

Surgical Management of IBD [Ulcerative Colitis], the Present and the Future

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The idiopathic inflammatory bowel disease (IBD), also known as Ulcerative Colitis and Crohn's Disease, are truly multidisciplinary ailments, requiring the coordinated care of medical, surgical and many other specialty clinicians. In spite of its assumed immunologic basis, the surgeon is critical in the care and management of IBD patients. There are no medical cures for these illnesses but surgical colectomy effectively cures ulcerative colitis while the majority of Crohn's disease patients will also require the services of a surgeon during their life time for complications such as stricture, fistulization or tissue sepsis.

Over the past several years there has been a dramatic increase in research in CD and UC, especially in the areas of genetics and immunology. This research has produced intriguing insights into disease pathogenesis and has resulted in new effective therapies. It is appropriate to ask how these newer concepts of disease aetiology and these novel treatments will affect the surgeon's future role in the care of IBD patients.

Approximately one third of patients with mucosal Ulcerative Colitis will undergo operative treatment. An operation can be indicated either to treat the complications of the disease or because the symptoms of the disease can not be adequately controlled with medical therapy. A variety of surgical options

exists in both the acute and elective setting. Each operation has advantages and disadvantages.

Indications for Surgery

Emergency: There are basically three scenarios in which the patient becomes a candidate for emergency surgery.

1. In Toxic Colitis, the patient is acutely ill with fever, tachycardia, and leucocytosis and exhibits abdominal tenderness and distension, dehydration and hypotension. Nutritional imbalances, electrolyte aberrations and anaemia may also occur.
2. Some patients present with toxic colitis associated with colonic dilatation or toxic megacolon. Despite aggressive medical therapy, some patients with toxic colitis progress to toxic megacolon; in either scenario, colonic perforation may occur.
3. Rarely severe haemorrhage warrants emergency surgery.

Elective: The most common elective indication for surgery is intractability.

These patients are candidates for surgery because of chronic disability owing to the symptoms of the disease. Alternatively, patients may have adequate function but require continuous levels of medical agents that are associated with unacceptable side effects.

Carcinoma, high grade dysplasia, and in certain instances, low grade dysplasia are also indications for surgery. Other indications include colonic stricture, refractory anaemia,

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extraintestinal manifestations, severe growth retardation in young patients etc.

Surgical Options

Emergency (Within 24 Hours of Hospitalisation):

Toxic colitis mandates aggressive medical management, including intravenous fluids and systemic parenteral steroids and antibiotics; parenteral nutrition may also be indicated. Deterioration, or lack of objective improvement within 48 to 72 hours or less, are generally indications of emergency colectomy. Barium enema, narcotics and antidiarrhoeal agents have been implicated in precipitating toxic megacolon and should be avoided in patients with severe colitis.

Two basic options exist in emergency setting:

1. The most commonly performed operation is a Total abdominal colectomy with Brooke's Ileostomy with either a rectal or rectosigmoid Hartmann's stump or a rectosigmoid mucous fistula. This option is preferable because it eradicates the disease and requires no bowel anastomosis or deep pelvic dissection, while allowing the patient to be weaned from medical agents. In addition, it does not preclude subsequent surgical intervention.
2. The second but rather rare option, the Turnbull "Blowhole" procedure is not so widely practised at the current times.

Controversy exists about the role of primary total proctocolectomy or restorative proctocolectomy in urgent cases.

Elective

There are four elective surgical options :

1. Total proctocolectomy with Brooke's end ileostomy
2. Total abdominal colectomy with

ileoproctostomy

3. Total proctocolectomy with continental ileostomy (Koch Pouch)
4. Restorative proctocolectomy with ileoanal reservoir (ileal pouch)

Total Proctocolectomy: It completely eliminates all disease and thereby obviates the risk of malignancy. It eliminates the need for medical therapy and offers the patient a single operation with relatively rapid return to family and vocation.

Disadvantages: Include need for a permanent stoma with attendant physiological complications, the potential for pelvic nerve injury and delayed perineal wound healing.

Indications: Current relative indications include elderly patients, individuals with distal rectal carcinoma, patients with severely compromised anal sphincter function and people who desire a single operation for cure.

Contraindications : Relative contraindications include the emergent setting, unless complicated by a major uncontrollable rectal bleeding, or if restorative proctocolectomy is to be potentially offered.

Ileorectal anastomosis : It may be performed with or without a proximal diverting stoma; ileorectal anastomosis can be performed subsequent to an initial abdominal colectomy with Brooke ileostomy and rectal Hartmann's pouch or mucous fistula.

Advantage: The risk of pelvic nerve dysfunction is minimal, along with avoidance of both a permanent stoma and a perineal wound.

Disadvantages : Retention of diseased rectal mucosa and its potential for subsequent development of rectal carcinoma. There is always a possibility of anastomotic leak.

