Anal Fistula

Endosonography in anal fistulae and abscesses

Sudol-Szopinska and coIs assessed the reliability of anal endosonography (AES) in the diagnosis of anal fistulae and abscesses in 86 patients. In 66 cases with permeable external opening, hydrogen peroxide solution was introduced into the fistula tract. Reliability of AES was defined after surgical treatment of all cases and found that 74 anal fistulae (86%) were found on AES. In 10 patients a coexisting abscess was found; the remaining 12 abscesses were without any fistula. Surgery confirmed the type of anal fistula in 64 patients (86.5%), and location of internal openings in 60 cases (81.1%). All abscesses were confirmed. They concluded that AES showed high accuracy in diagnosing anal fistulae and abscesses.

Radiation proctitis

Sucralfate and late radiation proctitis

O'Brien and cols assessed the potential for sucralfate administered rectally to reduce the risk of late rectal morbidity in patients undergoing nonconformal radiotherapy (RT) for carcinoma of the prostate and to study the variables related to acute and late toxicity. Eighty-six patients with localized prostate carcinoma were randomized in a double-blind, placebo-controlled study to a daily enema of sucralfate suspension or the same suspension without sucralfate. The enema began the first day of RT and was continued for 2 weeks after treatment completion. With a median follow-up of 5 years, the probability of late Grade 2 RTOG/EORTC toxicity was 12% for placebo and 5% for sucralfate (p = 0.26). The probability of late rectal bleeding was 59% for placebo and 54% for sucralfate. No statistically significant difference was found between the treatment arms for the peak incidence of any of the other patient self-assessment variables. Rectal pain of a moderate or severe grade during RT was the best predictor of the subsequent development of late toxicity. They concluded that the results of this study do not support the use of sucralfate administered rectally as a method for reducing the late toxicity of nonconformal RT for prostate cancer.

Rectal prolapse

No relevant papers were found in the present review.

Topical nifedipine

Perrotti and cols undertook a prospective, randomized, double-blind study including 110 patients treated for chronic anal fissure. Patients treated with nifedipine (n = 55) used topical 0.3 percent nifedipine and 1.5 percent lidocaine ointment every 12 hours for 6 weeks. The control group (n = 55) received topical 1.5 percent lidocaine and 1 percent hydrocortisone acetate ointment during therapy. Healing of fissure was achieved after 6 weeks of therapy in 94.5% of the nifedipine-treated patients ($P < 0.001$) as opposed to 16.4% of the controls. Mean anal resting pressure had a 11% reduction ($P = 0.002$). They concluded that the therapeutic use of topical nifedipine and lidocaine ointment should be extended to the conservative treatment of chronic anal fissure.

Oral lacidipine

Ansaloni and cols assessed the effectiveness in healing anal fissure (AF) of lacidipine, a calcium channel blocker with a better tolerability in comparison to other calcium antagonists. Twenty-one consecutive patients with AF were treated with oral lacidipine (6 mg daily) and warm sitz baths for 28 days. Seven patients (33.3%) developed side effects, but only one, who developed dyplopia, withdrew from the study at the 14-day control. Three fissures (14.3%) healed by 14 days and a total of 19 (90.4%) after 28 days. They concluded that oral lacedipine is quite well tolerated and may offer a promising alternative treatment for AF.

Nitroglycerin ointment dose

Bailey and cols undertook a study to determine the optimal dose and dosing interval of nitroglycerin ointment to heal chronic anal fissures. A randomized, double-blind study of intra-anally applied nitroglycerin ointment (Anogesic) was conducted in 17 centers in 304 patients with chronic anal fissures. The patients were randomly assigned to one of eight treatment regimens (0.0, 0.1, 0.2, 0.4 percent nitroglycerin ointment applied twice or three times per day), for up to eight weeks. A dose-measuring device standardized the delivery of 374 mg ointment. There were no significant differences in fissure healing among any of the treatment groups; all groups, including placebo had a healing rate of approximately 50 percent. Treatment with 0.4 percent (1.5 mg) nitroglycerin ointment was associated with a significant ($P < 0.0002$) decrease in average pain intensity compared with vehicle as assessed by patients with a visual analog scale. Treatment was well tolerated, with only 3.29 percent of patients discontinuing treatment because of headache. They concluded that nitroglycerin ointment did not alter healing but significantly and rapidly reduced the pain associated with chronic anal fissures.

