



Endoscopic resection of a giant fibrovascular esophageal polyp by use of a scissor-type knife

Kenji Yamazaki, MD, PhD,¹ Yasuyuki Yoshida, MD,¹ Akinori Maruta, MD, PhD,¹
Masahito Shimizu, MD, PhD,² Ryoji Kushima, MD, PhD³

A 73-year-old woman presented to the emergency department because of loss of consciousness; she recovered within a few minutes. Chest CT revealed a large intraluminal tumor arising from the proximal esophagus (Fig. 1). Accordingly, she was referred to our department. Barium esophagography revealed an approximately 10-cm-long intraluminal esophageal mass arising from the cervical esophagus (Fig. 2).

EGD revealed a pedunculated polyp covered with normal squamous epithelium (Fig. 3). The polyp was entirely stained with iodine (Fig. 4). These findings suggested a giant fibrovascular esophageal polyp. Although the patient did not describe dysphagia or anorexia, her temporary

loss of consciousness could be attributed to polyp-related asphyxia. Regardless of the large polyp size, its pedicle could be clearly visualized (Fig. 5). Accordingly, endoscopic polyp removal with the patient under general anesthesia was planned, and informed consent was obtained because of the progressive nature of the polyp and the risk of sudden death by asphyxiation due to polyp regurgitation.

Initially, we attempted polyp resection using an endoscopic snare technique; however, its large size prevented

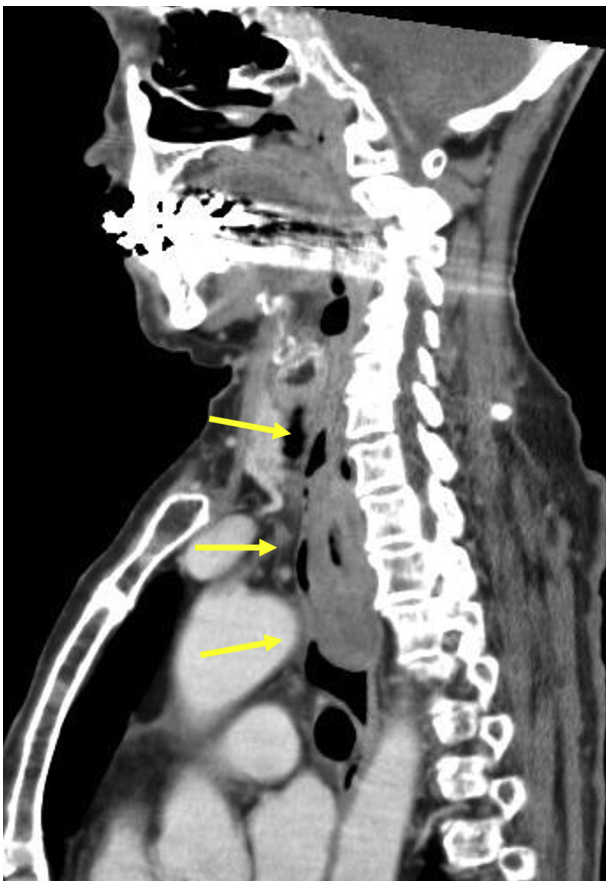


Figure 1. Sagittal CT showing the fibrovascular polyp arising from the proximal esophagus (arrow).



Figure 2. Barium esophagogram showing the fibrovascular polyp arising from the cervical esophagus.

