Use of the Over-The-Scope-Clip for Treatment of Massive Gastrointestinal Bleeding from a Jejunal Varix.

INTRODUCTION

The Over-The-Scope Clip (OTSC; Ovesco, Tübingen, Germany) is a novel endoscopic clipping device designed for tissue approximation. The device offers a non-surgical approach to fistula closure, gastrointestinal (GI) perforation closure and bleeding control (1, 2). We report a patient in whom the Ovesco clip was used for successful endoscopic management of massive gastrointestinal bleeding from a jejunal varix, where previous interventions had failed.

CASE

A 67-year-old male with past medical history significant for coronary artery disease, chronic renal insufficiency and Laennec’s cirrhosis was admitted for a laparoscopic left radical nephrectomy for renal cell carcinoma. Post nephrectomy, his hospital stay was complicated by superior mesenteric vein thrombosis requiring anticoagulation. Patient then developed melena with a significant hematocrit drop. Upper Endoscopy was performed which revealed findings suggestive of recent bleeding in the distal duodenum, but no active bleeding site was identified. The next day, he continued to show clinical evidence of bleeding, therefore a tagged red blood cell scan was performed, which showed an abnormal radiotracer activity in the proximal jejunum. Subsequently an Enteroscopy revealed fresh blood in the duodenum-jejunal area and an organized clot around a mildly swollen ampulla raising suspicion for a hepatobiliary/pancreatic source. A subsequent angiogram demonstrated a right hepatic artery pseudoaneurysm which was coil embolized. No flow was seen in the pseudoaneurysm post-embolization. Unfortunately, the patient continued to bleed profusely. He underwent repeat mesenteric angiography, which did not demonstrate active extravasation of contrast. He was evaluated by surgery but deemed high-risk due to his multiple comorbidities. Repeat Enteroscopy was...
then undertaken for continued bleeding. By now he had received a total of 38 units of packed red cells, 13 units of thawed plasma, 9 units of fresh frozen plasma, 3 units of platelets and 2 units of cryoprecipitate.

At repeat endoscopic evaluation, the major ampulla was visualized with a side viewing endoscope and clear bile was seen flowing from the ampulla with no evidence of hemobilia. Using a pediatric colonoscope a push enteroscopy was performed to the proximal jejunum. A tortuous, varix-like, prominent blood vessel with a central small ulceration was noted in the proximal jejunum with active bleeding from the varix. Ethanolamine was injected into the varix but hemostasis could not be achieved. Then a size 12/6t OTSC was loaded onto the pediatric colonoscope and deployed over the actively bleeding jejunal varix. Immediate and complete hemostasis was achieved with a single Ovesco clip application (Figures 1-3) Patient did not require any additional blood transfusions after the procedure and his hematocrit stabilized over the next several days, with no further transfusion requirement. However, due to his multiple other comorbidities and overall poor prognosis, the family opted for "comfort measures only" and he passed away several days later. No further bleeding was noted post-Ovesco clip placement.

**DISCUSSION**

The OTSC device is an excellent tool for treating gastrointestinal tract hemorrhage, small perforations, and post-operative fistulae since its advent at the end of 2010.[2] This novel system is fundamentally different from the traditional endoscopic clips in that it is introduced and deployed "over the scope", rather than "through the scope". While evidence for clinical use in humans is accumulating, large scale comparative studies are lacking. We describe here a case of a patient in whom the OTSC device was used to successfully treat a massively bleeding jejunal varix that had failed multiple evaluations and interventions. Post procedure, there was complete hemostasis achieved, with stable hematocrit and no further bleeding or transfusion requirements.

**CONCLUSIONS**

Management of GI perforations, fistulae, and massive bleeding should involve a multidisciplinary approach with collaboration between endoscopists and other specialties. The OTSC device represents a major advance in the realm of endoscopic management of high risk patients in a variety of challenging clinical settings. It is a particularly valuable tool for a subset of patients who may otherwise be very poor surgical candidates, as in the case of our patient. In addition, successful management of bleeding and perforation endoscopically using the Ovesco clip helps avoid the cost and morbidity of surgery and other interventions. To our knowledge, this is the first successful use of the OTSC device in the management of massive jejunal variceal bleeding.

**References:**