

Complete duodenal obstruction and EUS-guided gastroenterostomy: What to do? (with video)

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Gastroenterostomy using a lumen-apposing metal stent (LAMS) is an effective procedure to solve gastric outlet obstruction, but usually, an oroenteral catheter is necessary for filling the small bowel.^[1] What to do in cases of complete obstruction when it is not possible even to advance a guidewire through?

The academic purpose of this work was to expose a useful approach that may be considered in this scenario. A 64-year-old woman was referred for a complete duodenal obstruction due to pancreatic adenocarcinoma: first, EUS-guided identification of the collapsed small bowel at the Treitz area, and second, EUS-guided puncture using a 22G needle (without stylet and flushed with saline to avoid air injection), filling contrast and saline into the lumen bowel. A submucosal injection of the enteral wall can be recognized as easy to perform and can help to access nicely the enteral lumen, without doubts and fluoroscopy assistance

[Figure 1]. Once the lumen gains enough diameter, a second EUS-guided puncture with 19G needle is safely done. Then, a water-jet filling technique is possible, connecting a water pump directly to the 19G needle [Figure 2]. Lastly, once the small bowel is largely distended, the direct “free-hand” method using an electrocautery-enhanced LAMS (HotAxios; 20 × 10 mm) is used and then completely deployed. After intra-LAMS dilation (optional), spontaneous water drainage and visualization of the enteral lumen confirm successful gastroenterostomy [Figure 3, Video 1]. The patient started oral feeding correctly within 8 hours.

Although the direct use of a 19G needle has been reported, given that, in most cases, the small bowel will be collapsed, the first attempt to access inside the enteral lumen may be easier using firstly a 22G needle (a 22G → 19G → free-hand LAMS, strategy).^[2]



Figure 1. a. Collapsed small bowel close to the gastric wall, at the Treitz area. b. EUS-guided puncture using a 22G needle (without stylet and flushed with saline), filling contrast and saline into the lumen bowel. A submucosal injection of the enteral wall can be recognized as easy to perform and can help to access nicely the enteral lumen, without doubts. c. Fluoroscopy confirmation.

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Endoscopic Ultrasound (2023) 12:4

Received: 4 October 2022; Accepted: 12 April 2023

Published online: 18 September 2023

<http://dx.doi.org/10.1097/eus.000000000000019>

Video Legend

Complete duodenal obstruction and EUS-guided gastroenterostomy: What to do?

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. All authors have read and agreed on the content of this article.

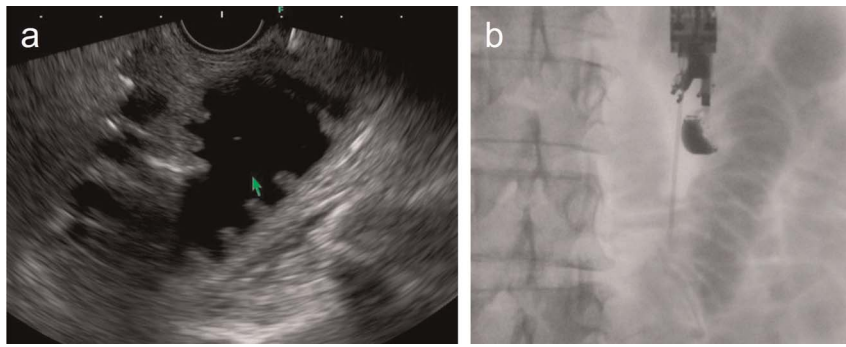


Figure 2. Once the enteral lumen gains enough diameter (a), a second EUS-guided puncture with 19G needle is performed b), EUS.

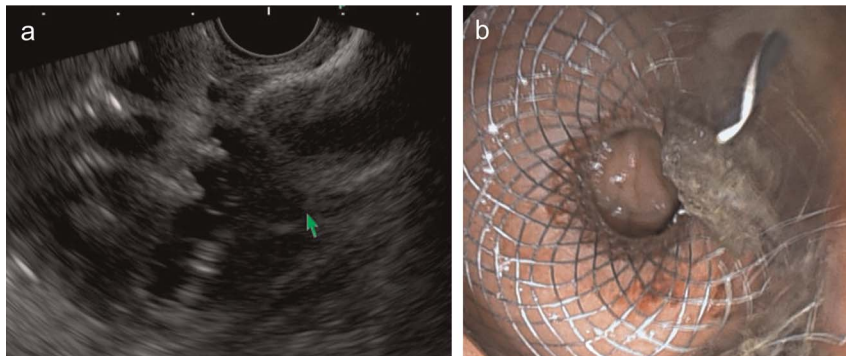


Figure 3. a, Direct free-hand method using an electrocautery-enhanced LAMS (HotAxios; 20 mm × 10 mm). b, After intra-LAMS dilation, visualization of the enteral lumen confirms successful gastroenterostomy. LAMS: lumen-apposing metal stent.

Funding

The authors have no financial disclosures and no grant support to report.

Conflicts of Interest

Dr. Gornals is a consultant for BostonSc. The other authors have no conflicts of interest to disclose.

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