20 each). Postoperative pain, wound healing were evaluated, as well as anal pressures and sphincter anatomy. Mean follow-up is 46 months.

Results: Postoperative pain at rest and during defecation was less important after PPH if no resection of external piles or skin tags was associated (P < 0.0001). Healing time was shorter after PPH (P < 0.0001). Endoanal ultrasound remained unchanged postoperatively. Resting and squeeze pressures decreased after MM, but not after PPH (P < 0.01). After a mean follow-up of 46 months (12-56), persistent or recurrent symptoms, mostly mild and temporary, were observed after both MM and PPH, in 7 and 11 patients respectively (NS). After PPH, five patients (25%) complained of recurrent external swelling and/or prolapse (P = 0.047 vs. MM) requiring redo surgery in four of them, after 10, 13, 14 and 21 months. No redo-surgery was required after MM. Long term patient satisfaction after PPH was not better than after MM.

Conclusions: Postoperative pain is less important after PPH. This advantage disappears if any resection is associated with the stapling. At medium to long-term follow-up, PPH seems to carry a higher risk of symptomatic external haemorrhoidal disease, needing further surgery.