

Title:

Endoscopic submucosal dissection for exploration and removal of a gastric buried foreign body

Authors:

Lijuan Mao, Tao Dong, Wan Lu, Zeyu Wu, Qide Zhang

DOI: 10.17235/reed.2022.8885/2022

Link: [PubMed \(Epub ahead of print\)](#)

Please cite this article as:

Mao Lijuan, Dong Tao, Lu Wan, Wu Zeyu, Zhang Qide. Endoscopic submucosal dissection for exploration and removal of a gastric buried foreign body. Rev Esp Enferm Dig 2022. doi: 10.17235/reed.2022.8885/2022.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Endoscopic submucosal dissection for exploration and removal of a gastric buried foreign body

Lijuan Mao[#], Tao Dong[#], Wan Lu, Zeyu Wu, Qide Zhang*

Digestive Endoscopy Center, Affiliated Hospital of Nanjing University of Chinese Medicine (Jiangsu Province Hospital of Chinese Medicine), Nanjing, China.

[#] Lijuan Mao and Tao Dong contributed equally to this work.

***Correspondence:** qidezh@163.com

Keywords: Foreign body. Endoscopic submucosal dissection. Endoscopy. Surgery. Treatment.

Dear Editor,

Foreign body (FB) fully embedded in the gastrointestinal tissue forming a buried FB is rare, characterized by deceiving endoscopic appearances, e.g., erosion, ulceration, or subepithelial lesion. Conventional endoscopic removal is challenging in this circumstance under which surgery is usually indicated. We reported a gastric buried FB that treated via endoscopic submucosal dissection.

Case report

A 64-year-old woman was referred to our center with intermittent abdominal pain for 4 days. At a primary hospital, computed tomography (CT) demonstrated a gastric foreign body (FB), while esophagogastroduodenoscopy (EGD) was negative. On admission, physical examination was unremarkable. CT re-examination depicted a linear object in the gastric antrum (Fig. 1A). EGD showed a gastric ulcer (Fig. 1B) but could not find any FBs. Assuming that FB had migrated inside the gastric wall, endoscopic ultrasound (EUS) was performed, which revealed a striped hyperechoic structure indicative of a gastric buried FB. As the patient was stable without the sign

of perforation, we attempted endoscopic submucosal dissection (ESD) instead of primary surgery. Following nearly complete dissection, a whitish fishbone-like object was noticed (Fig. 1C-D). It was retrieved with a forceps (Fig. 1E) and demonstrated as a sharp bone (Fig. 1F). No significant perforation was observed with a meticulous inspection of the post-ESD wound. The mucosal defect was closed with endo-clips. With fasting and parenteral nutrition, the patient resumed a liquid diet on postoperative day 3 and was discharged smoothly.

Discussion

FB fully embedded in the gastrointestinal tissue forming a buried FB is rare, characterized by deceiving endoscopic appearances, e.g., erosion, ulceration, or subepithelial lesion, making conventional endoscopic identification and removal challenging (1). CT and EUS could provide helpful information in its differential diagnosis (2). Surgery is regarded as the last option for complicated FBs (3), while for a buried FB, our case illustrated the feasibility of ESD, a well-established endoscopic resection technique for its removal.

References:

- [1] Watanabe Y, Ukiyama E, Abe N, et al. Extraction of buried and covered foreign body in esophagus using endoscopic submucosal dissection devices. *Pediatr Int* 2020,62(3):401-402.
- [2] Dong T, Tao Y, Wu R, et al. Endoscopy-negative esophageal foreign body - The role of computed tomography. *Rev Esp Enferm Dig* 2022, Publish Ahead of Print.
- [3] Birk M, Bauerfeind P, Deprez PH, et al. Removal of foreign bodies in the upper gastrointestinal tract in adults: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2016,48(5):489-96.

Figures and figure legends

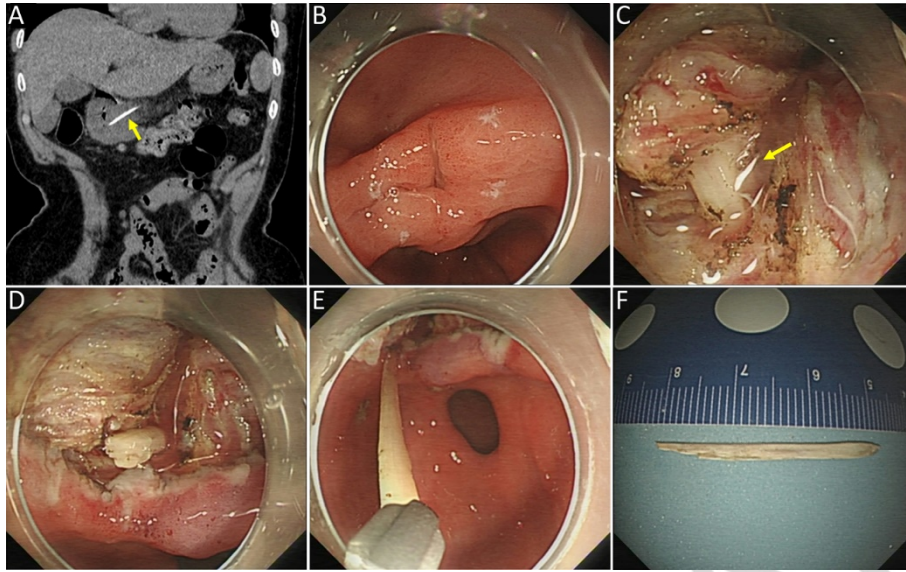


Figure 1. A. Coronal computed tomography image showed an approximately 3-cm linear hyperdense object (yellow arrow) in the gastric antrum. B. Endoscopy revealed a hole-like ulcer at the lesser curvature of the gastric antrum. C. A hard whitish object (yellow arrow) was noted in the submucosal space during the dissection. D. After complete dissection, a bony foreign body (FB) was demonstrated vertically embedded in the muscular tissue. E. The FB was removed with a forceps. F. The extracted FB.