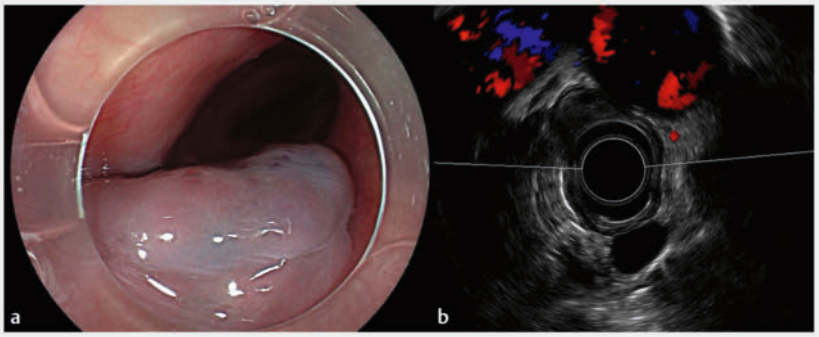
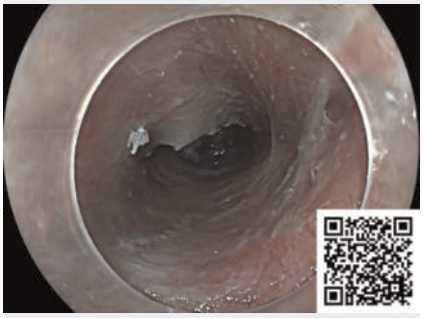
Thieme

# Efficacy of endoscopic submucosal tunnel dissection in the management of a large esophageal cavernous hemangioma

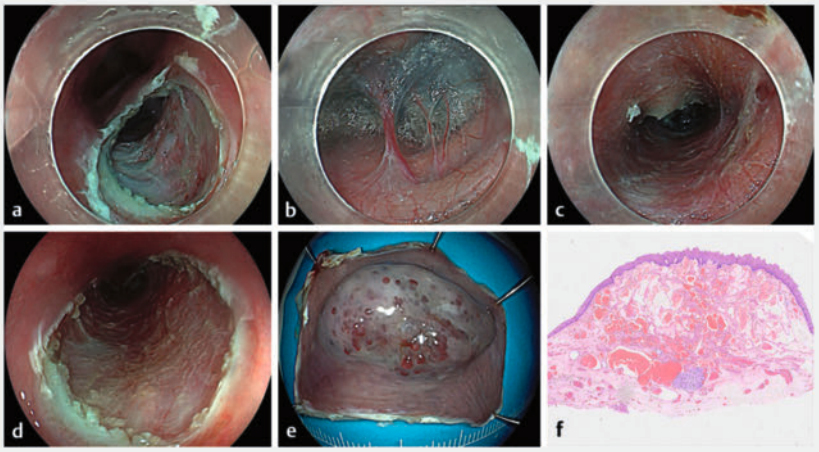
OPEN ACCESS




▶ **Fig. 1** Colonoscopy and endoscopic ultrasound. **a** Gastroscopy revealed a 3-cm, half-circumferential, bluish-purple esophageal mass located in the mid-esophageal region. **b** Endoscopic ultrasound confirmed a well-demarcated, moderately hyperechoic lesion within the submucosal layer.



**Video 1** Efficacy of endoscopic submucosal tunnel dissection for the management of a large esophageal cavernous hemangioma.




▶ **Fig. 2** Endoscopic submucosal tunnel dissection. **a** A transverse incision was made on the oral side of the lesion to establish the tunnel entry point. **b** The submucosal layer revealed a notable abundance of perforating vessels. **c** A submucosal tunnel was meticulously fashioned, extending 1 cm distally from the incision. **d** Postoperative wound. **e** The tumor was successfully resected in its entirety. **f** Histopathological examination confirmed the diagnosis of esophageal cavernous hemangioma.

