LETTER TO THE EDITOR

Safety and usefulness of balloon endoscopy in Crohn's disease patients with postoperative ileal lesions

Dear Sir,

Surgery is required for most Crohn's disease (CD) patients due to strictures and/or penetrating disease (e.g., fistula, abscess and perforation). Even if surgical resection is performed, this does not represent "curative" treatment because clinical recurrences are often seen after surgery. Previous studies indicated that 25–35% of CD patients needed re-surgery at 5 years and up to 40–70% at 15 years after initial resection. To avoid clinical recurrence and re-surgery, assessment of endoscopic lesions/severity in the small and large intestine may be critical. In fact, it was reported that endoscopic recurrence was observed in most cases of postoperative CD patients. However, few reports have investigated regarding postoperative recurrence in the small intestine.

Recently, double-balloon endoscopy (DBE) and single-balloon endoscopy (SBE) have been developed to observe lesions in the small intestine. These techniques enable directly and precisely observation of lesions at small intestine in patients with Crohn's disease. To date, no studies have been conducted to observe postoperative CD lesions in the small intestine using balloon endoscopy. We performed SBE in 20 postoperative CD patients to evaluate lesions in the small intestine within 6–12 months after surgery. Patient characteristics and clinical/endoscopic severity were prospectively assessed. As most CD lesions were expected to exist in the neoterminal ileum or end of the ileum, SBE was conducted using an anal approach. All patients used 2–4 L of pethlene glycol solution ≥4 h before the SBE. Procedures were performed under conscious sedation. Pethidine hydrochloride (15 mg) and 0.2 mg of flunitrazepam were injected immediately before the procedure.

SBE was performed safely without hospitalization in 19 of 20 patients. Only 1 patient had to be admitted for SBE because the patient lived far from our institution. Any anastomosis (ileo-ileo anastomosis in 11 patients, ileo-colonic anastomosis in 3 patients, both ileo-ileo and ileo-colonic anastomosis in 3 patients) were observed in 17 patients. SBE could not pass through ileo-colonic anastomosis in a patient due to stricture while we could observe at least 30 cm (range 30–110 cm) from terminal ileum/neoterminal ileum in other 19 patients. Interestingly, lesions in the small intestine and/or anastomosis were detected in 18 of 19 patients (94.7%). Colonic lesions were observed in 5 patients (25%). Ileal lesions in patients who were treated with 5-ASA and/or immunomodulators (6-mercaptopurine, azathioprine) were more severe than those with infliximab (Fig. 1).

In our study, inflammations were detected not only in end of the ileum /neo-terminal ileum but also in middle/upper ileum. It is difficult to observe ileo-ileo anastomosis and middle ileum by conventional colonoscopy. The visualization

Figure 1  (Left) Examples of typical SBE findings at SBE. Aggravated inflammation at the ileoileo anastomosis. (Right) Endoscopic severity in the ileum of postoperative CD patients who were treated with 5-ASA or immunomodulators or infliximab. 5-ASA: 5-aminosalicylates, IM: immunomodulators, IFX: infliximab.

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of these areas using SBE might be beneficial since the use of infiltration/deflation of balloon of SBE is possible to decrease patients’ pain and displeasure.

Based on findings at SBE, 11 of 15 patients who used 5-ASA or immunomodulators agreed to IFX treatment. After administration of IFX, clinical remission was maintained in all 11 patients within more than 2 years. Even though CDAI/CRP was normal, CD lesions were detected using balloon endoscopy in most cases. These results indicated that balloon endoscopy is useful to assess the endoscopic severity in the small intestine and to alter maintenance therapy for CD due to findings of balloon endoscopy, as most patients with ileal lesions agreed to use IFX in our study. Balloon endoscopy will help physicians to evaluate the small intestinal lesions and to consider treatment strategy for postoperative CD patients.

References