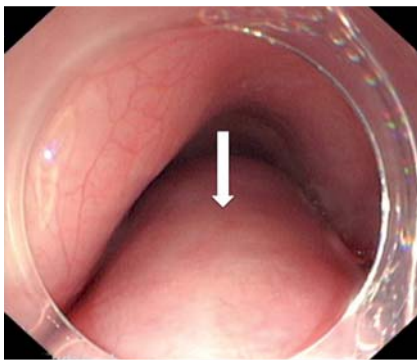


Endoscopic submucosal dissection of a huge esophageal atypical lipomatous tumor (well-differentiated liposarcoma) with a 4-year recurrence-free survival

A 35-year-old man complained of dull pain after food intake. His medical history and findings from physical examinations and laboratory tests were unremarkable. Standard esophagogastroduodenoscopy revealed a huge mass in the cervical esophagus. On endoscopy, the sausage-like pedunculated tumor protruded into the lumen (▶ **Fig. 1**). Chest computed tomography (CT) scan

showed a large mass that was well-circumscribed, intraluminal, and heterogeneous (fatty density in the upper section and parenchymal density in the lower part) (▶ **Fig. 2**). The mass was located between the T1 to T8 levels and connected to the posterior wall of the esophagus.

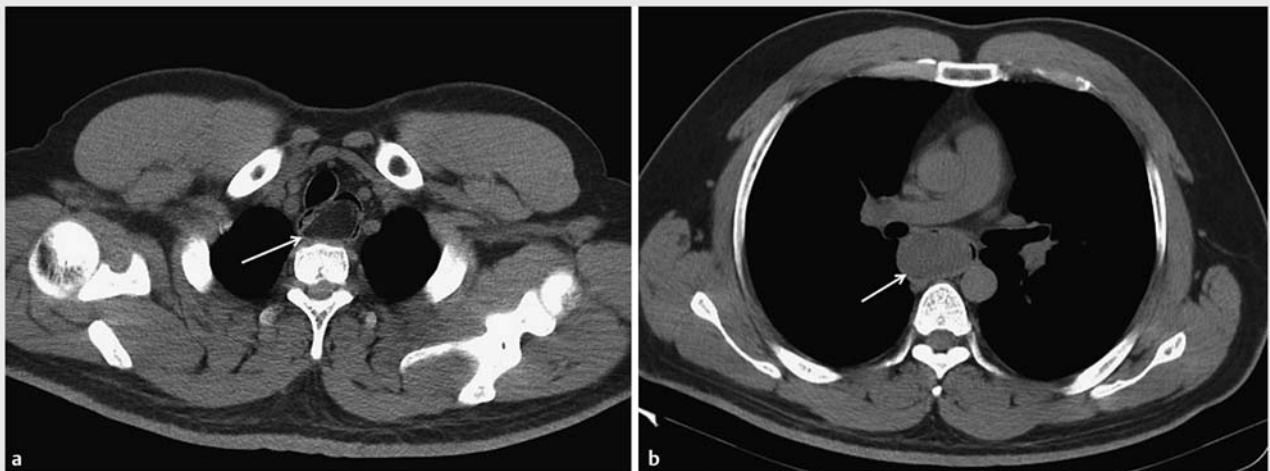
Endoscopic submucosal dissection (ESD) was performed successfully to treat this patient (▶ **Fig. 3**, ▶ **Video 1**). The submucosal injection and initial mucosal incision (▶ **Fig. 3b**) were done at the base of the mass, 18 cm from the incisors, using a Hybrid Knife (I-type; Erbe, Tübingen,