Indications : Presence of primarily colonic

disease with a relatively spared and compliant rectum. Other indications include a palliative operation in patients with metastatic colorectal carcinoma which complicates ulcerative colitis.

Contraindications : Presence of severely diseased rectum, dysplasia or nonmetastatic colorectal carcinoma, severely weakened anal sphincter and lack of patient compliance for subsequent surveillance.

Continent Ileostomy (Koch Pouch) : This has the advantage of avoidance of a need for an appliance over the stoma. However this procedure is associated with numerous complications including pouch specific ones such as valve slippage and pouchitis etc.

Indications : The main indications are the patients who have previously undergone a total proctocolectomy with Brooke ileostomy and desire a continent stoma or patients with severe treatment resistant incontinence following a restorative proctocolectomy. The other potential indication is the patient who has weak anal sphincter.

Contraindication : The main contraindications are, Crohn's disease, morbid obesity, excessive adhesions, short bowel syndrome, and high output stoma.

Restorative Proctocolectomy

Advantage: Avoidance of permanent stoma, maintenance of anal route of evacuation, eradication of disease, elimination or minimisation of chances of development of cancer, and ability to discontinue the specific medical treatment.

Disadvantage : Complexity of procedure, potential for pelvic nerve injury, the need for multiple operations, possibility of septic sequelae, pouchitis, frequent evacuation, and the possibility of incontinence.

Indications : Patients with intractable symptoms, frustrations with side effects of

the drugs necessary to maintain remission, dysplasia, malignancy (except in lower third of rectum), patients with ileoproctostomy who have developed dysplasia or malignancy in upper portion of retained rectum or who have continued to be symptomatic from proctitis and patients who have undergone preliminary total abdominal colectomy with Brooke ileostomy with rectal retention for treatment of toxicity or other emergent indications.

Contraindications : Patients with untreatable anal incontinence, carcinoma of distal rectum invading the anal sphincter, or patients who have a personal preference for one of the other surgical options.

Summary

Choice of operation in Ulcerative Colitis depends on several variables including the indication for surgery, its elective or urgent status, state of the anal sphincter muscle, certainty of diagnosis, and patient preference after full and complete information is given of the current knowledge. Several controversial issues remain pertaining to operative choices and techniques and patient management. Ultimately, all decisions may need to be altered because of intraoperative findings. The surgeon planning a double stapled anastomosis may need to use a mucosectomy and must be versed in its performance. Although the patient may not expect to have an ileostomy performed, intraoperative variables such as pelvic haemorrhage, anastomotic tension, and operative blood loss may dictate an intraoperative change of plan. Similarly use of laparoscope may need to be abandoned at any stage of the procedure because of the usual reasons of conversion, such as extensive adhesions, operative complications, and failure of the operation to progress in a timely manner.

The patient should have the opportunity

to speak with other patients who have had the desired operation so they will be best able to make a decision. Patient support group and literature describing the operative options may also be useful in this regard. All the issues should be discussed with the patient who should be cognizant of the risks, benefits, complications, functional results and failure rates of all treatment options. Thus, the surgeon must either be personally versed in all options or be prepared to refer the patient to the appropriate specialist if the patient prefers an option with which the surgeon has insufficient experience.

IBD is a complex genetic disorder that will be treated using medical and surgical therapies that are specifically tailored for the individual patient using patient defined genetic and metabolic determinants of disease. The disease's pathophysiologic

complexity will defy the rapid discovery of a simple, all encompassing cure. These patient defined genetic and metabolic factors will help determine the type and timing of surgery, its prognosis and risk. The malignant risk of IBD will be more accurately defined and the timing of surgery determined using tests other than colonoscopy. Continued improvement in minimally invasive techniques of surgery will offer the IBD patients rapid relief of complications of disease with the least disability and stress. Fundamentally, the paradigm of care for the future will require the recognition that both surgical and medical therapies will need to be chosen in concert with the purpose of providing the best therapy for that individual patient at that point in their disease history in order to maximize response while minimizing long term recurrence.

A SIGNIFICANT STEP FORWARD FOR GOUT

Traditional treatments have included colchicines and non-steroidal anti-inflammatory drugs (NSAIDs), but these are not without serious and potentially life-threatening adverse events. The use of corticosteroids in the acute phase of the illness provides an equally effective and safer method to treat gout.

In a systematic review, Janssens and colleagues stated that there was inconclusive evidence for the effectiveness of corticosteroids in the treatment of acute gout. However, in today's Lancet, the same group claim to provide evidence of *equivalent* effectiveness of oral prednisolone and naproxen in the treatment of gout arthritis.

A comparison of these two studies draws attention to important differences in the approach to gout—one from a purist and the other from a pragmatic viewpoint. Should the clinical diagnosis of acute gout be confirmed by the presence of negatively birefringent monosodium urate crystals in joint aspirate before treatment is started?

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