

Combined Endoscopic Fistulotomy and Clipping for the Treatment of Fistula From the Tip of the J-Pouch to Anastomosis

Grace Sze, BA¹, Freeha Khan, MD¹, and Bo Shen, MD¹

¹Center for Inflammatory Bowel Diseases, Digestive Disease and Surgery Institute, Cleveland Clinic, Cleveland, OH

ABSTRACT

Patients who undergo restorative proctocolectomy with ileal pouch-anal anastomosis may develop mechanical complications such as presacral sinuses and fistulas. The current method of treatment may include medical therapy or redo surgery. Recently, endoscopic management for postoperative complications has shown effective results. We present a unique case of a pouch-to-pouch fistula, from the tip of the “J” to the anastomosis that was successfully treated with endoscopic needle-knife sinusotomy and over-the-scope clips.

INTRODUCTION

Pouch sinus, a leak that has a blind-ending track, is an uncommon complication of IPAA, occurring in only 2.8% to 8% of patients.¹ It may be asymptomatic or associated with symptoms such as pelvic pain, discomfort, dyschezia, and urgency. It can also imitate sepsis, pouchitis, cuffitis, or Crohn’s disease (CD) of the pouch.² A pouch fistula, a tract connecting 2 epithelized surfaces, is a more common complication of CD, ulcerative colitis (UC), and after ileal pouch-anal anastomosis. Currently, medical therapy and surgical intervention are used for treatment, but there is no single conclusive therapy for inflammatory bowel disease-related sinuses and fistulae. This is the first case that illustrated a pouch sinus leading to a tip of J-pouch leak. We demonstrate that a planned endoscopic approach toward the sinus and tip of J-pouch leak was viable and effective.

CASE REPORT

A 32-year-old woman presented at the Pouch Center in 2015 with chronic abdominal pain since 2013. She has a history of UC since 2001 and underwent 3-stage proctocolectomy with ileal pouch-anal anastomosis (IPAA) in 2011/2012 because of severe medically refractory UC. She began experiencing symptoms of pouchitis subsequent to closure of her ileostomy. In 2013, she had surgery for abdominal wall hernia and soon after she began to experience chronic abdominal pain, fever, and diarrhea. The patient was diagnosed with chronic pouchitis based on clinical and endoscopic evaluation and received chronic antibiotics. Her abdominal pain persisted despite antibiotic therapy. The patient was started on prednisone and infliximab in early 2015 when symptoms began to break through antibiotic treatment. She was then diagnosed with CD. Since being on infliximab, she reported around 10 bowel movements per day and an improvement in appetite, fever, and nausea. However, upper abdominal pain and a separate lower abdominal pain persisted. She required hospitalization 3 times in 2015 because of abdominal pain.

Because of recurrent symptoms, an endoscopic evaluation was planned. Pouchoscopy showed normal pouch mucosa, afferent limb, and cuff. However, 2 distal pouch “sinuses” (5 cm in length and 10 cm in length) were initially found at the anastomosis. An additional opening was found at the tip of the “J,” 10 cm from the opening of the second sinus, on a soft tip guide wire. The tip of “J” leak was connected to the distal presacral sinus (Figure 1). Therefore, a diagnosis of pouch-to-pouch fistula, from the tip of the “J” to the anastomosis, was made. The risks and benefits of endoscopic therapy were discussed with the patient, and informed consent was obtained. The patient was taken to the outpatient endoscopy suite for the inception of pouchoscopy.

