found, and the infiltration of inflammatory cells with fibrosis was present in the gastric mucosal layer; therefore, it was speculated that thickening and elevation of the mucosa by the infiltration of inflammatory cells might have formed a polypoid lesion. Nevertheless, the reason for the multiplicity of lesional occurrences in AIP is unclear.

In conclusion, it is necessary to be aware of the existence of gastric lesions in the event of encountering a case of AIP, and further collection and examination of similar cases are required.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviations: AIP, autoimmune pancreatitis; ERC, endoscopic retrograde cholangiography.

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Spiral-enteroscopy–assisted enteral stent placement for palliation of malignant small-bowel obstruction (with video)

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Management of patients with small-bowel obstruction distal to the third part of the duodenum can be challenging. These patients are often poor surgical candidates, and placement of a self-expanding metal stent (SEMS) can be technically demanding. We report on 2 consecutive patients, referred with small-bowel obstruction to a tertiary-care institution, who had successful placement of SEMS by using spiral enteroscopy.

Spiral enteroscopy is a new technique that allows rapid visualization of the small-bowel. A spiral overtube (Spirus Medical, Inc, Stoughton, MA) (Fig. 1) pleats the small-bowel onto the enteroscope. The average depth of insertion by using this technique is 256 cm, taking 16.2 minutes (range 7 ± 33 minutes).[1] Spiral enteroscopy has been used to assess and treat small-bowel pathology[1-3]; however, this is the first report of using this technique to deploy an SEMS in the small-bowel.

CASE REPORT

Two consecutive patients with small-bowel obstruction were referred to a tertiary-care referral center. The procedure was performed by a single endoscopist (P.O.), with a second endoscopist (A.M.L. or V.C.) assisting. The first patient was a 53-year-old man with metastatic pancreatic adenocarcinoma who presented with small-bowel obstruction at the level of the ligament of Treitz. Peroral enteroscopy was performed by using an Olympus SIF-Q180 (Olympus America, Inc, Center Valley, PA) with a single-balloon overtube. It was possible to reach the stricture, but it was not possible to stabilize the position of the single-balloon enteroscope (SBE) to allow assessment of the stricture. Repeat enteroscopy was performed by using an Olympus SIF-Q180 with an Endo-Ease Discovery small-bowel (DSB) overtube (Spirus Medical, Inc). The DSB overtube was

Figure 1. Endo-Ease Discovery overtube.

Figure 2. Small-bowel obstruction with tumor.

carefully lubricated with the lubricant provided with the overtube to prevent liner failure, which occurs when there is friction between the endoscope and the overtube. The enteroscope and DSB overtube were inserted through the mouth and advanced across the stomach into the duodenum, with careful attention to prevent gastric loop formation. The enteroscope was advanced to the level of the stricture by using a spiral pleating technique as previously described.[1] Using a special-length sphincterotome (Wilson Cook, Winston-Salem, NC), a 0.035-inch Jagwire Guidewire (Microvasive Endoscopy, Boston Scientific, Natick, MA) was used to traverse the stricture under fluoroscopic guidance. Contrast material was injected, which demonstrated a stricture with normal small-bowel distally. The wire was advanced beyond the stricture under fluoroscopic control, until a safety loop was created. The wire was left in place and the DSB overtube was manipulated until it almost abutted the proximal end of the stricture. The enteroscope was then removed, leaving the guidewire in place. A duodenal Wall Flex stent (Boston Scientific) was inserted over the guidewire through the Spirus overtube. The stent was then positioned within the stricture by using fluoroscopy. Before deploying the stent, the DBS overtube was retracted slightly by using a counterclockwise rotation. The stent was then deployed across the stricture, situating the waist of the stent in the midpoint of the stricture.

The second patient was a 48-year-old woman with lung, liver, and peritoneal metastases from rectal cancer. She presented with nausea, vomiting, and absolute constipation. A small-bowel series demonstrated a moderately dilated proximal jejunum with delayed emptying consistent with partial small-bowel obstruction. The lesion was beyond the reach of a standard upper endoscopy. An endoscopy was performed with an Olympus SIF-Q180 with DSB overtube (Video 1, available online at www.giejournal.org). The enteroscope with DSB overtube was inserted as far as the proximal jejunum as described in the previous case. There was clear tumor invasion of the small-bowel at this level, with almost complete obstruction of the bowel lumen (Fig. 2). A Hydra Jagwire Guidewire was inserted across the stricture under fluoroscopic guidance (Fig. 3). A catheter was advanced over the wire and normal small-bowel demonstrated distal to the stricture. The guidewire was exchanged for a super-stiff Jagwire Guidewire. The enteroscope was removed, leaving the guidewire in place, and the stent was deployed across the stricture in a similar manner to that in the first case (Fig. 4).

