



Images in Hospital Medicine

Endoscopic Repair of an Anastomotic Leak Using Over-the-Scope Clip

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Gastrointestinal leaks are a serious surgical complication resulting in communication of intra and extra-luminal compartments arising from a defect in the anastomosis. Here we present a short case with relevant endoscopic images and radiographs demonstrating successful closure of a leak with the over-the-scope clip device. As part of a multidisciplinary team, hospitalists should be familiar with novel endoscopic treatment options.

IMAGE REPORT

A 76-year-old woman presented with left lower quadrant abdominal pain four weeks after laparoscopic sigmoid resection for recurrent diverticulitis. The patient was afebrile and abdominal examination revealed mild LLQ tenderness and mild distention. A post operative JP drain remained in good position in the mid abdomen with scant liquid. A non-contrast CT of the abdomen was initially obtained with revealed free air. A barium enema showed an anastomotic stricture with an associated leak with extraluminal contrast collection along the pelvic sidewall. Gastroenterology was consulted for possible endoscopic repair.

A flexible sigmoidoscopy was performed which visualized the anastomosis in the sigmoid colon characterized by mild luminal stricture, ulceration and a disrupted staple line. There was a visible sinus tract which was felt to be the defect leading to the leak seen on imaging ([Figure 1a](#)). The scope was withdrawn and the over-the-scope clip (OTSC) was attached to the distal end of the scope and reinserted. The defect was then positioned at the center of the cap. Suction was applied capturing the surrounding mucosa and the clip was deployed ([Figure 1b](#)) resulting in closure of the defect. Follow up gastrografin enema demonstrated no evidence of extraluminal contrast confirming complete occlusion of the anastomotic leak by the OTSC ([Figure 2](#)). The patient did well after the procedure without complication.

Gastrointestinal leaks are defects in the gut wall resulting in communication of intra and extra-luminal compartments. Leaks can lead to significant morbidity and mortality.¹ Treatment of anastomotic leaks involves a multidisciplinary team including the hospitalist/internist, gastroenterologist, and surgeon. While awaiting definitive treatment, all patients should be treated conservatively with bowel rest (NPO), antibiotics and potentially with total parenteral nutrition depending on expected resolution. The

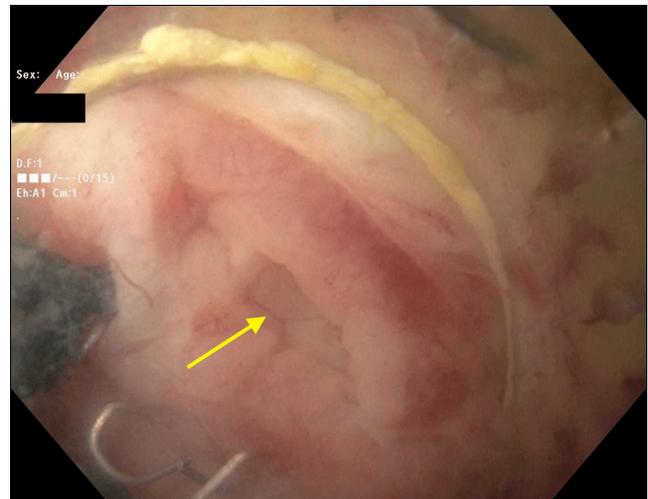


Figure 1a. Flexible sigmoidoscopy showing fistula opening (arrow) at the surgical anastomosis.

Ovesco OTSC is a novel device that allows closure of luminal defects up to 2 cm in size. OTSC has allowed for endoscopic treatment of defects that would have previously required surgery.^{1,2} Other uses for OTSC include hemostasis of high risk or refractory bleeding lesions, closure of fistulas or perforations, fixation of endoluminal stents and endoscopic full thickness resection. Potential complications of OTSC include premature deployment, perforation, and compression of surrounding tissue or organs. The clip is considered MRI conditional. In conclusion, endoscopic approaches have been shown to be safe, effective and less invasive than surgery for leak closures.²

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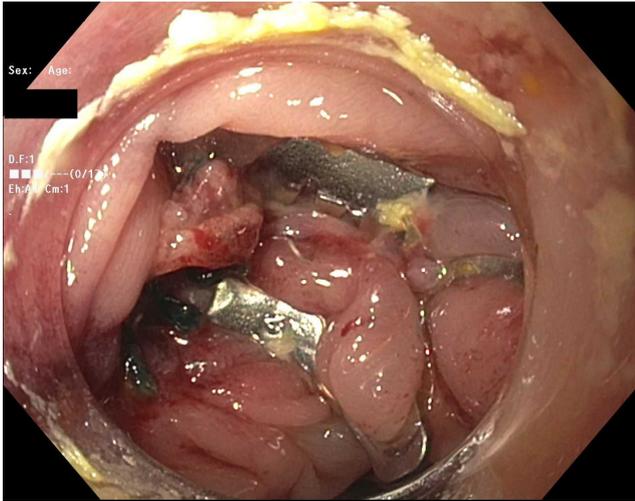


Figure 1b. After successful deployment of the over-the-scope clip.

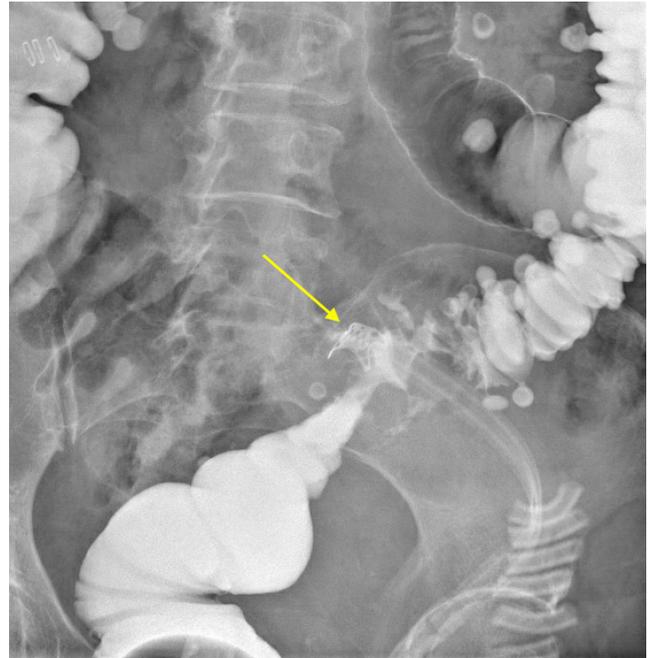


Figure 2. Enema showing no extraluminal contrast after clip closure (arrow).

DISCLOSURES/CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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