

# Alternative Treatment of a Bleeding Rectal Varix Using an Over-the-Scope Clip

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## ABSTRACT

Portal hypertension with the subsequent development of portosystemic shunts such as rectal varices is a well-known complication of liver cirrhosis. We discuss the classic options for management of bleeding rectal varices. We present an alternative and not previously described use of an over-the-scope clip to manage bleeding from a rectal varix refractory to management with endoscopic banding.

## INTRODUCTION

The prevalence of rectal varices in cirrhotics varies from 38% to 70%, but in 1 study, the addition of endoscopic ultrasound can increase the detection yield of deep rectal varices (perirectal and pararectal) from 11% to 51% of cases when compared with endoscopy.<sup>1,2</sup> Although rare, bleeding from rectal varices can be life-threatening. There are, to date, no established guidelines to guide the management of bleeding rectal varices. Options range from endoscopic, interventional radiology (transjugular intrahepatic portosystemic shunt and balloon-occluded retrograde transvenous obliteration) to, in severe cases, surgery. Endoscopic techniques include endoscopic injection sclerotherapy, endoscopic band ligation (EBL), and endoscopic ultrasound-guided cyanoacrylate injection with coil embolization. However, the modality used is dependent on local expertise. In a retrospective analysis, endoscopic injection sclerotherapy appeared to be superior to EBL in terms of long-term effectiveness and complications. EBL had higher rates of recurrence at 1 year although it was not significant (56% vs 33%).<sup>3</sup>

## CASE REPORT

A 27-year-old woman with a history of decompensated liver cirrhosis with a Model for End-Stage Liver Disease score of 30 secondary to primary biliary cholangitis and autoimmune hepatitis overlap was admitted to the intensive care unit for septic shock and acute kidney injury secondary to a multidrug-resistant *Escherichia coli* urinary tract infection. She was on propranolol for primary variceal prophylaxis and a history of chronic normocytic anemia (baseline hemoglobin 8.5 mg/dL).

Two months before this admission, the patient had a local admission for hematochezia. At that time, she had an esophagogastroduodenoscopy (EGD) that showed nonbleeding grade I esophageal varices and moderate portal hypertensive gastropathy. In addition, a flexible sigmoidoscopy showed mild, nonbleeding, internal hemorrhoids and no rectal varices were reported.

On admission, her workup was negative for spontaneous bacterial peritonitis, but 2 days after her admission, she was noted to have hematochezia and worsening anemia down to 5.7 mg/dL. A decision was made to perform an EGD that showed severe portal hypertensive gastropathy and 4, nonbleeding, grade III esophageal varices, which were banded 4 times. A flexible sigmoidoscopy showed an area in the distal rectum with an overlying clot that oozed on water irrigation, concerning for a bleeding rectal varix that was treated with the placement of 1 band.



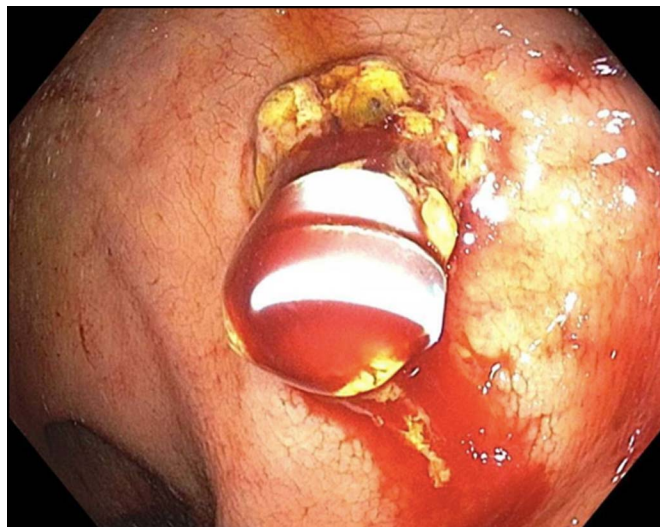
**Figure 1.** Rectal varix with dislodgement of the band and overlying clot.