Artificial anal sphincter

Devesa and cols evaluated results after implantation of Acticon Neosphincter in 53 patients with total anal incontinence not amenable to sphincter repair or after failed sphincteroplasty in a mean follow-up was 26.5 months. Perioperative events occurred in 26% patients including abnormal bleeding, vaginal perforation, rectal perforation, and unobserved urethral perforation. Late complications were cuff and/or pump erosion (18%), infection (6%), impaction (22%), pain (8%) and mechanical failures (4%). There were 10 (19%) definitive explants caused by septic or skin complications. Only 60% of patients with the device in action use the pump (patients' decision). Normal continence was achieved in 65% and continence to solid stool in 98%. They concluded that the artificial anal sphincter restores continence to solid stool in almost all severely incontinent patients and two-thirds achieve practically normal continence. No predictable factors of functional success could be found in this study.

Wong and cols published the results of a multicenter, prospective, nonrandomized clinical trial including 112 patients with artificial bowel sphincter. A total of 384 device-related or potentially device-related adverse events were reported in 99 enrolled patients. Of these events, 246 required no intervention or only noninvasive intervention. Seventy-three revisional operations were required in 46% of the 112 implanted patients. Infection rate necessitating surgical revision was 25%. Forty-one patients (37 percent) have had their devices completely explanted, of which 7 have had successful reimplantations. In patients with a functioning neosphincter, improvement in quality of life and anal continence was documented. A successful outcome was achieved in 85 percent of patients with a functioning device. Intention to treat success rate was 53 percent. They concluded that although morbidity and the need for revisional surgery are high, the artificial bowel sphincter can improve anal incontinence and quality of life in patients with severe fecal incontinence.

Anal Fissure

Botulinum toxin

Wollina and cols compared traditional Botulinum toxin A (BTXA) treatment in anal fissures with combined treatment of spasticity and focal hyperhidrosis of the anal fold and perianal skin. Ten patients with chronic anal fissures associated with focal hyperhidrosis as assessed by Minor's sweat test were investigated in an open, two-armed trial. Intramuscular injections of 20-25 U BTXA (Botox) were performed in group A (n = 5). In group B (n = 5) those injections were combined with intracutaneous injection of 30-50 U BTXA to treat focal hyperhidrosis. In a mean follow-up of 5 months, all five patients in group B but only two of five patients in group A experienced a complete remission despite the fact that relief of pain was evident in eight of 10 patients within 2 weeks. This open trial suggests that combined therapy of both muscular spasticity and focal hyperhidrosis may provide better results than intramuscular injections alone in anal fissure therapy with BTXA.

Anal sphincter tests after childbirth

Damon and cols assessed 100 consecutive incontinent patients and found that 38% had a normal sphincter and 62% had a defect detected by ultrasonography: The radial size of the defects was positively correlated with the severity of clinical symptoms. This study confirms the high prevalence of anal sphincter defects detected by ultrasonography in a population of incontinent parous females. Anal vector manometry was a useful tool to confirm the relation between echographic anal sphincter lesions and fecal incontinence.

Nazir and cols investigated 132 females obstetric sphincter rupture by transanal ultrasound, manometry, and scoring of bowel symptoms five months after delivery. They found that although both anal sphincter rupture and transanal ultrasound grade correlated with soiling grade and with manometry variables, in both cases only the transanal ultrasound grade was a significant independent variable.

Graciloplasty

Bresler and cols assessed the safety and efficacy of dynamic graciloplasty involved in a total of 24 patients treated with dynamic graciloplasty for fecal incontinence in 5 French surgical centers. No death occurred. A successful functional outcome was reported for 19 patients (79%) during the follow up period. Twenty-two complications occurred. One patient presented with an infected anal erosion leading to material explantation. They concluded that dynamic graciloplasty is an effective procedure for patients with refractory fecal incontinence but carries a significant morbidity which seems to be correlated with the surgeons' experience.

