Unusual case of a large small-bowel enteroenteric fistula successfully closed using purse-string sutures

A 28-year-old man was diagnosed with colonic Crohn’s disease with previous symptoms of diarrhea, weight loss, and vomiting 8 years ago. He was continually prescribed sulfasalazine (3 g/day) from the first diagnosis. During the medication period, these symptoms were successfully relieved. However, he was readmitted to our hospital 1 week ago with complaints of refractory diarrhea and vomiting.

Physical examination was normal except for diffuse abdominal tenderness, whereas laboratory tests revealed hemoglobin 73 g/L, potassium 3.3 mmol/L, sodium 128.6 mmol/L, and albumin 13.7 g/L. After the patient’s nutritional status had been improved, esophagogastroduodenoscopy was performed and showed a large fistula in the second portion of the duodenum (Fig. 1), extending to the jejunoileal lumen through the fistula tract (Fig. 2). A small-bowel enteroenteric fistula was diagnosed.

We used purse-string sutures, with an endoloop and hemostatic clips, to successfully close the fistula orifice (Fig. 3, Video 1). The patient’s symptoms resolved after the procedure, and he was switched to anti-tumor necrosis factor agents for further treatment.

Duodenal fistulas in patients with Crohn’s disease are rare and surgical treatment is usually recommended [1]. To our knowledge, this is the first case report of a large small-bowel enteroenteric fistula successfully closed using purse-string sutures.

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Competing interests

The authors declare that they have no conflict of interest.
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