Three days after the initial EGD and flexible sigmoidoscopy, the patient developed worsening anemia (6.7 mg/dL down from 7.7 mg/dL) that required 2 units of packed red blood cells and 2 units of fresh frozen plasma. Repeat flexible sigmoidoscopy showed a large blood clot with ulceration and mild oozing overlying the previously seen rectal varix seen 2 cm away from the anal canal (Figure 1). Because the prior band was noted not to be present, suggesting dislodgement, a decision was made to place 2 bands with successful hemostasis.

Unfortunately, over the next couple of days, the patient continued to have persistent hematochezia, and 5 days after her second flexible sigmoidoscopy, the patient had another drop in her hemoglobin (from 9 mg/dL to 6.7 mg/dL) which required another unit of packed red blood cells. Colonoscopy was performed that showed 1 medium-sized, bleeding rectal varix. It had stigmata of prior banding 2 times and an overlying clot. A necrotic ulcer base was noted (Figure 2). Hot snare with soft coagulation (Effect 5/50 W) was used through the working channel of the colonoscope to resect the protuberant part of the clot along with the bands. This was successful but revealed a bleeding vessel at the base of the prior banding site. To stop bleeding post-manuever, one 12 × 6 mm over-the-scope clip (OTSC; Ovesco Endoscopy, Tübingen, Germany; already mounted on the colonoscope before performing hot snare) was successfully placed over the ulcerated bleeding site achieving complete hemostasis (Figure 3). There was no bleeding at the end of the procedure. The patient was then transferred to a transplant center for liver transplant evaluation where unfortunately died a couple of days after from septic shock.

## DISCUSSION

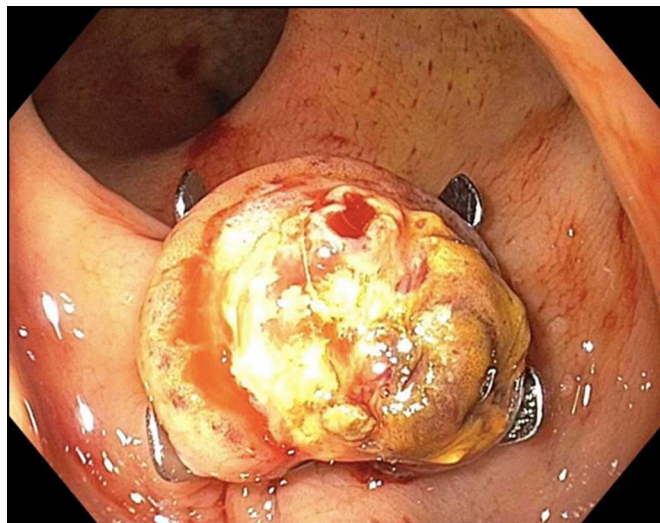
OTSCs have been recently described as adjuvants for hemostasis in gastrointestinal bleeding with immediate success reported up to 87%, and persistent bleeding in only 6% of



**Figure 2.** Bleeding varix with stigmata of prior banding and a necrotic base.

cases.<sup>4,5</sup> The “bear-claw” design allows for deeper anchoring into tissue, exhibiting a high compression force and grasping more tissue. It is currently positioned as a rescue or salvage therapy after failing standard hemostatic techniques.

The vast majority of literature refers to the use of the OTSC to achieve hemostasis in ulcers, bleeding after endoscopic mucosal resection and endoscopic submucosal dissection, and closure of perforations, fistulas, and mucosal defects.<sup>6–12</sup> Although the use of OTSC was described by Sharma et al in acute esophageal variceal hemorrhage, to our knowledge, this is the first case to be reported of using an OTSC to achieve rectal varix hemostasis after resection of previous bands using hot snare coagulation was achieved successfully.<sup>13</sup>



**Figure 3.** Placement of an over-the-scope-clip over the bleeding site to achieve hemostasis.

This case illustrates that the OTSC, although not indicated, could play a role in the management of variceal bleeding from the lower gastrointestinal tract and that the general gastroenterologist should be familiar with its use as an alternative therapy when rectal varices failed standard endoscopic therapies.

## DISCLOSURES

Author contributions: All authors wrote and edited the manuscript. T. Rustagi is the article guarantor.

Financial disclosure: T. Rustagi is a consultant for Boston Scientific.

Informed consent was obtained from the patient's next of kin for this case report.

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