Anterior anal sphincter repair

Elton and cols evaluated the results of overlapping anterior anal sphincter repair in 20 patients. In 12 of the patients, a polypropylene mesh was inserted in the repair to act as re-inforcement. At a median follow-up of 13 months 80% of patients said that surgery had improved their symptoms. There was a significant improvement in the continence score after operation ($P < 0.01$). They concluded that overlapping anterior anal sphincter repair is successful in relieving symptoms in patients with faecal incontinence due to an anterior sphincter defect but this improvement is not associated with any significant changes in anorectal manometric parameters.

Procon device

Giamundo and cols evaluated 7 patients who used the Procon device for fecal incontinence for 14 consecutive days. This device consists of a disposable, pliable rubber catheter with an infrared photo-interrupter sensor and flatus vent holes on the distal tip that is connected to a pager (or "beeper"). They reported an overall significant improvement in the quality of life ($p < 0.05$) and a significant reduction in incontinence scores with the Procon device ($p < 0.05$) and concluded that this is a promising device for patients with severe fecal incontinence who are unfit to undergo surgery, those in whom previous surgical treatments have failed.

Polyps and polyposis

Results in FAP after pancreatoduodenal surgery

Adenomatous polyps and adenocarcinomas of the periampullary region are the most common upper gastrointestinal neoplasms encountered in familial adenomatous polyposis (FAP) patients. [Ruo and cols] reviewed the clinical outcome of FAP patients after pancreaticoduodenal surgery for periampullary neoplasms. Of the 61 individuals participating in our prospective FAP registry, 8 underwent surgical resection of periampullary neoplasms. Seven of these had pancreaticoduodenectomy and 1 had duodenotomy with ampullectomy. The indications for surgery were periampullary cancer (3), severe dysplasia within a duodenal villous tumor (4), and solid-pseudopapillary tumor of the pancreas (1). At a median follow-up of 70.5 months 2 patients had died, neither from their periampullary neoplasm. The patient treated by local excision subsequently developed gastric cancer arising from a polyp and went on to gastrectomy. They concluded that pancreaticoduodenectomy is a safe and appropriate surgical option for FAP patients with duodenal villous tumors containing severe dysplasia or carcinoma.

Surveillance following colorectal polypectomy

[Nusko and cols] undertook a multivariate analysis of 1159 patients who had a polipectomy on long term follow up to identify risk factors for metachronous adenomas. Two risk groups were identified: (1) patients with no parental history of colorectal carcinoma with only small (< or = 10 mm) tubular adenomas have an estimated chance of 10% to develop advanced metachronous adenomas after 10 years; (2) the high risk group contained all other patients, 10% of whom will show metachronous adenomas of advanced pathology at follow up after only three years. They concluded that surveillance intervals can be scheduled for low risk (10 years) and high risk (three years) patients.

Fecal incontinence

Childbirth factors

Subpubic arch angle

[Frudinger and cols] assessed the relationship between the subpubic arch angle, anal sphincter and perineal trauma, and anal incontinence after childbirth in 134 low risk nulliparous women. Thirty-two women with a subpubic arch angle of less than 90 degrees had significantly prolonged first and second stages of labour when compared with 102 women whose subpubic arch was wider. Following delivery, anal continence deteriorated in more women with a narrow subpubic angle (69% vs 21%, P < 0.001) but this was unrelated to the incidence of anal sphincter and perineal trauma. They concluded that a narrow subpubic arch is strongly associated with prolonged labour and postpartum anal incontinence in nulliparous women but no relationship was found to perineal and anal sphincter trauma as assessed by ultrasound.

Martinez-Borra and cols investigated the effect of infliximab on circulating cytokines and acute phase proteins to determine the clinical response to anti-TNF-alpha in 36 patients with fistulizing Crohn's disease. Elevated TNF-alpha, IL-1beta, IL-6, and acute phase proteins were observed in patients with Crohn's disease. Of the patients with fistulas, 22 (61.1%) responded to treatment. Before receiving infliximab, higher levels of serum TNF-alpha were found in patients who did not respond to infliximab compared with those who did. So, circulating levels of TNF-alpha are associated with the response to infliximab and could help to identify patients who would benefit from anti-TNF-alpha treatment.

