

# Overview on Colorectal papers

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## Ulcerative Colitis

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### 1. Clinical aspects and research

#### Risk of cancer

Three papers included in the present review assessed the risk of malignancy in a long-term ulcerative colitis according different conditions. [Fraser and cols](#) studied a possible increased risk of malignancy after treatment with azathioprine as suggested by data from renal transplant and rheumatoid arthritis patients. A large series of inflammatory bowel disease patients were review and no increased risk was detected when azathioprine users and non-users groups were compared, and malignancy rates were identical for both groups (4.5%). [Soetikno and cols](#) performed a meta-analysis study to investigate whether or not patients with ulcerative colitis and primary sclerosing cholangitis have a significantly higher risk for the development of colorectal neoplasia than patients with ulcerative colitis but not primary sclerosing cholangitis. A significantly higher risk was found and therefore an intensive colonoscopic surveillance was suggested for patients with ulcerative colitis and primary sclerosing cholangitis. As patients with longstanding ulcerative colitis are at increased risk of colorectal cancer and no agreement has yet been reached regarding prevention strategies, [Biasco and cols](#) reported the results of an attempt to a long-term follow-up of 65 ulcerative colitis patients affected for more than seven years by a regular colonoscopic and biopsy follow-up programme. Twenty years after the beginning of the study only 11 (16.9%) patients have remained under surveillance, raising some doubts on the significance of such a programme and on its long-term feasibility.

#### Alternatives for maintaining remission in ulcerative colitis

Three papers have assessed the role of different drugs for the maintenance of remission of ulcerative colitis. [Musch and cols](#) investigated whether interferon-beta can induce clinical remission in corticoid-refractory ulcerative colitis by acting on the imbalance of pro- and anti-inflammatory cytokines observed in the pathogenesis of inflammatory bowel disease. The high response rate obtained in this open pilot study including 25 patients suggests that interferon-beta may be a safe and effective treatment for steroid-refractory active ulcerative colitis.

The possible therapeutic benefit of essential fatty acid supplementation in quiescent ulcerative colitis to reduce the frequency of disease relapse was investigated by [Middleton and cols](#) in a randomized, double-blind, placebo-controlled study, but no significant difference was observed between fatty acid supplemented or placebo

groups. The effect of budesonide in remission and relapse rates in ulcerative colitis was assessed by [Lindgren and cols](#). A controlled, double-blind multicentre study suggested that budesonide enema 2 mg o.d. appears to be the optimal dosage in active distal UC, but could not show that budesonide enema twice weekly is sufficient to maintain remission.

### **Balsalazide: a new drug**

Balsalazide is a new mesalamine-containing prodrug that is activated by bacteria in the colon. [Levine and cols](#) undertook a multicenter, randomized study to determine the dose-response of balsalazide and to compare its effect with mesalamine. After eight weeks of treatment they concluded that balsalazide is more effective in a 6.75 g daily dose and that it offers a more rapid onset than mesalamine (2.4 g daily) in improving signs and symptoms of acute ulcerative colitis.

### **Incidence and profile of familial inflammatory bowel disease**

[Halme and cols](#) assessed the familial occurrence of inflammatory bowel disease and compared the clinical features and serological markers (ASCA and pANCA) of familial and sporadic IBD in the genetically homogeneous Finnish population. Affected first-degree relatives were found in 15.6% of patients with CD and in 13.8% of patients with UC. No important clinical differences between patients with familial and sporadic forms of the disease were found. ASCA is associated with both familial and sporadic CD and pANCA with UC, but low sensitivity diminishes their value as a serological marker of IBD or as a differential diagnostic test between CD and UC.

## ***2. Surgical treatment***

### **Ileoanal pouches: Anal complications**

The incidence of anal complications after ileoanal J-pouch anastomosis procedures for ulcerative colitis (UC) and familial adenomatous polyposis (FAP) was reviewed by [Rossi and cols](#). A relatively high incidence of anal complications was found (44%), but no significant correlation with operative technique or disease type could be demonstrated.

