

Endoscopic Ultrasound-Guided Management of an Esophageal Duplication Cyst

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A 37-year-old female presented with dysphagia to solids and epigastric pain for 2 months. She denied any history of chest pain, regurgitation, or vomiting. Baseline investigations were unremarkable. An upper gastrointestinal endoscopy (UGIE) showed a globular swelling causing external compression of the lower third of the esophagus (►Fig. 1). Possibilities of an abscess, a retroperitoneal tumor (sarcoma or a lipoma), were considered. She did not have any localizing symptoms of a primary malignancy; hence, metastasis was an unlikely differ-

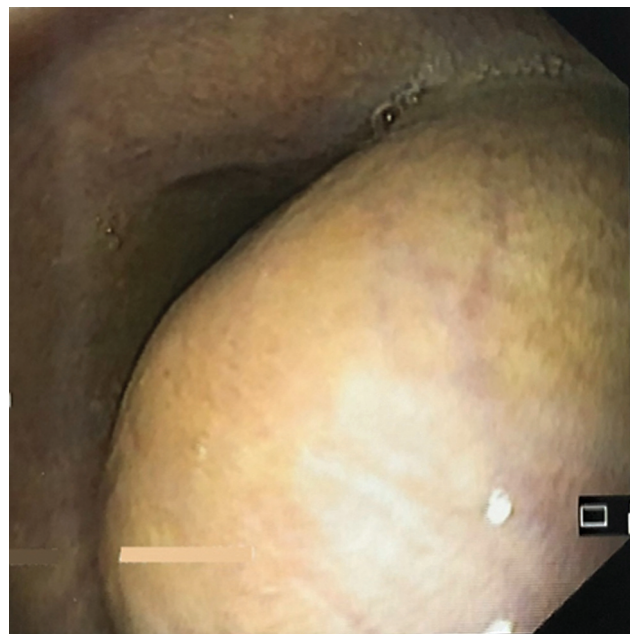


Fig. 1 Upper gastrointestinal endoscopy showed a globular external compression of the lower third of the esophagus.

ential. Endoscopic ultrasound (EUS) showed a cyst (3 × 2 cm) with hypoechoic contents and a multilayered wall, compressing the wall of the esophagus (►Video 1). The mural layers of the cyst were contiguous with the esophageal wall, and it was an intramural cyst. Contrast-enhanced computed tomography of thorax showed a hypodense mediastinal mass abutting the lower esophagus (►Fig. 2A and B). A diagnosis of duplication cyst was made. The patient declined surgery; hence, endoscopic management was planned.

Intravenous ceftriaxone (1 g) was prophylactically administered before the procedure to prevent infection (►Video 1). Under EUS guidance, a 19G fine-needle aspiration needle (Boston Scientific, Pennsylvania, United States) was used to puncture the cyst wall and pass a 0.035-inch guidewire into the cavity. Triangular tip knife (Olympus, Tokyo, Japan) was used to make a vertical incision on the adjacent esophageal wall; brownish fluid was seen exuding from the cyst. Biopsies were taken from the cyst wall, and the edges of the incision were clipped to avoid recurrence.

Video 1

Online content including video sequences viewable at: <https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0044-1782541>.

The patient recovered well; there was no pain or fever during the hospital stay. The leucocyte counts remained normal. Her dysphagia was completely relieved on follow-up at 2 weeks. The biopsies showed stratified squamous epitheli-

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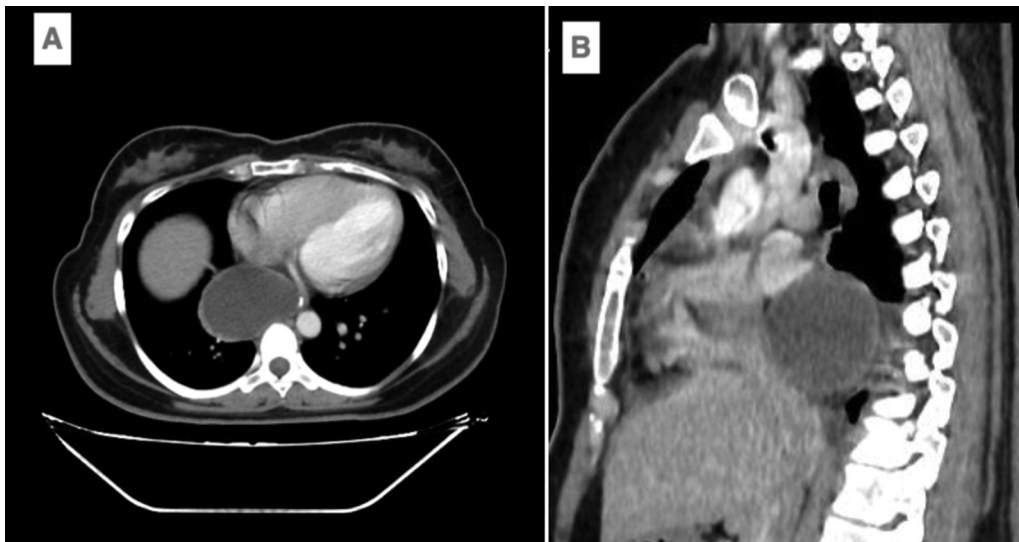