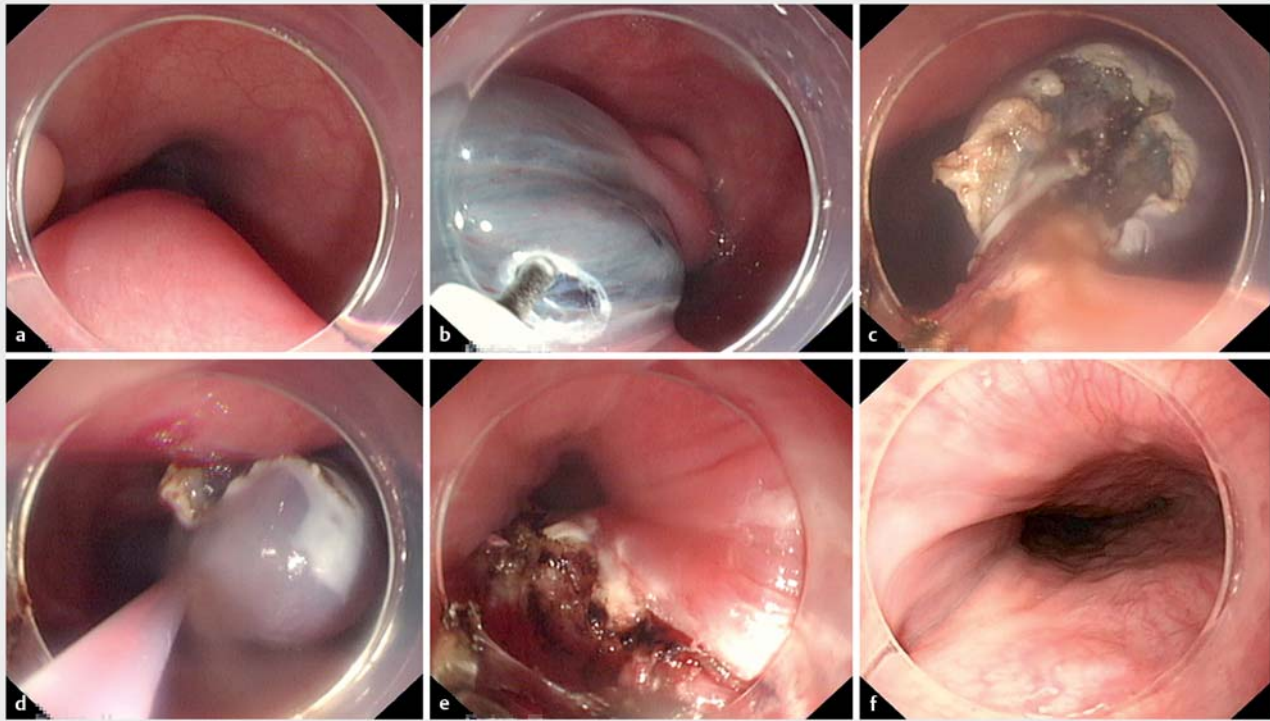
▶ **Fig. 1** Endoscopic view of a huge mass (arrow) in the cervical esophagus of a 35-year-old man who complained of dull pain after food intake.



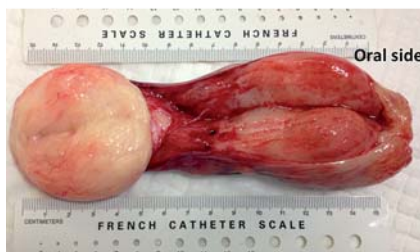
▶ **Video 1** Endoscopic submucosal dissection of a huge esophageal atypical lipomatous tumor (well-differentiated liposarcoma) in a 35-year-old man.



▶ **Fig. 2** Computed tomography (CT) scan showed a large, well-circumscribed, intraluminal, heterogeneous mass located in the posterior wall of the esophagus between the T1 to T8 levels. **a** Fatty density (arrow) in the upper section of the mass. **b** Parenchymal density (arrow) in the lower part of the mass.



► **Fig. 3** The endoscopic submucosal dissection (ESD) procedure. **a** Endoscopic view of the huge submucosal tumor. **b** Submucosal injection and mucosal incision at the base of the submucosal tumor. **c** Resection of the submucosal tumor. **d** Removal of the submucosal tumor with a snare. **e** The wound after hemostasis. **f** Endoscopic view of the esophagus after 3 months follow-up with no residual tumor or recurrence.



► **Fig. 4** Macroscopic appearance of the huge esophageal submucosal tumor.

