Endoscopic Management of Obstructing Pouch Twist: A Case Series

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BACKGROUND

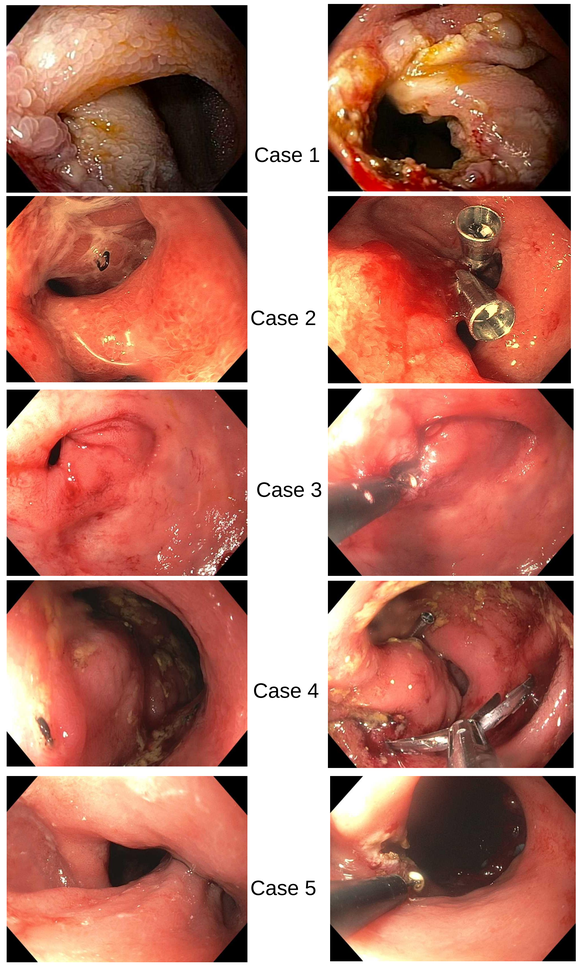
Restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA) has been a standard of surgical management of medically refractory ulcerative colitis (UC), UC with neoplasia, or familial adenomatous polyposis. While IPAA significantly improves patients' health-related quality of life, complications are common. Common complications include anastomotic leaks, abscesses, pouch strictures, pouchitis, and fistulas [2, 3]. These complications can result in poor functioning of the pouch even pouch failure, which requires a multimodal approach. Rare complications include afferent limb syndrome, pouch volvulus, and twisted pouch, which traditionally require surgical intervention. [4-9] This case series (N=5) describes a successful endoscopic management of a twisted pouch in symptomatic patients with a long-term follow-up.

CASE REPORT OF A CLASSIC CASE

A 35-year-old female was with left-sided UC 2015 with index. The patient was managed medically on adalimumab and 6-mercaptopurine. Her UC progressed into extensive colitis one year later. She underwent a 3-stage restorative proctocolectomy with IPAA for medically refractory UC in 2016. After stoma closure, she gradually developed symptoms of nausea, vomiting, diarrhea, significant weight loss, and abdominal tenderness. Computed tomography (CT) revealed dilated entire small bowel with possible obstruction at the pouch-anal anastomosis. She underwent a pouchoscopy in 2017 which revealed a dilated pouch lumen with a 4 cm long cuff. There was volvulus-like axial twist in the distal pouch with the nearly complete blocking of the pouch outlet (**Figure 1**). An expert colorectal surgeon was consulted and the consensus was to perform endoscopic therapy first. The twisted pouch was treated with outpatient endoscopic needle-knife septectomy with electroincision of the twisted folds, followed by the placement of two endoclips as spacers (**Figure 2**). The procedure was performed with the patient being under conscious sedation, observed for 30 mins at the recovery room and discharged afterwards. This led to immediate resolution of her symptoms.

A repeat pouchoscopy 2 weeks later revealed a mild outlet stricture and this was further treated with endoscopic septectomy. A repeat 6-month pouchoscopy 6 months later showed complete resolution of the obstruction. Yearly routine pouchoscopy showed that pouch twist remained to be revolved, but a severe circumferential anastomotic stricture. The latter was treated with endoscopic circumferential stricturotomy with the needle knife. Her last follow-up was in 2021 with pouch twist remaining resolved on pouchoscopy.

RESULTS



DISCUSSION AND CONCLUSION

The twisted pouch and volvulus are rare complications of IPAA with few cases being reported in the literature [4-5, 7-9]. Pouch twist is believed to result from poor orientation of the mesentery or, adhesions. An iatrogenic twisted pouch may result in having to place the mesentery posterior or to the left of the created pouch. It is more common in women as there is more room in the pelvis. Severe twisted pouch can lead to in acute or chronic pouch obstruction. Acute pouch twist requires timely management to avoid bowel necrosis and obstipation. The reported cases in the literature presented two to five years after surgery with pouchitis, ulceration, chronic abdominal pain, and incontinence. Diagnosis of this condition typically requires a high degree of suspicion, CT, and gastrografin enema. The patients reported in the literature have been managed surgically with adhesiolysis and derotation and fixing the pouch with or without redo of the ileorectal anastomosis [5, 6, 8, 9].

This case series describes the successful endoscopic treatment of the twisted pouch with septectomy. We believe that endoscopic septectomy can be offered as a first-line therapy.

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