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Effective hemostasis by use of hemospray in a case of severe bleeding in the jejunum

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Description

Gastrointestinal (GI) bleeding remains one the most common life-threatening emergencies associated with high morbidity and mortality and requires rapid and effective endoscopic hemostasis. Despite several available endoscopic hemostatic methods (injection therapy, mechanical and thermal therapy), the treatment of small bowel bleeding is still challenging, and successful hemostasis can be difficult to achieve. One of the novel topical hemostatic agents (Hemospray; Cook Medical, Winston-Salem, NC) was approved for the management of non-variceal upper GI bleeding, and clinical efficacy was shown for GI bleeding due to peptic ulcer, malignancy, gastric variceal hemorrhage, antithrombotic therapy, and lower GI bleeding [1-5].

We report a case of successful application of Hemospray using a modified technique for balloon enteroscopy in a case with severe bleeding in the jejunum.

A 63-year-old woman was referred to the endoscopy unit due to signs of GI bleeding with a subacute history of hematemesis and recent melena. The initial hemoglobin level was 8.4 g/dl and INR was slightly increased. Hemodynamic parameters were stable.

Esophago-gastro-duodenoscopy and colonoscopy revealed no bleeding source. However, the patient returned with acute signs of GI bleeding, and a video capsule enteroscopy showed a diffuse bleeding in the proximal jejunum (Figure 1). A single-balloon-enteroscopy identified the bleeding 30 cm distal of the ligament of Treitz (Figure 2). Hemospray was topically applied on the bleeding site through a single-balloon-enteroscope with a modified technique, using a catheter with a stiff guidewire to avoid bending and accidental clotting of spray catheter (Figure 3). Second-look endoscopy 48 hours later showed a 2 X 2 cm large submucosal lesion with ulcerations as the bleeding source (Figure 4). The lesion was marked with clips and ink marked to facilitate later identification during surgery (Figure 5). The lesion was removed surgically (Figure 6), and the postoperative recovery was uneventful. Histological examination revealed a well-vascularized submucosal benign tumor (Figure 7).

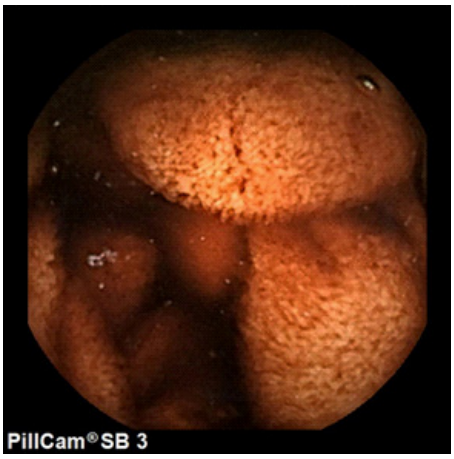
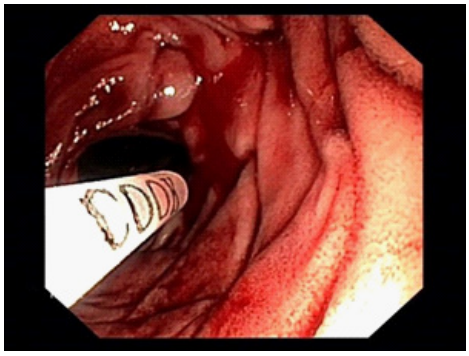


Figure 1: Video capsule endoscopic picture showing diffuse bleeding in the proximal jejunum.



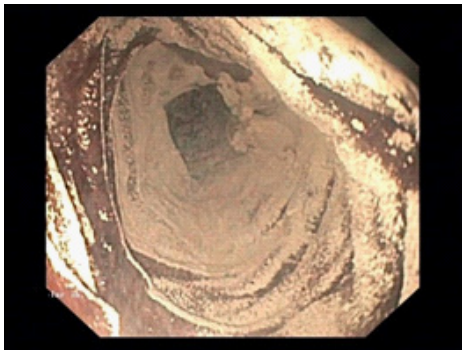


Figure 2 and 3: Endoscopic picture showing ongoing bleeding in the proximal jejunum before and after treatment with Hemospray.

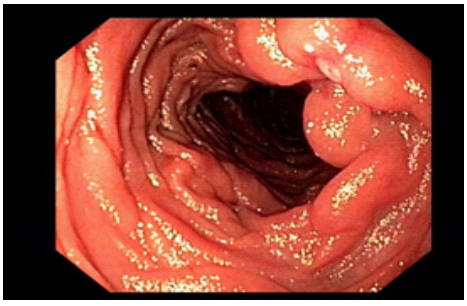


Figure 4: Endoscopic picture showing an ulcerated submucosal tumor in the proximal jejunum.

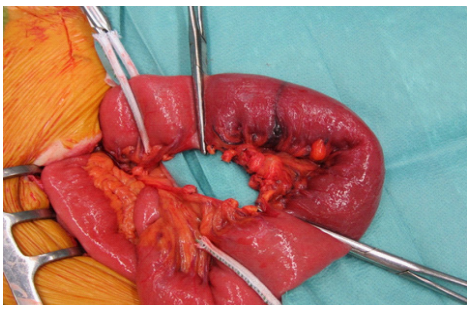


Figure 5: Surgical specimen of jejunum with ink marking.

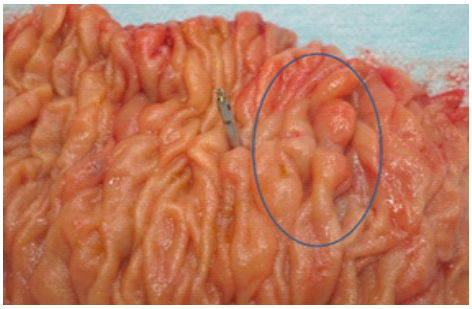


Figure 6: Resected specimen of jejunum with submucosal ulcerated tumor.

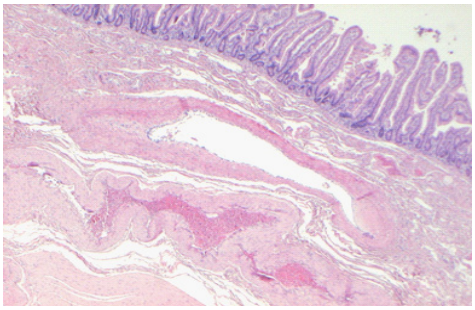


Figure 7: Microscopic picture of benign vascularized submucosal tumor.

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