Long-term survival case of esophageal gastrointestinal stromal tumor after thoracoscopic enucleation.

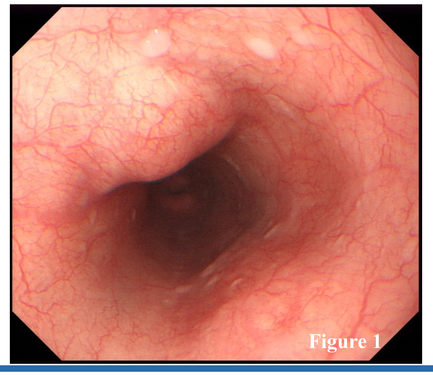
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Introduction

Esophageal gastrointestinal stromal tumors are relatively rare, accounting for 1-5% of all GISTs. The principle of treatment is surgical resection, but a standard technique for esophageal GIST has not been established. Recently, there have been some reports of tumor enucleation and resection after preoperative treatment.

Case presentation

We report a case of a male patient, 55 years-old.The patient was diagnosed with a submucosal tumor in the esophagus by endoscopic examination and referred to our hospital for further examination and treatment. Esophago-gastro-intestinal endoscopy revealed a submucosal tumor with a maximum length of 2.5 cm in the anterior wall of the middle thoracic esophagus which was 36cm distant from incisor teeth (Figure 1). Endoscopic ultrasonography showed the tumor with relatively homogeneous echoic pattern and appeared to be of intrinsic muscle layer origin (Figure 2). EUS guided fine needle aspiration biopsy was performed from the same site. Histopathological examination showed dense convoluted growth of spindle-shaped cells in hematoxylin and eosin staining. A mitotic count was only 1 in 50 high-power fields. Immunohistochemical results were positive for c-KIT and CD34. The specimen was diagnosed as a low-risk GIST under the Fletcher's classification. No tendency to invade the surrounding organs was observed. Based on the above findings, we diagnosed a low-risk group of esophageal GISTs and planned a thoracoscopic esophageal enucleation because of the small size of the tumor and relatively lower risk.


Figure 1

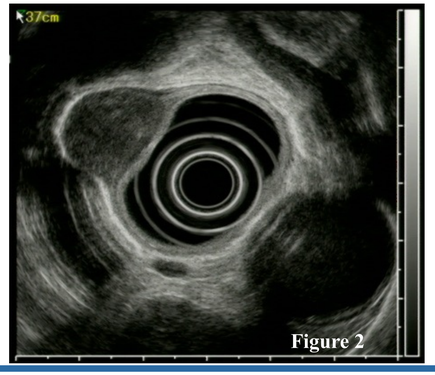


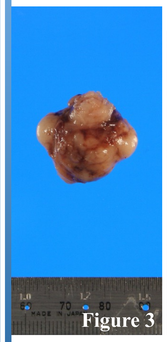
Figure 2

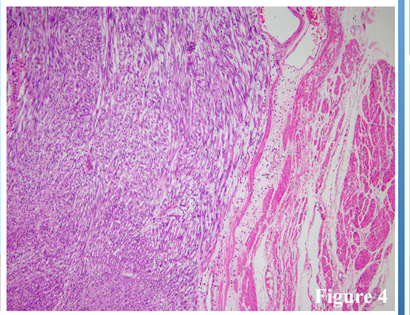
Operation

Four ports were inserted into the right thoracic cavity in the prone position, and the operation was started. A tumor was found in the middle thoracic esophagus through the pleura. The tumor was enucleated through an incision in the outer membrane muscle layer just above the tumor.

Histopathological findings

Macroscopic examination showed a submucosal tumor of 30 × 30 × 15 mm (Figure 3). Hematoxylineosin staining revealed a bundle-like growth of spindle-shaped tumor cells (Figure 4). The specimen was diagnosed as a low-risk GIST under the Fletcher's classification.


Figure 3


Figure 4

Post operative course

The patient's postoperative course was uneventful, and he was discharged 9 days after surgery. He is now 10 years and 3 months postoperatively and is alive recurrence-free.

Discussion

Esophageal GIST is a rare disease and there is no standard technique for it. Partial resection of gastrointestinal tract is recommended as the surgical treatment in the Japanese Clinical Practice Guidelines for Gastrointestinal Stromal Tumors. However, both esophagectomy and partial esophagectomy are associated with a high risk of severe postoperative complications. In this case, our patient had undergone a thoracoscopic esophageal enucleation and remained free of recurrence until now. It is essential to perform risk classification under the Fletcher's classification using EUS-FNA. Enucleation of esophageal GIST is considered as an acceptable procedure in patients diagnosed as very low or low-risk in the Fletcher classification.

Conclusion

We report a case of long-term survival case of esophageal GIST after thoracoscopic enucleation.

The introduction of enucleation for small-sized and low-risk esophageal GIST patients may avoid the invasive esophagectomy and reconstruction.