

The light at the end of the tunnel: tunnel bleeding following per-oral endoscopic myotomy



► **Fig. 1** Large hematoma at the entrance of the tunnel.



► **Fig. 2** Pressure ulcer caused by the hematoma at the esophagogastric junction.

Per-oral endoscopic myotomy (POEM) is a relatively safe procedure in expert hands. Complications associated with POEM include pneumoperitoneum, pneumothorax, and subcutaneous pneumothorax. Bleeding during the procedure can occur and is usually treated with the use of coagulation forceps. Delayed bleeding is rare, occurring in only 0.2–0.7% of patients [1,2].

A 73-year-old woman with history of achalasia for 10 years and a history of Heller myotomy presented with recurrence and underwent per-oral endoscopic myotomy (POEM). A posterior POEM was



► **Video 1** Technique to control bleeding into a tunnel after a peroral endoscopic myotomy.

performed successfully without any complications. At 12 hours following the procedure, she developed hematemesis associated with significant hypotension. She was resuscitated and an emergent upper endoscopy was performed. Endoscopy revealed distension of the tunnel and a large clot below the gastroesophageal junction eroding into the stomach from the tunnel (► **Fig. 1**). The tunnel was then opened by removing the hemostatic clips. The scope was advanced into the tunnel with an endoscopic cap (► **Fig. 2**) (► **Video 1**). A snare was used to clean large clots from the tunnel. Coagulation forceps was used to coagulate any visible vessel. The tunnel was washed with gentamicin. The opening of the tunnel was then closed with hemostatic clips. The patient did well after the procedure and was discharged 24 hours later. At 1 month follow-up, patient reported resolution of her dysphagia and no further signs of bleeding. At 1-year follow-up, no dysphagia was reported by the patient.


Intraoperative bleeding during POEM is usually minimal but can occur during any of the steps of POEM. Bleeding during the procedure tends to be self-limiting and respond to coagulation. Delayed bleeding can manifest in the first 48 to 72 hours after POEM. It is uncommon and is seen in 0.2% of patients [2]. Management entails re-entry into the tunnel, evacuating any blood clots, and identifying and coagulation of the bleeding site.

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Competing interests

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