The enteroscope was reinserted in both cases through the DSB overtube, confirming correct position and satisfactory deployment of the enteral stents within the stenoses (Fig. 5).

The first patient began a liquid diet and progressed to a soft solid diet 24 hours after stent insertion. The patient was discharged 2 days after the procedure and remains clinically well, tolerating a soft diet 5 months after the procedure. The second patient resumed a regular diet within 36 hours of SEMS insertion. She presented 2 months later with recurrent small-bowel obstruction. A CT scan demonstrated a large mass invading the proximal jejunum. The patient opted for hospice care, declining further intervention.

DISCUSSION

SEMSs are widely used to palliate malignant gastric outlet obstruction[4]; however, malignant strictures distal to the ligament of Treitz are more difficult to treat endoscopically because of difficulty reaching the lesions. Deploying a stent distal to an endoscope is technically challenging, requiring a stable position to effectively traverse the stricture and deploy a SEMS. A pediatric colonoscope can be used; however, loop formation[5] and the accessory channel can present difficulties in SEMS placement. An alternative is balloon-augmented enteroscopy.[5-8] SBE was unsuccessful in the first case because although it was possible to reach the stricture with the SBE, it was not possible to stabilize the position sufficiently to allow stent insertion. In our experience, the DSB overtube provides a more stable platform in the small-bowel for performing therapeutic procedures than does SBE.