Parsi and cols evaluated 100 patients with either inflammatory or fistulous Crohn's disease in a at least 3 months of follow-up after infliximab infusion to identify predictors of response to therapy. For inflammatory disease, 73% of nonsmokers, compared with 22% of smokers, responded to infliximab ($P < 0.001$). Among patients taking concurrent immunosuppressives, 74% responded to infliximab compared with 39% not taking any immunosuppressives ($P = 0.007$). Prolonged response (duration >2 months) was achieved in 59% of nonsmokers compared with 6% of smokers ($P < 0.001$) and in 65% of patients on immunosuppressives compared with 18% not on immunosuppressives ($P < 0.001$). For fistulous disease, overall response rates were not different between nonsmokers and smokers, but nonsmokers had a longer duration of response ($P = 0.046$). They concluded that in patients with inflammatory disease, nonsmoking and concurrent immunosuppressive use are associated with higher rates of response and longer duration of response to infliximab. In patients with fistulous Crohn's disease, nonsmoking is associated with longer duration of response to infliximab.

Recombinant human granulocyte-macrophage colony-stimulating factor (GM-CSF)

Treatment for Crohn's disease is aimed at immunosuppression. Dieckgraefe and cols performed an open-label dose-escalation trial (4-8 microg/kg per day) to investigate the safety and possible benefit of granulocyte-macrophage colony-stimulating factor (GM-CSF) in the treatment of 15 patients with moderate to severe Crohn's disease. No patients had worsening of their disease. Adverse events were negligible and included minor injection site reactions and bone pain. Patients had a significant decrease in mean Crohn's disease activity index (CDAI) score during treatment ($p<0.0001$). Overall, 12 patients had a decrease in CDAI of more than 100 points, and eight achieved clinical remission. Retreatment was effective, and treatment was associated with increased quality-of-life measures. GM-CSF may offer an alternative to traditional immunosuppression in treatment of Crohn's disease.

Probiotics

Some articles regarding the role of probiotic agents in the treatment of Crohn’s disease have been published by Gionchetti and cols, Shanahan and cols and Prantera and cols. None of these reports and reviews showed evidences of benefits with this therapeutic approach and further studies are required to assess its role in Crohn’s disease.

Overview on
Colorectal papers

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Crohn's disease

Infliximab

To evaluate the results of infliximab therapy, Doubremelle and cols reviewed the results obtained with 69 patients treated with a total of 170 infusions of infliximab, 32 patients being treated for refractory Crohn's disease and 37 for fistulas. In a median follow-up of 8 months an objective response was observed in 79% of refractory Crohn's disease patients and 78% of fistulazing patients. Forty-five percent of patients had relapsed within 4 months and a steroid-sparing effect was obtained in 73% of patients. The authors concluded that infliximab is very effective in steroid-dependent and fistulazing Crohn's disease although long term safety remains to be established by further studies.

de Ridder and cols described the clinical experience of infliximab treatment in 23 children and adolescents with refractory Crohn's with an average follow-up of 14.5 months. Four from 10 patients with refractory Crohn's disease showed good long-term response. Five from 12 patients with severe fistulas showed good long-term response.

Ljung and cols reviewed the results obtained with 8 patients with pyoderma gangrenosum associated with Crohn disease treated with infliximab. Complete healing of the pyoderma gangrenosum was observed in 3 cases, partial healing in 3 and temporary improvement in 2. Adverse effects such as skin rash, pneumonia and diarrhoea were seen in three patients. They concluded that infliximab has a therapeutic potential on skin manifestations associated with inflammatory bowel disease, even though successful treatment may require repeat courses of infliximab infusions.

Vermeire and cols assessed whether demographic or clinical parameters influence short-term response to infliximab. They studied the response to infliximab in 240 Crohn's disease patients of the Belgian Infliximab Expanded Access Program after the first infusion. They found 73.5% responders and 26.5% nonresponders to treatment. Young age, Crohn's colitis, and concomitant immunosuppressive treatment were identified as independent variables favoring short-term response to infliximab.