

EUS-guided esophageal lumen restoration in a young patient with complete luminal obstruction (with video)

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A 28-year-old woman with type 1 diabetes presented with severe dysphagia after pregnancy. Endoscopy showed a “blind” esophagus, with complete esophageal obstruction [Figure 1]. An endoscopic approach was unsuccessful in finding an access for the guidewire, and no evidence of contrast medium passage was seen. EUS was used to study the esophageal layers and try to see behind the stricture. The wall was thickened (10 mm), with prevalence of the submucosa. A mild insufflation of air, used as ultrasonographic contrast, allowed the endosonographer to see a hyperechoic line that was interpreted as the submillimetric remnant of the esophageal lumen [Figure 2]. A 19-gauge access needle was used to puncture, under EUS guidance, the esophageal wall [Figure 3] starting from the hyperechoic line inside the esophagus. After initial resistance, under fluoroscopic view of the needle path, a point of least resistance was felt, and the needle tip, inserted for almost 5 cm, was visualized below the diaphragm. A guidewire was inserted into the needle and under fluoroscopic view was seen creating a loop inside the stomach [Figure 4]. A Hurricane RX biliary balloon dilation catheter (6-mm diameter, 4-cm length), (Boston Scientific Corp., Natick, MA) was passed through the stricture, and the first dilation was performed [Figure 5]. In the following weeks, other dilations were performed with Savary bougies (Boston Scientific Corp., Natick, MA), and the esophageal lumen was restored [Video 1]. Forceps biopsies revealed acute and chronic inflammation, with severe fibrosis and no signs of eosinophilic esophagitis or tumor. After 3 months, the patient could eat normally, and a weight increase of 3 kg was observed. Complete esophageal obstruction may arise from both benign and malignant diseases. The treatment must be managed in centers with extensive experience of operative endoscopy because the approach may be challenging.^[1–3] We propose an alternative, ultrasonographic-guided approach to esophageal restoration.

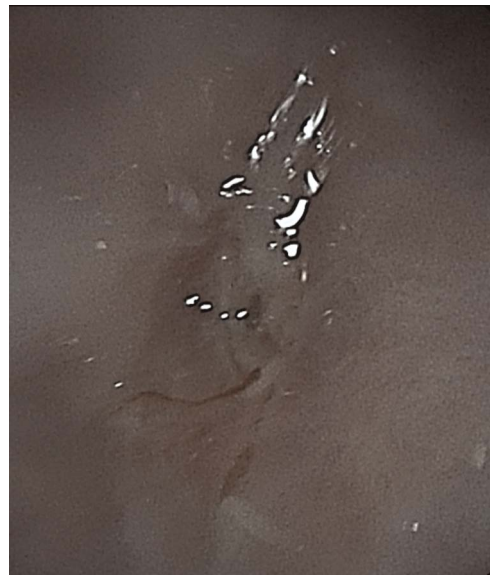


Figure 1. The endoscopic view of complete esophageal obstruction.

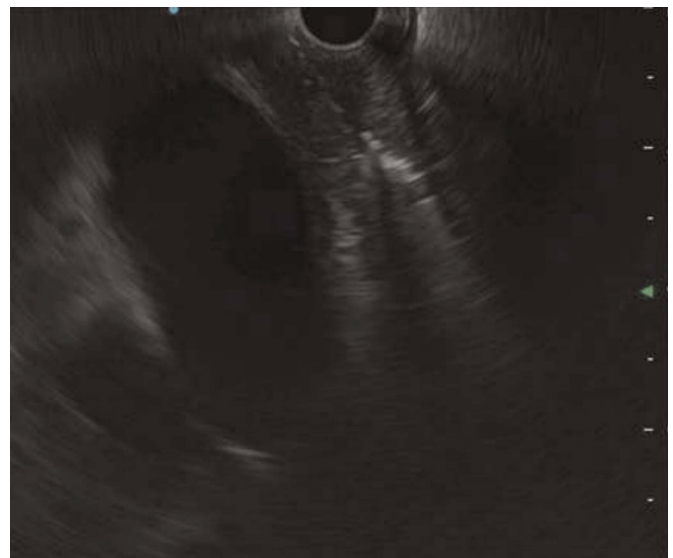


Figure 2. On EUS image, esophageal wall was homogeneously thickened.

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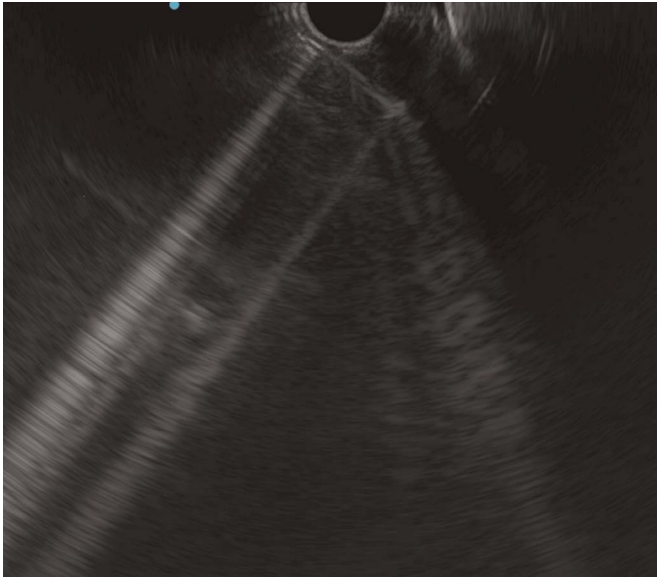


Figure 3. A 19-gauge access needle was used to puncture the esophageal wall under EUS guidance.



Figure 5. The endoscopic view of the first dilatation with balloon.

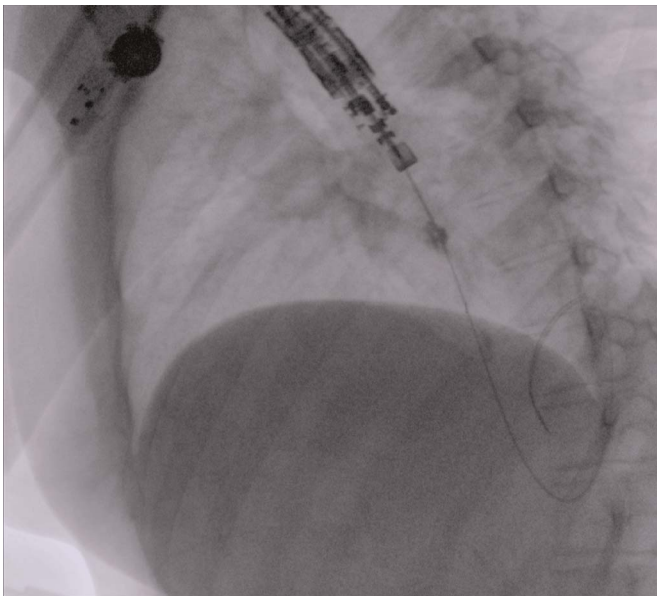


Figure 4. Fluoroscopic view of the guidewire that was inserted through the needle and advanced into the stomach.

Video Legend

Videos are only available at the official website of the journal (www.eusjournal.com).

Informed Consent

Informed consent was obtained from the patient for the publication of their information and imaging.

Conflicts of Interest

None declared.

Author Contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Silvia Carrara and Marco Spadaccini. The first draft of the manuscript was written by Marco Spadaccini, Silvia Carrara and Kareem Khalaf and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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