

Over-the-scope Clip System for Wound Closure after Endoscopic Resection of an Esophageal Submucosal Tumor: A Case Report

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To the Editor: Esophageal leiomyomas are the most common benign primary tumors of the esophagus and the common esophageal subepithelial lesions. The methods of treatment for esophageal submucosal lesions include surgical enucleation, endoscopic submucosal dissection, endoscopic enucleation, and submucosal tunneling with endoscopic removal (STER). Courses of treatment for esophageal leiomyomas are related to a variety of factors, including tumor size, location, morphology, and the patient's symptoms.^[1] The size and location of the tumor are the key factors in the selection of excision methods. With the development of endoscopic technology, the more endoscopic resection techniques have been proven to be feasible for tumors originating from muscularis propria, such as endoscopic full-thickness resection and the over-the-scope clipping device system (OTSC).^[2] OTSC is used for primary or rescue therapy for patients who undergoing closure of perforations or leaks.^[3]

A 55-year-old woman underwent a computed tomography (CT) examination for intermittent retrosternal chest pain accompanied by episodic wheezing for 4 months. The CT examination indicated eccentric hypertrophy of the upper esophageal wall while gastroscopy revealed a protruding, semicircular, submucosal lesion, about 18–22 cm from the incisors [Figure 1a]. Endoscopic ultrasonography indicated that the lesion originated from the muscularis propria of the esophagus, and exhibited an oval hypoechoic shadowing mass with a clear boundary and homogenous echo pattern. The lesion displayed inward and outward growth from the lumen, with a cross-sectional area of 15.9 mm × 9.4 mm [Figure 1b]. There was a high probability diagnosis of a leiomyoma. Endoscopic tumor resection was performed as the patient was experiencing chest pain and other uncomfortable symptoms. A mucosal incision was made at the opening of the esophageal tumor, and the tumor was removed. Intraoperative observation indicated that the majority of the white tumor had protruded outward from the esophageal wall [Figure 1c]. Full-thickness damage of the esophageal wall occurred after complete excision of the tumor, and wound closure

was successfully achieved using the OTSC system [Figure 1d]. The largest diameter of the tumor was 4 cm [Figure 1e]. Postoperative pathological examination indicated the presence of esophageal leiomyoma. Gastroscopy conducted 16 weeks after the operation indicated the OTSC was still in place, and there was good healing of the esophageal mucosa [Figure 1f]. The patient's chest pain and other symptoms disappeared.

Fähndrich and Sandmann^[4] have reported that endoscopic full-thickness resection technical successful ratio was 94%, and the complete resection rate was 100% in patients with lesions needed to be full-thickness resection by OTSC system. STER was another effective and safe endoscopic resection techniques for submucosal tunneling which are located in the middle and distal thirds of the esophagus. Adequate length in the incision and the lesion is a requirement for the establishment of a tunnel. Hence, STER technique was limited to be used in lesions which located in the upper of the esophagus. The main features of this case included locating in the upper esophagus, the outward growth from the lumen and originating in the muscularis propria of the esophagus. There is not enough length to construct an esophageal tunnel in this case, and the use of OTSC closed technology has achieved good results.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Received: 12-06-2016 **Edited by:** Li-Shao Guo

How to cite this article: Zhao XJ, Wang X, Li AQ, Sheng JQ. Over-the-scope Clip System for Wound Closure after Endoscopic Resection of an Esophageal Submucosal Tumor: A Case Report. Chin Med J 2016;129:2390-1.

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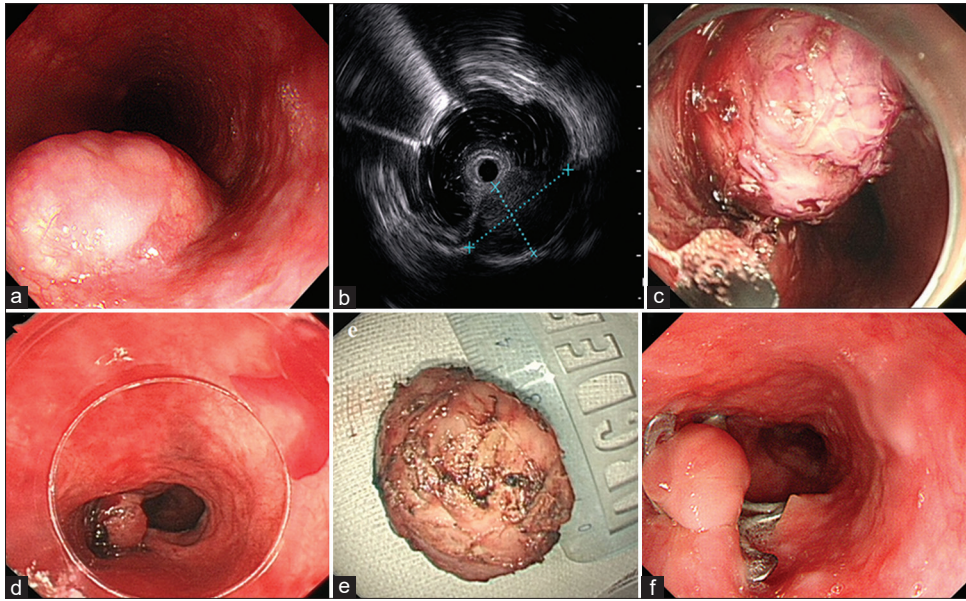


Figure 1: (a) A protruding, semicircular, submucosal lesion with a smooth surface on the esophagus; (b) The lesion originated from the muscularis propria of the esophagus; (c) The white tumor had protruded outward from the esophageal wall; (d) Wound closure was achieved using over-the-scope clip; (e) The largest diameter of the tumor was 4 cm; (f) 16 weeks after the operation.

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