Germany). Then submucosal dissection was performed from the oral side to anal side after complete incision of the huge mass (► **Fig. 3 c**), while submucosal injections were frequently repeated to secure an appropriate lifting of the mucosal layer from the muscle layer. En bloc resection was achieved by ESD technique, then a snare (SD-230U-20, Olympus) was used to retrieve the resected specimen (► **Fig. 3 d**), all visible exposed vessels on the wound were coagulated by hemostatic forceps (FD-410LR, Olympus) (► **Fig. 3 e**).

The resected tumor was 16.0×5.5×4.0 cm in size and 124 g in weight (► **Fig. 4**). Pathological examination, confirmed by immunohistochemical staining, indicated the tumor was an atypical lipomatous tumor (also termed “well-differentiated liposarcoma”) (► **Fig. 5**). The post-operative period was uneventful and the patient was discharged on postoperative day 2.

The patient was scheduled for the first endoscopic follow-up 3 months later (► **Fig. 3 f**), and annually thereafter. After 4 years, there has been no evidence of any residual tumor or recurrence. This case presents a successful attempt to treat an esophageal atypical lipomatous tumor by ESD with a 4-year disease-free and recurrence-free survival.

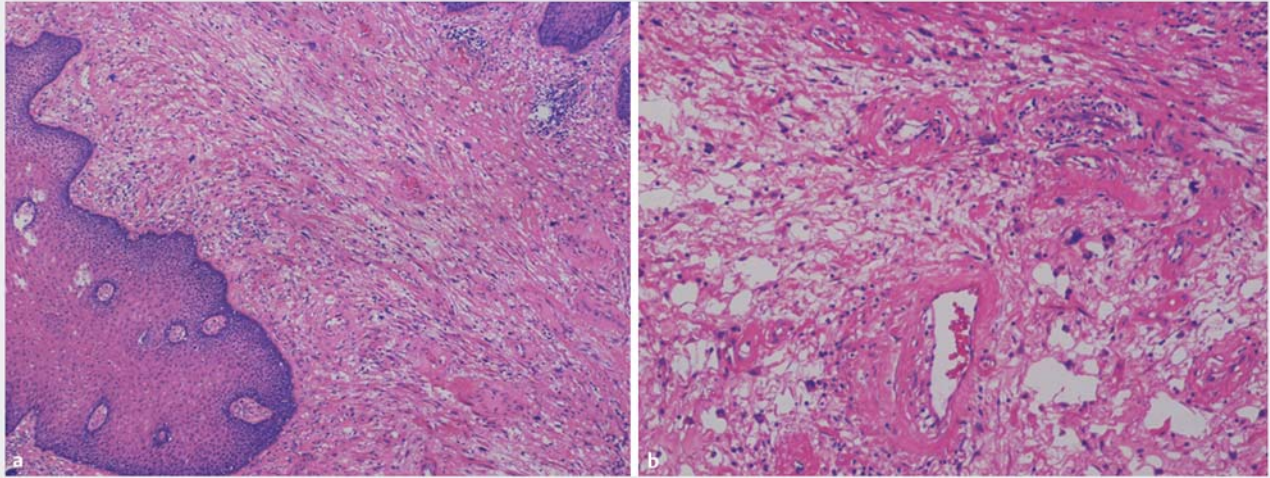
Atypical lipomatous tumors (well-differentiated liposarcomas) are very rare in the esophagus. Fewer than 20 cases have been reported [1] with the dominant location being the cervical esophagus. Reported methods of treatment included transthoracic esophagectomy, transoral resection, thoracoscopic eso-

phagectomy or even total esophagectomy. The predominant type of the tumor in the esophagus was polypoid and seldom transmural [1]. This provides a good chance for endoscopic removal of the tumor. Since this type is a low grade malignant mesenchymal neoplasm with a high propensity to local recurrence and the potential to dedifferentiate to higher grades over time [2], long-term follow-up is warranted for this case.

Endoscopy_UCTN_Code_CCL_1AB_2AC_3AB

Competing interests

There is no conflict of interest to declare for Drs. Ping-Hong Zhou, Ming-Yan Cai, and Jia-Xin Xu.



► **Fig. 5** Pathologic evaluation of the resected tumor. **a** The tumor was covered by normal squamous epithelium. **b** Histologically, the tumor was composed of a well-differentiated lipomatous component adjacent to scattered bizarre spindle cells (hematoxylin–eosin stain).

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