




BRIEF REPORT

Submucosal tunneling endoscopic resection of an exogenic esophageal mass in the mediastinum (with video)

Zhengqi Li , Yong Liu, Lizhou Dou, Yueming Zhang and Guiqi Wang*

Department of Endoscopy, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, P. R. China

*Corresponding author. Department of Endoscopy, National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100021, P. R. China, Tel: +86-13671229223; Fax: +86-010-87788098, Email: wangguiqi@126.com

Introduction

Submucosal tunneling endoscopic resection (STER) for the treatment of upper gastrointestinal submucosal tumors originating from the muscularis propria was first introduced by Xu *et al.* [1] in 2012. It has been demonstrated to be safe and effective for treating small (<3.5 cm) esophageal leiomyoma. However, sometimes the esophageal leiomyoma may be a giant mass and protrude into the mediastinum. It is uncertain whether STER can be used to resect the mass in the mediastinum. In this case, we successfully carried out STER in a patient with giant leiomyoma protruding into the mediastinum.

Case presentation

A 40-year-old male was accidentally found to have an esophageal mass of 36–39 cm from the incisors during gastroscopy on 12 February 2019 (Figure 1A). Endoscopic ultrasound revealed a mass of ~23.8 × 24.7 mm arising from the muscularis propria (Figure 1B). Computed tomography (CT) showed that the mass was 4.2 × 2.4 × 5.2 cm located in the lower esophagus; no enlarged lymph nodes were discovered (Figure 1C).

STER was conducted for the mass as previously described [1]. During the operation, we found that the main part of the mass was protruding into the mediastinum and near to the vagus (Figure 1D–G). Therefore, we resected it carefully in the mediastinum and the mass was completely resected (Video 1). The

patient was discharged from hospital 5 days after STER, without complications including perforation and bleeding. The pathological result of the mass was leiomyoma. The follow-up showed no recurrence or adverse events during the routine gastroscopy and CT scan (Figure 1H).

Discussion

Esophageal leiomyoma is a benign submucosal tumor that is derived from the muscularis propria of the esophagus [2]. A giant leiomyoma that protrudes into the mediastinum is uncommon [3]. At present, complete surgical excision of the mediastinal tumor with symptoms by thoracotomy or thoracoscopy is recommended. STER has been demonstrated to be safe and effective for treating small and solitary esophageal submucosal tumors with low complication rates [4–6]. In this case, we used STER to treat the exogenic esophageal mass in the mediastinum. The difficulties of the operation were as follows: (i) complete resection of the mass without nerve injury; and (ii) closure of the mucosal incision site.

In conclusion, STER may serve as a minimally invasive, safe, and effective treatment for mediastinal tumors; however, long-term outcomes should be evaluated further.

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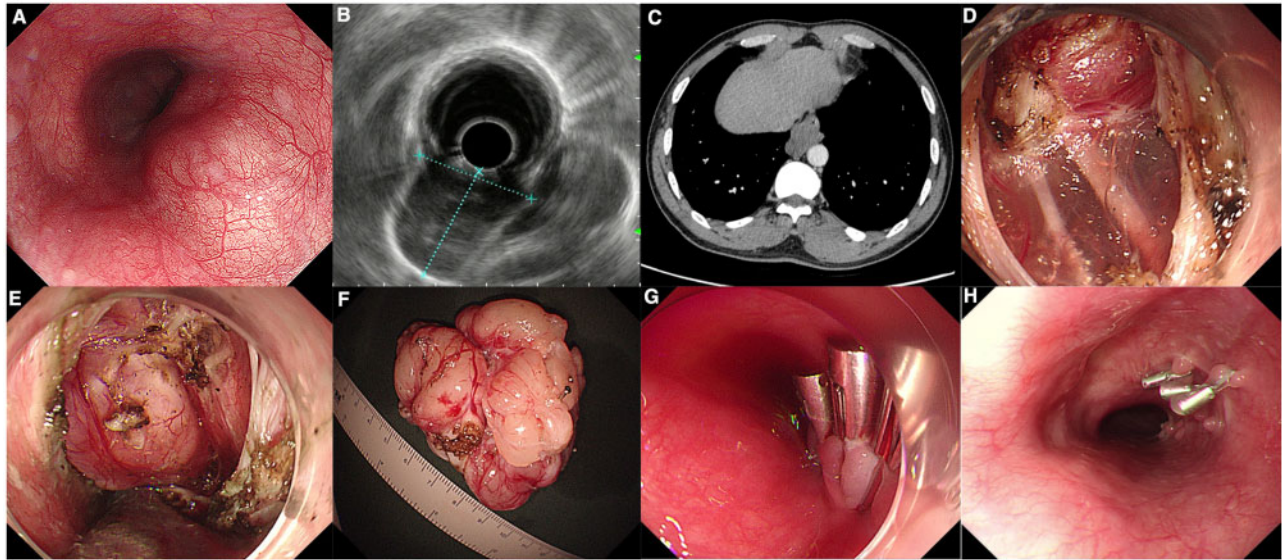
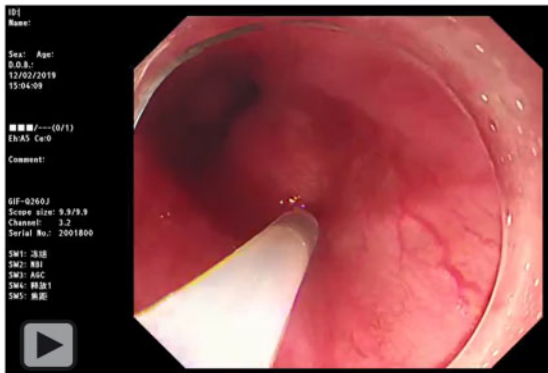


Figure 1. The feature and submucosal tunneling endoscopic resection procedure of the mass. (A) Upper endoscopy reveals an esophageal mass of 36–39 cm from the incisors. (B) Endoscopic ultrasound shows a mass of 23.8 × 24.7 mm arising from the muscularis propria. (C) CT shows that the mass is 4.2 × 2.4 × 5.2 cm located in the lower esophagus; no enlarged lymph nodes are discovered. (D) A submucosal tunnel was made to expose the mass and the main part of the mass was protruding into the mediastinum and near to the vagus. (E) The mass in the mediastinum. (F) The resected tumor. (G) Closure of the mucosal incision site. (H) The routine gastroscopy during follow-up shows no recurrence.



Video 1. The mass is resected carefully in the mediastinum and finally completely resected without nerve injury.

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Conflicts of interest

None declared.

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