Fig. 2 Contrast-enhanced computed tomography chest showed a hypodense cystic mediastinal mass posterior to the esophagus: (A) transverse view; (B) sagittal view.

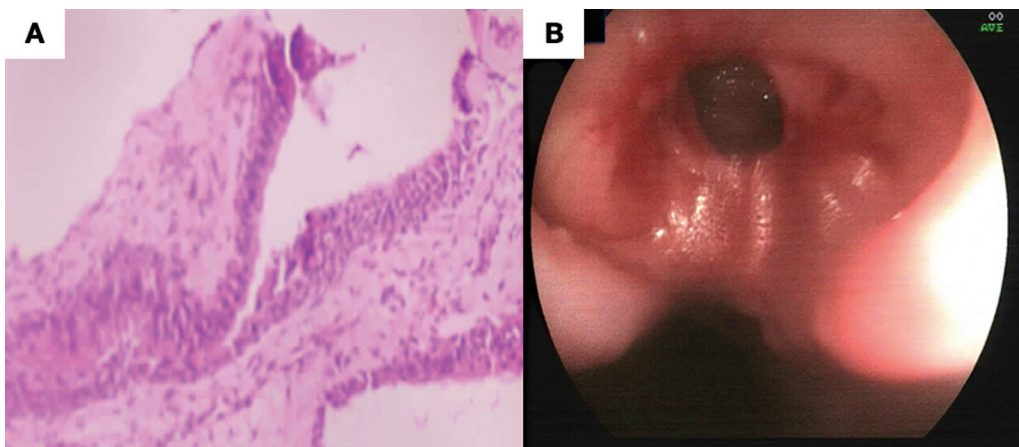


Fig. 3 Biopsy from the cyst wall (A) showed stratified squamous epithelium, confirming the diagnosis of an esophageal duplication cyst. Follow-up endoscopy (B) showed a simple diverticulum at the site of the cyst, confirming curative fenestration.

um, confirming the diagnosis (► **Fig. 3A**). On the follow-up visit, 3 months later, the repeat UGIE showed a simple diverticulum (► **Fig. 3B**).

Duplication cysts are uncommon; the previous literature predominantly describes surgical management.¹ Few cases report endoscopic fenestration.^{2,3} While EUS has been used for diagnosis,⁴ there are concerns regarding infectious complications with needle aspiration.¹ Only one case of EUS-guided fenestration has been described so far.⁵ EUS may alter the future of this intervention as it provides direct visualization of the cyst cavity, allows guided puncture of the cyst wall and tissue acquisition in case of suspicion of an alternate diagnosis.

Note

The manuscript has been submitted solely to this journal. Permission was obtained from all coauthors before submitting this article.

No third-party material was reprinted, hence no permission was taken.

The manuscript has not been invited.

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Proper consent was obtained from the patient before obtaining endoscopic images.

Conflict of Interest

None declared.

References

- 1 Liu R, Adler DG. Duplication cysts: diagnosis, management, and the role of endoscopic ultrasound. *Endosc Ultrasound* 2014;3 (03):152–160

- 2 Nishikawa J, Nagao M, Ogawa R, et al. Endoscopic treatment of an esophageal duplication cyst. *Endoscopy* 2017;49(S 01): E107–E108
- 3 Joyce AM, Zhang PJ, Kochman ML. Complete endoscopic resection of an esophageal duplication cyst (with video). *Gastrointest Endosc* 2006;64(02):288–289
- 4 Somani P, Sharma M. Endoscopic ultrasound of esophageal duplication cyst. *Indian J Gastroenterol* 2016;35(06): 497–498
- 5 Okamoto T, Nakamura K, Ikeya T, Fukuda K. Endoscopic fenestration with EUS guidance for esophageal duplication cyst. *VideoGIE* 2021;6(05):211–214