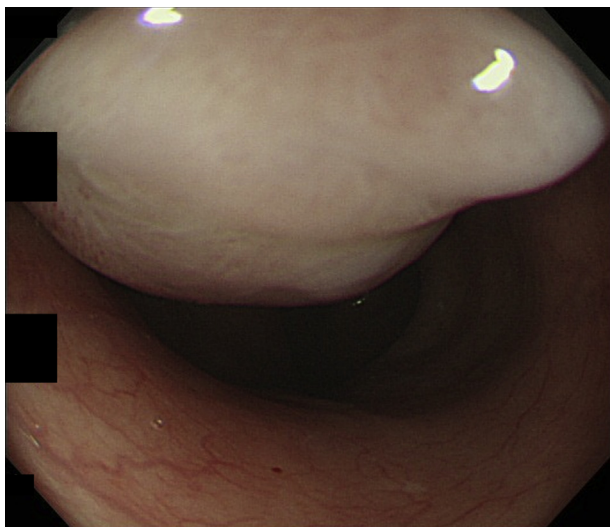


Figure 3. Endoscopic view showing the surface of the fibrovascular polyp.

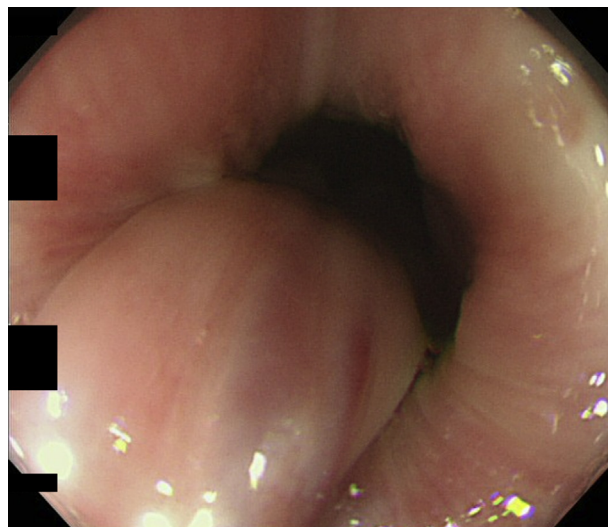


Figure 5. Endoscopic view showing the pedicle of the fibrovascular polyp.

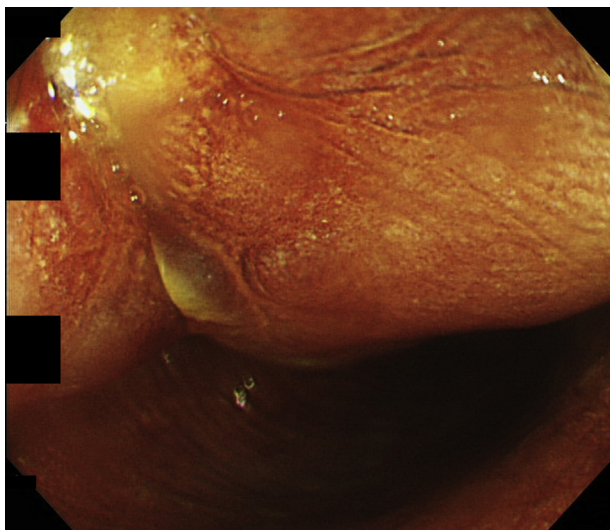


Figure 4. Endoscopic view showing the fibrovascular polyp entirely stained with iodine.



Figure 6. Giant fibrovascular polyp of the esophagus after endoscopic resection.

this application. Subsequently, we performed resection with a stag beetle (SB) knife GX (opening width 7.5 mm; Sumitomo Bakelite Co, Ltd, Tokyo, Japan), a scissor-shaped device that can easily grasp the polyp stalk (Video 1, available online at www.VideoGIE.org). Three types of SB knives (Jr, short, and GX types) are available in Japan. In our patient, the polyp pedicle was wide and thick, and the polyp was easy to move. Thus, we selected the SB knife GX; its characteristics and comparison with another SB knife are described in the video.

An endoclip was positioned at the pedicle base before resection to prevent bleeding. The knife facilitated grasping the pedicle, and the pedicle was excised by use

of a high-frequency generator (VIO300D; Erbe, Tübingen, Germany) in the endocut Q mode (effect 1). Using the soft coagulation mode (effect 5, 40 W), we prevented intermittent bleeding, and coagulation was achieved during excision. We endoscopically resected the giant polyp en bloc safely, without perforation (Fig. 6), with negligible bleeding, and removed it using an overtube. Histologic analysis identified a fibrovascular polyp (Fig. 7). On postoperative day 2, the patient initiated oral intake and was discharged without adverse events.

