

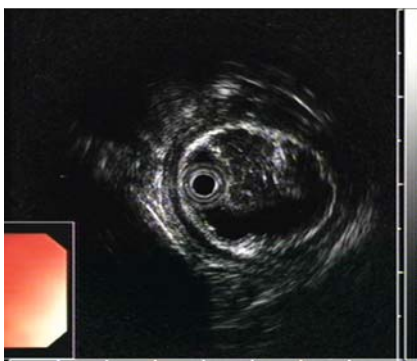
## Endoscopic submucosal dissection for a symptomatic cervical esophageal cavernous hemangioma



► **Fig. 1** Chest computed tomography showed a mass convex to the esophageal lumen, causing stenosis, and enhanced gradually to show punctate calcification (white arrow).



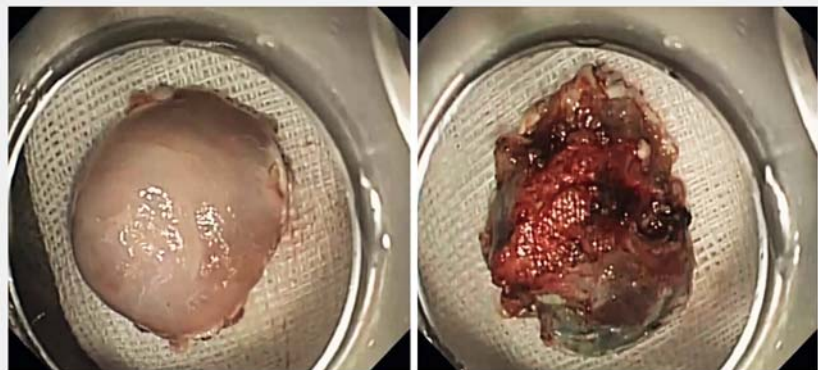
► **Fig. 2** Gastroscopy revealed a mass with smooth bluish surface in the right posterior esophageal wall, 20 cm from the incisors.



► **Fig. 3** Endoscopic ultrasound showed an inhomogeneous hypoechoic and well demarcated mass localized to the submucosal layer and measuring 15 mm × 20 mm in diameter.



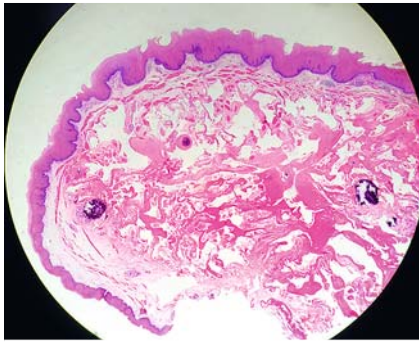
► **Video 1** The endoscopic submucosal dissection process was successful with minor bleeding during the procedure.



► **Fig. 4** The resected specimen contained a dark purple mass measuring 22 mm × 22 mm.

A 29-year-old man was found with a round mass in the cervical esophagus on chest computed tomography (CT) for dysphagia. The mass was convex to the esophageal lumen, causing stenosis, and enhanced gradually to show punctate calcification (white arrow) (► **Fig. 1**). Gastroscopy revealed a mass with a smooth bluish surface in the right posterior esophageal wall, 20 cm from the incisors (► **Fig. 2**). Endoscopic ultrasound showed an inhomogeneous hypoechoic and well

demarcated mass localized to the submucosal layer and measuring 15 mm × 20 mm in diameter (► **Fig. 3**). Endoscopic submucosal dissection (ESD) was performed with the consent of the patient. The ESD process was successful with minor bleeding during submucosal dissection (► **Video 1**). The resected specimen contained a dark purple mass measuring 22 mm × 22 mm (► **Fig. 4**). Histopathological results revealed proliferative vessels with a dilated lumen



► **Fig. 5** Histopathological results revealed proliferative vessels with dilated lumen covered by squamous epithelium in the submucosa, diagnosed as cavernous hemangioma.

covered by squamous epithelium in the submucosa, diagnosed as cavernous hemangioma (► **Fig. 5**). The patient was discharged home uneventfully on post-operative day 4. There were no symptoms observed at the 12-month follow-up. Esophageal hemangiomas are extremely rare, representing only 3.3% of all benign esophageal tumors [1]. An esophageal hemangioma is usually asymptomatic; patients with additional symptoms such as hematemesis, melena, and dysphagia may require treatment. Esophagectomy, tumor enucleation, endoscopic sclerotherapy, laser therapy, and endoscopic mucosal resection have been reported to treat esophageal hemangioma [2]. However, because conventional endoscopic therapy cannot obtain specimens for pathological examination and is associated with a risk of residual or recurrent hemangioma, en bloc removal is another possible treatment option [3]. ESD is able to achieve en bloc margin-negative resection of tumors while avoiding invasive surgery and allowing preservation of the native organ [4]. Only a few reports

showed that ESD may be applied for esophageal hemangiomas [3, 5]. Herein, we presented a case of a symptomatic cervical esophageal cavernous hemangioma successfully removed en bloc by ESD. The benefits and risks of ESD in the treatment of esophageal hemangiomas need more investigation in the future.

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### Competing interests

The authors declare that they have no conflict of interest.

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