### **Ileoanal pouch in indetermined colitis**

The role of ileoanal pouches in patients with indetermined colitis remains to be determined. Two papers included in this review compared the functional results and complications after ileal pouch-anal anastomosis in patients with indeterminate or ulcerative colitis. These comparisons were published by [Delaney and cols](#) and [Dayton and cols](#), from Cleveland Clinic, Ohio and University of Utah, respectively, with very similar results. Despite a slightly higher incidences of pouch complications after IPAA in the IC group compared with the UC group, these differences were not statistically significant. Functional results were the same in both groups. They conclude that patients with indetermined colitis should not be precluded from having IPAA surgery, since an outcome equivalent to that of patients with UC must be expected.

### **Ileoanal pouch operation in septuagenarians**

As stated by [Delaney and cols](#) , concerns about morbidity and functional outcome have lead some authors to suggest that ileal pouch-anal anastomosis should not be performed in older patients. This article evaluates the outcome of seventeen patients older than the age of 70 among a series of 1,911 ileal pouch-anal anastomosis undertaken for ulcerative colitis at Cleveland Clinic, Ohio. One mortality has occurred and despite some degree of incontinence in more than 50% of cases, no patient was considered as usually or always incontinent. The authors conclude that ileal pouch-anal anastomosis is an acceptable surgical option for selected healthy, motivated septuagenarians with ulcerative colitis who are eager to preserve fecal continence.

### **Appendectomy x ulcerative colitis**

The association between appendectomy and UC has recently been the subject of intense scrutiny, since published data from animal models and epidemiological case control and cohort studies have shown a negative correlation between both conditions. [Koutroubakis and cols](#) present a metaanalysis of 17 case-controlled studies suggesting that alterations in mucosal immune responses leading to appendicitis or resulting from appendectomy may negatively affect the pathogenetic mechanisms of UC. This is a fascinating field of research and new studies are expected for a better understanding of IBD pathogenesis.

### **Salvage procedure for ileoanal pouch operation**

Increasing number of reports have demonstrated the feasibility of salvage procedures for failed ileal pouch-anal anastomoses. [MacLean and cols](#) review a series of sixty-three reconstructive procedures performed in 57 patients and found that despite some minor functional disturbances, more than 80 percent rate their physical and psychological health as good to excellent. They conclude that reconstructive pouch surgery has a high success rate in experienced hands.

### **More studies in ileoanal pouches**

- Scoring systems for diagnosing pouchitis ([Heuschen and cols](#))
- Mucin expression study to assess ileoanal reservoir adaptation ([Sylvester and cols](#))

## **Colonoscopy**

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### **Bowel preparation**

[Poon and cols](#) compared polyethylene glycol-electrolyte lavage (PEG-EL) solution with sodium phosphate in relation to patients' tolerance and its effectiveness as a bowel cleansing agent and found similar results. They concluded that 2-l PEG-EL solution is therefore an effective alternative as a bowel-cleansing agent for colonoscopy.

[Berkelhammer and cols](#) compared sodium phosphate (NaP) and magnesium citrate (Mg), to assess the effects of timing and dilution of NaP. They found that when preparations were taken the day before colonoscopy, Mg achieved better bowel cleansing, but in contrast, taking NaP the evening before and morning of colonoscopy improved cleansing in the right colon. They also found that dilution of NaP reduces vomiting and that NaP induces rectosigmoid aphthous ulcers more often than Mg. Safety and efficacy of reduced dosing regimens of sodium phosphate tablets were studied by [Rex and cols](#), who concluded that both regimens, using either 28 or 32 tablets, are well tolerated and effective for colon cleansing prior to colonoscopy.

In other study, [Rex and cols](#) measured the impact of bowel preparation on total direct cost as well as procedure time and volume by recording the time spent suctioning fluid and feces from the colon and the time spent washing the colon to clean the mucosa. They concluded that the increase in colonoscopy costs associated with imperfect preparation is substantial and suggested that more reliable bowel preparations, or measures to improve patient compliance with bowel preparation, could significantly reduce the costs of colonoscopy in clinical practice.