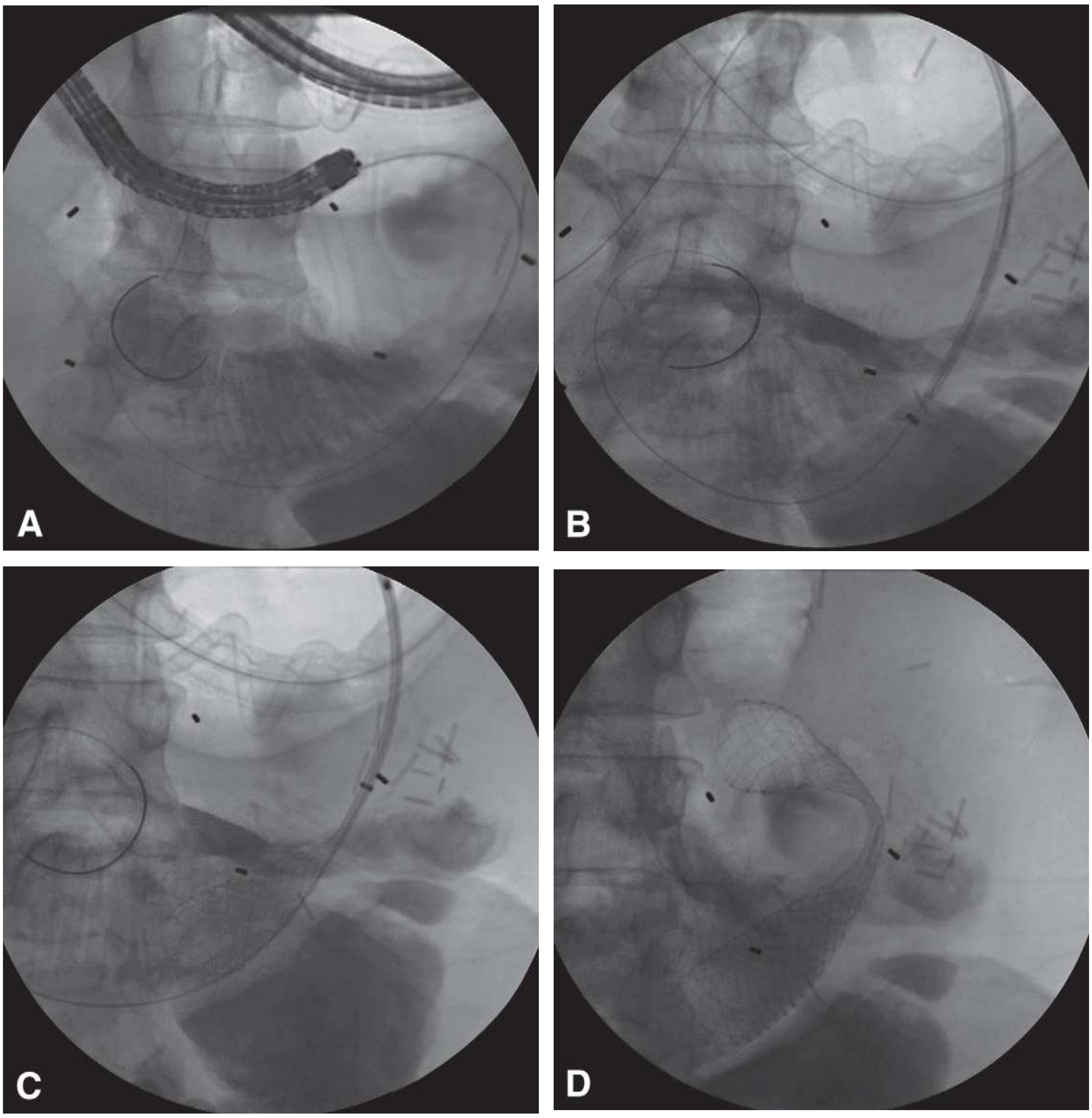

Figure 3. Deployment of SEMS using Endo-Ease Discovery overtube.

Spiral enteroscopy with a DSB overtube is a new technique that has been reported to be safe, effective, and rapid for investigating the small-bowel.[1,3] The configuration of the spirals is such that the bowel is held in a very secure position, providing stability at the distal tip, which greatly assists SEMS placement and other interventions. This advantage was instrumental in both cases described in this report. The accessory channel of commercially available enteroscopes is not large enough to admit an enteral stent. This problem is overcome by using the DSB overtube as a vehicle for deploying SEMS and conceivably other therapies. There are limitations to spiral enteroscopy. Two endoscopists are required to perform the procedure, and it is not always possible to reach the distal ileum. Initial reports suggest that it is safe, with minor mucosal trauma seen and no major side effects reported.[1,2] However, this is a relatively new technique, and, as such, larger numbers of cases and further experience are required to determine whether there are any significant side effects. Ours was a single-center study with a small number of cases. Nevertheless, in this small series, spiral enteroscopy provided a reliable method for placing enteral stents in the setting of malignant small-bowel obstruction.

CONCLUSION

Spiral enteroscopy with the Endo-Ease DSB overtube provides a stable platform for the deployment of SEMS in malignant small-bowel strictures.

DISCLOSURE

P. I. Okolo III has disclosed a consultant relationship with Spirus Medical and Boston Scientific. The other authors disclosed no financial relationships.

Figure 4. Radiographic image of deployed SEMS.

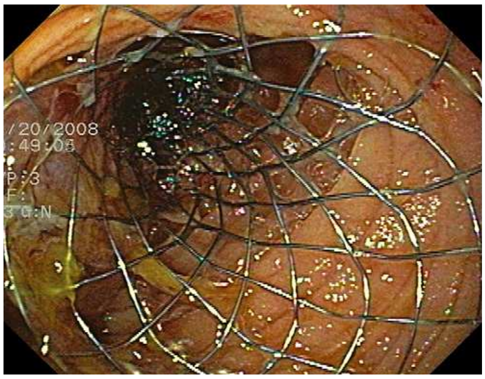

Figure 5. Endoscopic image of deployed SEMS.

Abbreviations: DSB, Discovery small-bowel overtube; SBE, single-balloon enteroscope; SE, spiral enteroscopy; SEMS, self-expanding metal stent.

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EUS-guided drainage of an isolated primary tubercular prostatic abscess

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Prostatic abscess occurs infrequently. The genitourinary tract is a common site of involvement in extrapulmonary tuberculosis. However, primary prostatic tuberculosis is very rare,[1] and tubercular abscess in the prostate gland is extremely uncommon unless the patient is immunocompromised.[2,3] Prostatic imaging studies, such as transrectal US (TRUS) and magnetic resonance imaging (MRI) are important in the diagnosis and management of prostatic abscess.[4-11] Although surgical drainage is the mainstay in the treatment of prostatic abscess, the best method of drainage remains somewhat controversial.[7,8] TRUS-guided needle aspiration or drainage is the most widely used technique, with fairly good success. Failure of this method usually requires surgical drainage.[12] Although there are a few case reports of tubercular prostatic abscess in the medical literature, all were described in AIDS patients.[2,3,7] EUS-guided transrectal