A 44-year-old man presented with symptoms of gastroesophageal reflux disease and dysphagia. Gastroscopy revealed a 3-cm, half-circumferential, bluish-purple esophageal mass located in the mid-esophageal region (▶ **Fig. 1 a**). Computed tomography revealed a soft tissue nodule causing significant stenosis of the esophageal lumen. Endoscopic ultrasound confirmed a well-demarcated, moderately hyperechoic submucosal lesion, characteristic of an esophageal cavernous hemangioma (▶ **Fig. 1 b**). Subsequent to a detailed consultation, endoscopic submucosal tunnel dissection (ESTD) was undertaken (▶ **Video 1**).

Using a hybrid knife (Erbe Elektromedizin GmbH, Tübingen, Germany), saline mixed with indigo carmine was injected 0.5 cm proximal to the lesion, followed by a 1.5-cm transverse incision to create a submucosal tunnel extending 1 cm distally (▶ **Fig. 2 a**). A significant presence of perforating vessels was observed in the submucosal layer, prompting the use of soft electrocoagulation for meticulous hemostasis (▶ **Fig. 2 b**). An additional 1.5-cm incision was made distally. Incremental dissection along both tunnel margins was performed, achieving complete en bloc resection with a 0.5-cm margin from the tumor's edge. Electrocoagulation was applied to exposed vessels to control bleeding, with no damage to the muscular layer (▶ **Fig. 2 c**). The procedure was completed in 30 minutes without complications, including perforation, hemorrhage, or fever. Histopathological analysis confirmed esophageal cavernous hemangioma (▶ **Fig. 2 d**). The patient was discharged on postoperative day four and remained symptom-free during 12 months of follow-up.

Esophageal cavernous hemangioma is a rare benign tumor [1], with management options for asymptomatic cases typically

involving observation, whereas symptomatic cases may necessitate intervention. Treatment approaches include esophageal resection, tumor dissection, endoscopic sclerotherapy, and laser therapy [2]. Endoscopic submucosal dissection has been utilized for esophageal hemangiomas [3,4], and our case illustrates that ESTD enhances submucosal visualization and expedites dissection. This represents the first successful en bloc resection of a symptomatic esophageal cavernous hemangioma via ESTD.

Endoscopy_UCTN_Code_TTT_1AO_2AC

## Funding Information

Guangdong Province Clinical Teaching Base Teaching Reform Research Project 2021JD086

National Natural Science Foundation of China
82341019

## Conflict of Interest

The authors declare that they have no conflict of interest.

## The authors

**Guang Yang[1], Silin Huang[1], Suhuan Liao[1], Yang Lv[2], Wei Gong[2], Qiuping Qiu[1], Nan Liu[3]**

1 Department of Gastroenterology, South China Hospital, Medical School, Shenzhen University, Shenzhen, China
2 Department of Gastroenterology, Shenzhen Hospital of Southern Medical University, Shenzhen, China
3 Institute of Environment and Health, South China Hospital of Shenzhen University, Shenzhen, China

## Corresponding author

**Silin Huang, MD**
Department of Gastroenterology, South China Hospital, Medical School, Shenzhen University, No. 1 Fuxin Road, Longgang District, Shenzhen, P. R. China
silinhuang@szu.edu.cn

## References

[1] Araki K, Obno S, Egashira A et al. Esophageal hemangiona; a case report and review of the literature. Hepatogastroenterology 1999; 46: 3148–3154
[2] Rodrigues-Pinto E, Pereira P, Macedo G. Bluish discoloration of the esophagus: cavernous hemangioma of the pharynx and larynx with esophageal involvement. Endoscopy 2015; 47: E213–E214. doi:10.1055/s-0034-1391823
[3] Zhu Z, Wang L, Yin J et al. Endoscopic submucosal dissection for a symptomatic cervical esophageal cavernous hemangioma. Endoscopy 2022; 54: E604–E605. doi:10.1055/a-1694-3217
[4] Chedgy FJ, Bhattacharyya R, Bhandari P. Endoscopic submucosal dissection for symptomatic esophageal cavernous hemangioma. Gastrointest Endosc 2015; 81: 998. doi:10.1016/j.gie.2014.10.023

## Bibliography

Endoscopy 2024; 56: E886–E887
**DOI** 10.1055/a-2421-6218
**ISSN** 0013-726X

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany