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Predictive Factors of Postoperative Recurrence in Crohn's Disease: The Value of the Rutgeerts Score

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Abstract

Background/Introduction: Postoperative recurrence of Crohn's disease is frequent despite therapeutic advances. Early ileocolonoscopy, evaluated using the Rutgeerts score, is the reference standard for detecting endoscopic recurrence, which strongly correlates with the risk of clinical relapse [1]. ***Materials and Methods:*** This retrospective study included patients with Crohn's disease followed up between 2012 and 2025 who underwent an ileocecal or ileocolonic resection. Endoscopic recurrence was defined as a Rutgeerts score ≥ i2 during an ileocolonoscopy performed between 6 and 12 months postoperatively [1,2]. ***Results:*** Endoscopic recurrence was observed exclusively in patients who did not receive postoperative prophylactic treatment. No cases of recurrence were observed in patients treated with azathioprine or infliximab. ***Conclusion:*** The absence of postoperative prophylactic treatment appears to be a major risk factor for early endoscopic recurrence [2–4].

Keywords: Crohn's disease, Postoperative recurrence, Ileocolonoscopy, Rutgeerts score, Ileocecal resection.

INTRODUCTION

Crohn's disease (CD) is a chronic inflammatory bowel disease characterized by a relapsing remitting course and transmural lesions that frequently lead to complications requiring surgical management. Despite the advent of biologic therapies, an estimated one in six patients will require an ileocolonic resection within five years of diagnosis. However, even after the complete resection of macroscopically involved segments, surgery is not a curative treatment for CD.

Postoperative recurrence is frequent, occurring in 60% to 80% of patients in the years following surgery. Ileocolonoscopy performed early after surgery is the reference standard for evaluating mucosal recurrence. This is objectively measured using the Rutgeerts score, which has a well-established prognostic value for clinical relapse and the need for reoperation. Therefore, identifying predictive factors for endoscopic recurrence is essential for optimizing postoperative prevention strategies [1, 5].

MATERIALS AND METHODS

This retrospective study included patients with CD followed up between 2012 and 2025 who underwent an ileocecal or ileocolonic resection. The collected data included age, sex, smoking status at the time of surgery, disease duration, history of intestinal surgery, disease phenotype, presence of perianal lesions or extraintestinal manifestations, preoperative treatments, time to postoperative ileocolonoscopy, Rutgeerts score, and treatments initiated after surgery. Endoscopic recurrence was defined as a Rutgeerts score ≥ i2 during an ileocolonoscopy performed 6 to 12 months postoperatively [1,2].

RESULTS

Of 80 patients with CD, 10 met the inclusion criteria. All 10 patients presented with perianal lesions, and one patient (10%) had extraintestinal manifestations. Surgical indications were predominantly ileal or ileocecal strictures (60%), followed by complex fistulas (30%) and intra-abdominal collections (10%).

Preoperatively, 80% of the patients had received immunosuppressive or biologic therapy. During the postoperative endoscopic evaluation, two patients (20%) presented with endoscopic recurrence (Rutgeerts score ≥ i2); neither of these patients had received prophylactic treatment after surgery. Conversely, no cases of endoscopic recurrence were observed in the eight patients who received postoperative treatment with azathioprine or infliximab.

DISCUSSION

Postoperative recurrence represents a major challenge in the management of CD. The seminal study by Rutgeerts *et al.,* demonstrated that mucosal recurrence appears early after surgery and often precedes clinical relapse, justifying the routine use of the Rutgeerts score as a prognostic tool [1]. International guidelines recommend performing an ileocolonoscopy 6 to 12 months after surgery to detect endoscopic recurrence and adapt the therapeutic strategy early [1,6]. This approach helps prevent progression to clinical recurrence and the need for subsequent surgery.

The prevention of recurrence relies on the early initiation of prophylactic treatment, as endoscopic lesions can appear within the first few weeks following surgery [3]. Thiopurines and anti-TNF agents are currently the best-evaluated treatments in this context, demonstrating proven efficacy in reducing endoscopic recurrence [2,3,7]. A study by De Cruz *et al.,* comparing an endoscopy-guided strategy with routine prophylaxis reported a higher rate of early endoscopic recurrence in the group monitored solely by endoscopy, highlighting the value of immediate pharmacological prevention in high-risk patients [2].

However, identifying patients at high risk of recurrence remains challenging, with active smoking being the only universally recognized risk factor [3]. The ongoing SOPRANO-CD study aims to better define the respective roles of routine biologic prophylaxis and an endoscopy-guided approach in preventing postoperative recurrence [4].

In our study, the absence of postoperative prophylactic treatment appeared to be the primary factor associated with early endoscopic recurrence, whereas no recurrence was observed in patients treated with azathioprine or infliximab. Although limited by a small sample size, these results align with existing literature and reinforce the value of a proactive strategy combining preventive treatment and endoscopic surveillance [2,4]. Furthermore, while the Rutgeerts score remains the reference standard, the use of intestinal ultrasound and fecal calprotectin are emerging as reliable alternatives for close monitoring [8].

CONCLUSION

A strategy combining prophylactic treatment initiated early after surgery with routine endoscopic surveillance between 6 and 12 months significantly reduces the risk of postoperative recurrence of CD and should be prioritized in high-risk patients [1,4].

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