Giant fibrovascular esophageal polyps are rare, representing <2% of all esophageal benign tumors.¹ Most of these are enormous and arise from the cricopharynx or upper esophagus. Polyp regurgitation into the mouth can cause laryngeal obstruction, causing asphyxiation and death.² Polyp resection is recommended in all patients for controlling symptoms and eliminating the risk of asphyxiation.³ Traditional excision commonly involves transcervical vertical esophagotomy. Endoscopic resection is technically feasible and avoids transcervical vertical

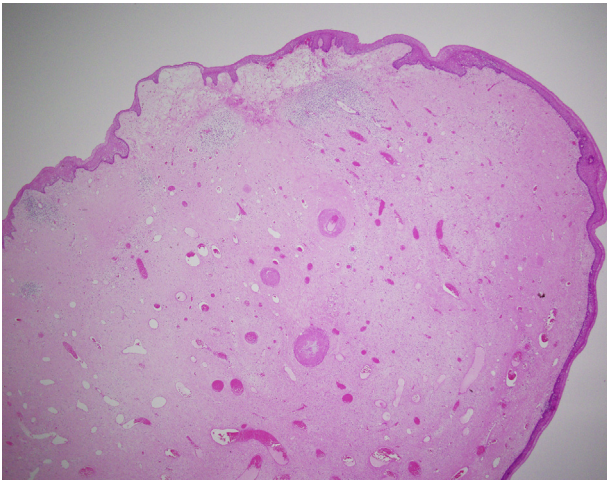


Figure 7. Histologic analysis identified the fibrovascular polyp (H&E, orig. mag. ×4).

esophagotomy-related morbidity.³ Recently, endoscopic resection with ultrasonic shears, a needle-type knife, and an electro-surgical snare has been performed.³⁻⁵ The Scissor-type knife facilitates grasping the pedicle and enables simultaneous excision and coagulation while maintaining a stable view by use of only a single device. Furthermore, the SB knife's capacity to grasp, assess, and then excise and coagulate target tissues enables safe and easy resection of large polyps with their stalk, which is challenging when the snare technique is used.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: SB, stag beetle.

REFERENCES

1. Levine MS, Buck JL, Pantongrag-Brown L, et al. Fibrovascular polyps on the oesophagus: clinical, radiographic and pathologic findings in 16 patients. *AMJ Am J Roentgenol* 1996;166:781-7.
2. Sargent RL, Hood IC. Asphyxiation caused by giant fibrovascular polyp of the esophagus. *Arch Pathol Lab Med* 2006;130:725-7.
3. Lobo N, Hall A, Weir J, et al. Endoscopic resection of a giant fibrovascular polyp of the oesophagus with the assistance of ultrasonic shears. *BMJ Case Rep. Epub* 2016 Jan 14.
4. Mangiavillano B, Savarese MF, Boeri FA, et al. A rare case of giant fibrovascular polyp endoscopically resected with loop and cut technique. *VideoGIE* 2016;26:57-8.
5. Fedorov ED, Ivanova EV, Seleznev DE, et al. Endoscopic removal of a giant double-headed fibrovascular esophageal polyp. *VideoGIE* 2018;3:301-3.

Department of Gastroenterology, Gifu Prefectural General Medical Center (1); Department of Gastroenterology, Gifu University School of Medicine, Gifu, Japan (2); Department of Clinical Laboratory Medicine and Diagnostic Pathology, Shiga University of Medical Science, Otsu, Japan (3).

Copyright © 2019 American Society for Gastrointestinal Endoscopy. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.vgje.2019.06.004>.