Ileal Crohn's disease is best treated by surgery

A C J Windsor

The optimal management of Crohn's disease remains complicated and controversial. In common with other benign conditions, treatment is dependent on a balance between therapeutic risk and benefit. Unfortunately, in surgery the risk arm of the risk/benefit balance appears to predominate. Clinicians, both surgical and medical, seem preoccupied by the complications of surgical intervention, including disease recurrence, anastomotic breakdown, enterocutaneous fistula, and short bowel syndrome. In response to this, "conventional wisdom" currently dictates that the initial management of uncomplicated Crohn's disease should be medical, and only when complications, such as obstruction or fistulation, are apparent either at presentation or develop following a period of medical management is surgery indicated. This approach fails to appreciate the benefits of early surgery and the potentially detrimental effects of delaying surgery. For many years the mainstay of medical management in Crohn's disease has been corticosteroids and 5-ASAs. The increasing use of immunosuppressive therapy in Crohn's and more recently the emergence of a number of novel therapies such as interleukin 10 and anti-tumour necrosis factor (TNF) antibody may serve only to demote surgery further down the management pathway and further support the physician's mistaken belief that medical management may in future be able to cure Crohn's disease and obviate, entirely, the need for surgical intervention.

There is an extensive body of literature to support the precept that surgical intervention in Crohn's disease is not without risk.^{1,2} However, it is apparent that approximately 80% of patients presenting with ileal disease will require surgical intervention at some stage in their lifetime.³⁻⁵ Realisation that the extent of disease resection and the extent of lymph node clearance does not affect disease recurrence rates,^{6,7} and the increasing use of strictureplasty in obstruction,⁸ has improved surgical strategies in Crohn's disease without compromising small bowel mucosal area. However, Crohn's disease cannot be cured by surgical intervention and thus the principles of management should include the relief of symptoms, minimising the risks of therapy and disease recurrence.

RELIEF OF SYMPTOMS

If the key to successful management of Crohn's disease is relief of symptoms, who better to define optimal time for surgical intervention than the patients themselves. Scott and Hughes pursued this argument by sending postal questionnaires to 80 patients who had undergone ileal colic resection for terminal ileal Crohn's disease.⁹ The

questionnaire attempted to establish when the patient felt the optimal time for surgical management in their particular case should have been. They found that 72% of patients felt that they would have preferred their surgical intervention to have been earlier. The median time for this earlier intervention was 12 months, and their reasons were: severity of preoperative symptoms (97%), ability to eat normally (87%), relief of symptoms (62%), and obviating the need for medication (43%). Other authors have investigated how surgical intervention impacts upon quality of life and have universally seen improvements in a number of key life parameters.¹⁰

MINIMISING THE RISKS OF THERAPY

Little is written about the consequences of long term medical therapy in Crohn's disease but it seems clear that the use of steroids and immune suppressants, particularly in the young adult, may have potentially devastating effects. On the contrary, the complications of surgery are oft quoted and yet when examined carefully from specialist centres the morbidity and mortality statistics are gratifyingly low. Andrews *et al* reported a series from Birmingham of 184 ileocolic resections over the period 1980–1990.¹¹ The mortality rate was 2%, and morbidity included wound infection (7%), postoperative abscess (9%), and anastomotic failure (11%). Others have analysed factors associated with complications and suggest that steroid use, low serum albumin, and the presence of preoperative sepsis (abscess and fistula), all indicators of advanced disease, are contributory. Hulten *et al* corroborated this, suggesting the more advanced the disease, the more likely are septic/fistulating preoperative problems and the greater the postoperative morbidity.¹² They demonstrated that operating in the presence of complicated disease increased postoperative morbidity from 12% to 48%, and concluded that early resection prior to development of advanced and complicated disease was beneficial.

Short bowel syndrome and the resultant intestinal failure is a rare but life threatening consequence of massive or repeated resection in Crohn's disease. The advent of strictureplasty has greatly improved the management of this group of patients.^{13,14} It can be performed on single or multiple strictures without the need to sacrifice mucosal surface and has been shown to significantly improve obstructive symptoms. Stebbing and the Oxford group, and Yamamoto and the Birmingham group reported 90–95% improvement in symptoms following 241 and 387 strictureplasties, respectively.^{15,16} Morbidity rates and recurrence rates were apparently not significantly different from control groups of conventional resectional surgery, however, Sayfan *et al*

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Debate

reported a reduction in surgery free interval in their strictureplasty group from 7.9 years to 2.9 years although this has not been substantiated by others.¹⁷

MINIMISING THE RISKS OF RECURRENCE

That recurrence or recrudescence of disease following surgery is almost inevitable has been used as an argument for not operating in Crohn's. Endoscopic recurrence is known to occur early with approximately 70% of patients demonstrating evidence of ulceration by 12 months.¹⁸ However, as symptoms and not disease dictate the need for intervention, reoperation rates of approximately 25% at five years and 35% at 10 years suggest that many patients will enjoy a significant asymptomatic period prior to further surgery, and others will never require another operation.¹¹ Weston *et al* supported these data by reporting the outcome of a series of 34 patients who had an incidental diagnosis of ileocolic Crohn's made at operation for suspected appendicitis.¹⁹ Half of the 10 patients who had an immediate ileocolic resection required no further intervention after 12 years of follow up. Of the 26 who were treated conservatively, 24 eventually required surgery for debilitating symptomatology.

Minimising or preventing recurrence of disease following surgery would further support the concept of early surgical intervention but attempts to date have been at best poor. Although a recent report by Lochs *et al* suggested the use of 5-ASA compounds in the postoperative period may reduce recurrence rates.²⁰ Rutgeerts *et al* reported early reduction in recurrence following the use of metronidazole but this advantage was lost at two years.²¹ Equally, a number of papers comparing sutures versus staples have suggested that the anastomotic technique may be influential but the data are as yet conflicting.²²⁻²⁴ We await with interest data on the use of azathioprine and immunomodulators such as anti-TNF- α or interleukin 10 in this setting but it is possible that they may provide significant advantages over other prophylactic measures. Data defining the detrimental effects of smoking and recurrence in Crohn's provide hope for at least some patients, provided they can be persuaded to stop.²⁵

SUMMARY

To argue for immediate surgery in all cases of Crohn's disease would ignore the potential for morbidity following surgery, and dismiss the beneficial effects of medical therapy, particularly with the possible advent of an exciting new era of immunomodulation. However, it is clear that surgery is mistakenly considered the "villain" in the management of this complicated disease. The evidence presented above should enlighten those entrenched clinicians and persuade them that not only is surgery an extremely good therapeutic modality for Crohn's but delay can lead to significantly greater pre and postoperative morbidity and significant decay in quality of life compared with implementing appropriate and timely surgical intervention.

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