### **Incomplete colonoscopy**

[Mitchell and cols](#) reviewed details of two thousand two hundred and sixteen colonoscopies in order to detect possible factors associated to incomplete examinations. A significant difference between male and female completion rates was noticed due to a difference in the incidence of excess looping and intolerance of the procedure, whilst a non-significant trend to lower completion rates in patients over 75 years of age compared to younger patients. They suggest the need of a colonoscopy report with completion rates by adjusting for a better direct comparisons of completion rates reported by different units.

[Rex and cols](#) reviewed the records of 42 consecutive patients with one or more prior unsuccessful attempts at colonoscopy referred for a repeat attempt and found that the examination was completed by cecal intubation in 40 of these (95%). They emphasize that a variety of methods and instruments may be employed to achieve this goal including propofol sedation, pediatric colonoscope, an external straightener or without with pediatric colonoscope, upper endoscope, guidewire exchange, enteroscope with a colon straightener or an enteroscope straightener.

[Chong and cols](#) reviewed the role of barium enema examination after in 158 patients after incomplete colonoscopy and found a diagnostic yield of 3.2% for neoplastic lesions larger than 1 cm in the nonvisualized colon.

### **Reducing pain in colonoscopy**

Three studies aimed to assess an alternative to reduce pain in colonoscopy. [Shah and cols](#) determined the frequency of pain episodes experienced during diagnostic colonoscopy and the corresponding colonoscope configuration, utilizing real-time magnetic endoscope imaging (MEI). In other study, [Shah and cols](#) assessed the effect of magnetic endoscope imaging on patient pain and sedation in a prospective randomized controlled trial. No significant reduction in patient requirements for sedative medication or improvement in patient tolerance was found, but the dosages of sedation drugs used were smaller in MEI group.

Another alternative to reduce pain in colonoscopy was assessed by [Bretthauer and cols](#), who conducted a randomised controlled trial to assess patient tolerance and safety when using CO2 insufflation during colonoscopy. This study in unsedated patients showed that CO2 insufflation is safe during colonoscopy with no rise in arterial CO2 level. CO2 insufflation was found to be superior to air in terms of pain experienced after the examination.

### **Nurses and colonoscopy**

The role of nurses in lower endoscopic procedures was reviewed by two studies. [Jain and cols](#) emphasized their importance to safely and effectively perform flexible sigmoidoscopies to increase the rate of colorectal screening in a cost-effective manner. [Sipe and cols](#) reviewed eighty outpatients undergoing colonoscopy randomized to receive either propofol or midazolam plus meperidine and found that propofol administered by nurses and supervised by endoscopists has several advantages over midazolam plus meperidine.

### **Other studies:**

- Colonoscopy in subjects older than sixty ([Yoshinaga and cols](#)) or eighty ([Lukens and cols](#)) years.
- Virtual colonoscopy x conventional colonoscopy for the detection of colorectal neoplasia: a blinded study ([Laghi and cols](#))
- Novel three-channel and three-slit stiffening tube ([Mukai and cols](#))

## **Constipation**

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### **Rectal barostat testing for irritable bowel syndrome**

Visceral hypersensitivity was detected in patients with functional gastrointestinal disorders and has been proposed as a biological marker of irritable bowel syndrome (IBS). [Bouin and cols](#) assessed the role of rectal distention using an electronic barostat in the diagnosis of IBS. They found that lowered rectal pain threshold is a hallmark of IBS patients and that rectal barostat testing is useful to confirm the diagnosis of IBS and to discriminate IBS from other causes of abdominal pain.

### **Colonic inertia: pathophysiology**

Two studies included in this review aimed to clarify the pathophysiology of this still obscure condition by different approaches. [Shafik and cols](#) used electric waves produced by artificial colonic pacing in colonic inertia patients and postulated that pacemaker stimulation presumably leads to local activation of interstitial cells of Cajal and segmental step-wise contraction. [Tomita and cols](#) investigated the enteric nerve responses in lesional and normal bowel segments derived from patients with slow-transit constipation and patients who underwent colon resection for colonic

cancers and suggested that an increase of nitric oxide mediates nonadrenergic, noncholinergic inhibitory nerves and plays an important role in the dysmotility observed in the colons of patients with slow-transit constipation.

