

## Novel endoscopic approach to resection of large symptomatic duplication cysts

We present the case of a 51-year-old man with dysphagia to solids and occasional retrosternal chest pain. Computed tomography of the chest revealed an esophageal mass, which on endoscopy was just distal to the gastroesophageal junction. An esophagram found a delay in the passage of contrast as a result. An endoscopic ultrasound (EUS) demonstrated an anechoic/hypoechoic third layer cyst, with internal debris and a redundancy of layers, consistent with a large duplication cyst. Although definitive management is surgical excision, simple endoscopic fenestration has been described [1, 2]; however, there remains a concern about recurrence in the long term. We offered the patient a novel endoscopic approach aimed at complete excision of the luminal cyst wall, reducing any long-term recurrence (▶ **Video 1**).

The cyst was punctured using a 19-gauge EUS needle. Saline with methylene blue was injected into the cyst to increase its size and stain the internal cyst wall blue, making an endoscopic excision safer. An electrosurgical knife was used to create an initial incision along the lateral margin, and endoscopic submucosal dissection (ESD) was performed until we identified the cyst roof, which was stained blue. The knife was used to perforate the cyst, resulting in an immediate flow of methylene blue-stained cyst fluid. The entire roof was then resected en bloc in a circumferential manner using an insulated-tip knife. With the internal cavity comple-



▶ **Video 1** Endoscopic management of a large duplication cyst.

tely exposed, the lining was irrigated and inspected. The edges of the cyst were clipped circumferentially to prevent both delayed bleeding and premature closure. This is the first description of an ESD technique for treatment of a duplication cyst. Pre-injecting the cyst seems to make dissection easier and safer. The result is a complete unroofing and marsupialization of the cyst cavity. This may be a potentially superior approach for the treatment of duplication cysts and may help to reduce the risk of recurrence.

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### Competing interests

Dr. Carr-Locke is a consultant for Olympus America.

### The authors

**Lionel S. D'Souza<sup>1</sup>, Arvind J. Trindade<sup>2</sup>, Brian Markowitz<sup>2</sup>, David L. Carr-Locke<sup>3</sup>, Petros C. Benias<sup>2</sup>**

- 1 Stony Brook University Hospital, New York, United States
- 2 North Shore University Hospital, New York, United States
- 3 New York Presbyterian/Weill Cornell Medical Center, New York, United States

## Corresponding author

### Lionel S. D'Souza, MD

Division of Gastroenterology and  
Hepatology, Stony Brook University Hospital,  
101 Nicolls Road, Health Sciences Tower  
Level 17, Room 060, Stony Brook, New York  
11794-8410, United States  
Fax: +1-631-444-8886  
dsouza.lionel@gmail.com

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### Bibliography

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