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A rare esophageal metastatic adenocarcinoma misdiagnosed as esophageal leiomyoma

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Author contributions: design of the study, Jun Liu; collection of the information of the patient, Yang Wu and Haina Chai; EUS, Chaowu Chen; administration of treatment, Pinghong Zhou and Chao Sun; writing and review of the article, Yang Wu, Haina Chai and Jun Liu.

Conflict of interest: the authors declare no conflict of interest.

Informed consent statement: informed consent was obtained from the patient.

Keywords: Esophageal metastatic adenocarcinoma. Misdiagnose. Leiomyoma.

Dear editor,

A 66-year-old female made gastroscopy because of swallowing foreign body sensation. The gastroscopy indicated that a 2 × 3 cm hemispherical mucosal bulge in the anterior wall of the esophagus (A). Chest CT suggested soft tissue hypodense shadow in the middle esophagus (B). EUS showed a hypoechoic mass originating from muscularis propria (C) (Diagnosis: esophageal leiomyoma possibly). In order to

resect the lesion, the patient was admitted to the hospital. The patient had a history of postoperative lung moderately-lowly-differentiated adenocarcinoma. Endoscopic submucosal dissection (ESD) (Submucosal tunneling endoscopic resection, STER) (D-I) was performed on 2024-06-08: we entered the lens from the incisors 26-28cm anterior wall, injected 1:10,000 epinephrine saline indigo carmine solution in the upper segment of the lesion about 5cm. After seeing the mucosal elevation, we performed the submucosal tunnel establishment and gradual submucosal peeling. We saw that the tumor originated from muscularis propria with a hard texture, no periphery, and the tumor was adherent to the periphery. The tumor was completely taken out after gradual separation. Postoperative pathological diagnosis: poorly differentiated adenocarcinoma, lung origin considered (HE: heterogeneous cells distributed in nested sheets and sieve-like arrangement with infiltrative growth. IHC: heterogeneous cells Syn(-), cgA(-), CD56(-), Ki67(30%+), CK7(+), CK20(-), CKpan(+), SSTR2(-), Villin(-), CDX-2(-), CK5/6(-), P63(-), P40(-), TTF-1(+), NapsinA(+)) (①-⑨). Postoperative PET/CT: postoperative lung cancer, postoperative esophageal metastasis, multiple lymph nodes with abnormal increase in FDG metabolism in bilateral clavicular region and so on. Tumor metastasis was considered combining with medical history. The patient discharged to oncology for further treatment.

Discussion

We report for the first time an extremely rare case of esophageal metastatic adenocarcinoma resembling esophageal leiomyoma leading to misdiagnosis. Esophageal metastatic adenocarcinoma is a diagnostic challenge (1). A normal epithelium is seen in esophageal stenosis due to the submucosal nature of most metastases (2). EUS and EUS-FNA can be of great help in determining the layer of origin of a lesion and local lymph node spread and in obtaining a histopathologic diagnosis (3-4). In this case, the lesion was misdiagnosed as an esophageal leiomyoma initially. Intraoperatively, the lesion was unencapsulated, hard, and peripherally adherent, which was not consistent with an esophageal leiomyoma. Combined with pathology and medical history, the diagnosis was esophageal metastatic adenocarcinoma of pulmonary origin. In any esophageal stenosis with

normal mucosa, metastasis must be contemplated as a differential diagnosis, especially in patients with a history of cancer (1-2).

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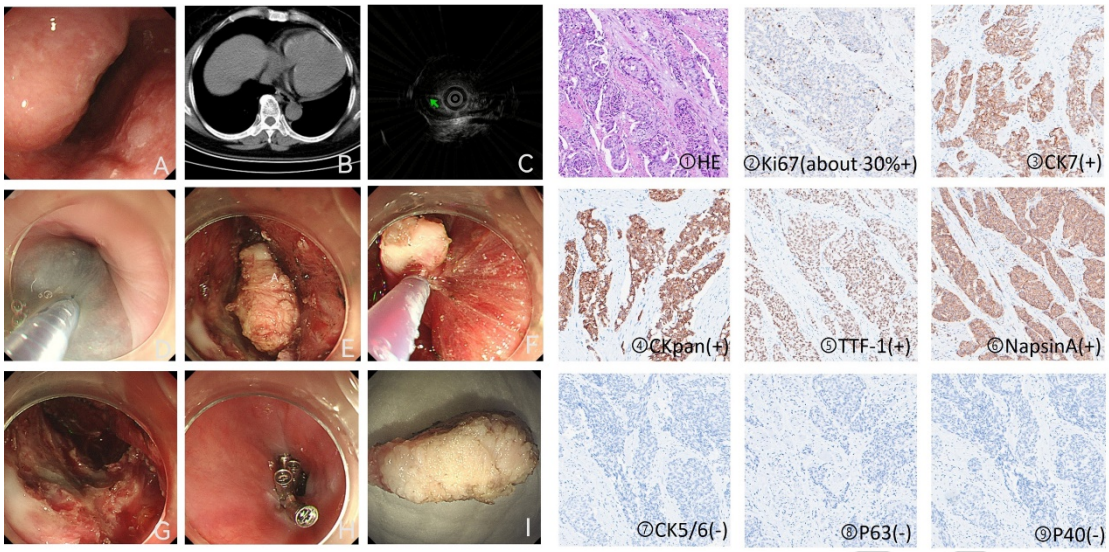

Fig. A. 2024-05-17 Gastroscopy showed esophagus from the incisor 26-28cm anterior wall, visible hemispherical mucosal bulge, smooth surface, no ulcer formation in the center, no mucosal bridge formation, no vesicle ulceration, the size of about 2 × 3cm.

Fig. B. 2024-06-03 Chest CT showed soft tissue hypodense shadow in the middle esophagus.

Fig. C. 2024-05-17 EUS: lesion at the visible hypoechoic mass, pike-shaped, ring 1/2 week, cross-section of about 1 × 2cm, protruding into the lumen, the border is clear, the internal Echo is homogeneous and originates from the lamina propria. Endoscopic diagnosis: esophageal submucosal elevation (esophageal leiomyoma possible).

Fig. D-I. 2024-06-08 STER.

Fig. ①-⑨. Pathology: HE (100×) showed heterogeneous cells distributed in nested sheets and sieve-like arrangement with infiltrative growth. IHC (100×) showed heterogeneous cells Syn(-), cgA(-), CD56(-), Ki67(about 30%+), CK7(+), CK20(-), CKpan(+), SSTR2(-), Villin(-), CDX-2(-), CK5/6(-), P63(-), P40(-), TTF-1(+), and NapsinA(+). Diagnosis: poorly differentiated adenocarcinoma, with lung origin considered.