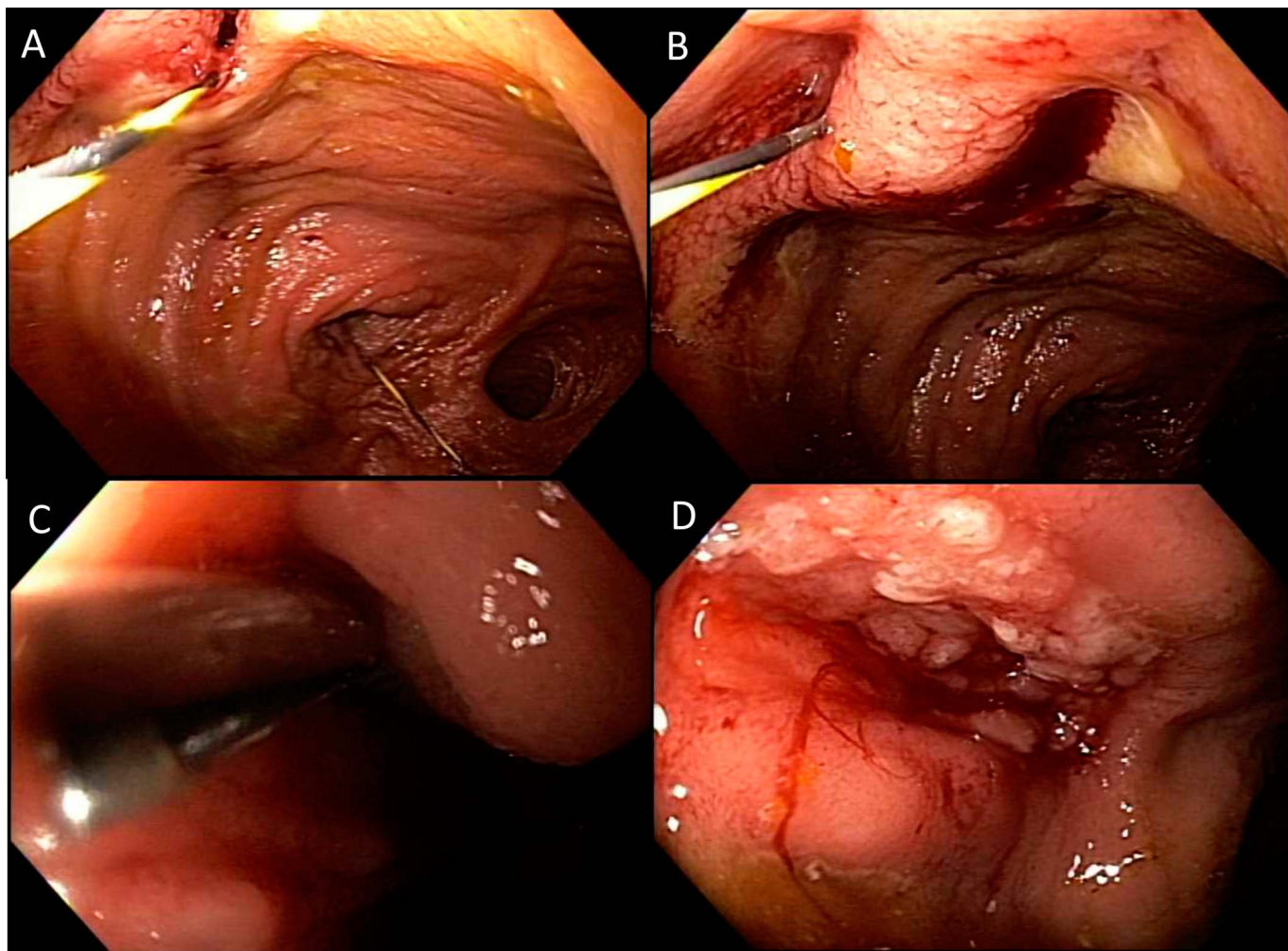


Figure 1. (A) A distal pouch sinus 10 cm in length. (B) A distal pouch sinus 5 cm in length. (C) A fistula opening at the tip of J-pouch clipped with endoclips. (D) A completely healthy presacral fistula and normal pouch.

Both sinuses were treated with needle-knife sinusotomy 4 cm deep (for the first sinus) and 5 cm deep (for the second sinus or fistula). The fistula opening at the tip of J-pouch was clipped with endoclips (Figure 1). The procedure was performed without difficulty. One month later, a follow-up pouchoscopy was performed. It presented a residual 4-cm long sinus that was further treated with needle-knife sinusotomy, 5 endoclips, and 50% dextrose spray for hemostasis and promotion of healing. Finally, the patient received a subsequent third pouchoscopy showing a residual pouch-to-pouch fistula from the tip of the J-pouch to the presacral space, which was measured 5 cm in length. This was further treated with endoscopic needle-knife fistulotomy followed by placement of 4 endoclips. One month later, a follow-up pouchoscopy showed a completely healed presacral fistula and normal pouch (Figure 1).

DISCUSSION

Pouch sinuses and fistulae often result from surgical factors. They were historically managed first with close monitoring and delayed ileostomy, but persistent sinuses required injection of fibrin glue and surgical unroofing. Fistulae are commonly

treated with long-term antibiotics, immunomodulators, and biologics, but medical therapy is effective in less than 50% of patients.³ Other treatment plans include redo pouch surgery, pouch excision, and drainage that often expose the patient to potential adverse events. Our group recently performed a case-control study and found that endoscopic sinusotomy was as effective as and less invasive than surgical redo pouch. Endoscopic sinusotomy may be considered as first-line treatment modality. Compared with redo surgery and hospitalization, endoscopic therapies are more cost effective as well. The patient does not require hospitalization after treatment, and healing occurs at a much faster rate. However, multiple treatment sessions may be needed to treat the sinus, and the procedures may apply to smaller sinus tracts.^{4,5} Needle knife is used for sinusotomy and fistulotomy separately. In this case, we used a combination of both with endoclips.

In conclusion, we successfully executed endoscopic needle-knife sinusotomy and over-the-scope clipping system in a symptomatic patient with a pouch-to-pouch fistula, from the tip of the “J” to the anastomosis. We denoted that this complex pouch complication can be safely and effectively treated with endoscopic therapy, alternative to surgery.

DISCLOSURES

Author contributions: G. Sze wrote the manuscript, created the images, edited the video, and is the article guarantor. F. Khan proofread and helped write the manuscript. B. Shen selected the case study and performed the endoscopy.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received October 23, 2018; Accepted December 27, 2018

REFERENCES

1. Ahmed Ali U, Shen B, Remzi FH, Kiran RP. The management of anastomotic pouch sinus after IPAA. *Dis Colon Rectum*. 2012;55:541–8.
2. Pappou EP, Kiran RP. The failed J pouch. *Clin Colon Rectal Surg*. 2016;29:123–9.
3. Sands BE, Anderson FH, Bernstein CN, et al. Infliximab maintenance therapy for fistulizing Crohn's disease. *N Engl J Med*. 2004;350:876–85.
4. Wu XR, Wong RC, Shen B. Endoscopic needle-knife therapy for ileal pouch sinus: A novel approach for the surgical adverse event (with video). *Gastrointest Endosc*. 2013;78:875–85.
5. Lian L, Geisler D, Shen B. Endoscopic needle knife treatment of chronic presacral sinus at the anastomosis at an ileal pouch-anal anastomosis. *Endoscopy*. 2010;42(Suppl 2):E14.

Copyright: © 2019 The Author(s). Published by Wolters Kluwer Health, Inc. on behalf of The American College of Gastroenterology. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.