### **Alternative treatment of severe constipation**

Two methods have been assessed as alternatives to patients with severe constipation. [Kenefick and cols](#) described their experience with permanent sacral nerve stimulation in four women and found that there was a marked improvement in all patients with temporary, and in three with permanent, stimulation. They concluded that permanent sacral nerve stimulation can be used to treat patients with resistant idiopathic constipation.

[Heriot and cols](#) described one case where a percutaneous endoscopic colostomy tube was placed in the sigmoid colon endoscopically using a colonoscope and the patient irrigated two liters of water through the percutaneous endoscopic colostomy twice each day and was able to successfully evacuate her rectum without excess straining or discomfort.

## **Hemorrhoids**

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Five papers were selected among the twelve retrieved by Medline about "hemorrhoids".

### **Stapled hemorrhoidectomy**

Stapled hemorrhoidectomy (mucosectomy) is a new technique that has recently been introduced for the treatment of third-degree and fourth-degree hemorrhoids and rectal mucosal prolapse. [Maw and cols](#) presented a case of severe retroperitoneal sepsis complicating stapled hemorrhoidectomy that was successfully treated by conservative means. [Orrom and cols](#) described a series of nineteen patients who underwent stapled anooplasty followed up from 8 weeks to 6 months postoperatively and found that seventy-two percent of patients had good to excellent results, with no significant complications.

### **Rubber band ligation in the out-patient clinic**

[Kumar and cols](#) performed a prospective study of 98 consecutive patients treated by RBL in the out-patient clinic and found it to be an effective treatment but with significant complications such as pain (51%), vasovagal attacks (15%) and bleeding (1%). It concluded that rubber band is an effective treatment but patients should be adequately warned especially of pain and vasovagal attacks.

### **Comparing outcomes of hemorrhoidectomy**

[Chung and cols](#) compared the results obtained in a comparative study involving eighty-six patients randomly assigned to Harmonic Scalpel, bipolar scissors, and the conventional scissors excision-ligation techniques. They concluded that Harmonic Scalpel hemorrhoidectomy is as good as bipolar scissors hemorrhoidectomy in terms

of reduced blood loss but is superior because it is associated with less postoperative pain and hence, better patient satisfaction. However, these observed benefits are small, and the time off work or normal activity remains similar.

#### **Anal lesions x childbirth delivery**

Thrombosed external hemorrhoids and anal fissures are common and are responsible for severe discomfort during childbirth. However, the real incidence of these lesions is unknown. [Abramowitz and cols](#) performed a prospective study with proctologic examination during the last 3 months of pregnancy and after delivery (within 2 months) in 165 consecutive pregnant females. They found that one third of females have thrombosed external hemorrhoids or anal fissures in the postpartum period. Traumatic delivery appears to be associated with thrombosed external hemorrhoids.

## **Diverticular disease**

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#### **Intraoperative colonic lavage in diverticulitis**

The ideal treatment for complicated diverticulitis is still controversial. [Regenet and cols](#) performed a prospective study in 71 patients with peritonitis, comparing primary resection with intraoperative colonic lavage, and Hartmann's procedure. They concluded that primary resection with intraoperative colonic lavage compares favorably with Hartmann's procedure for local or diffuse purulent peritonitis in complicated diverticulitis and must be considered as an alternative to the Hartmann's procedure in stercoral peritonitis.

#### **Elective laparoscopic colectomy for diverticulitis**

[Bouillot and cols](#) undertook a retrospective multicenter study of elective laparoscopic sigmoidectomy for diverticulitis involving 179 patients from 10 surgical units. Conversion to laparotomy was necessary in 25 cases (13.9%), and they concluded that complication and mortality rates are similar to those observed after open procedures.

