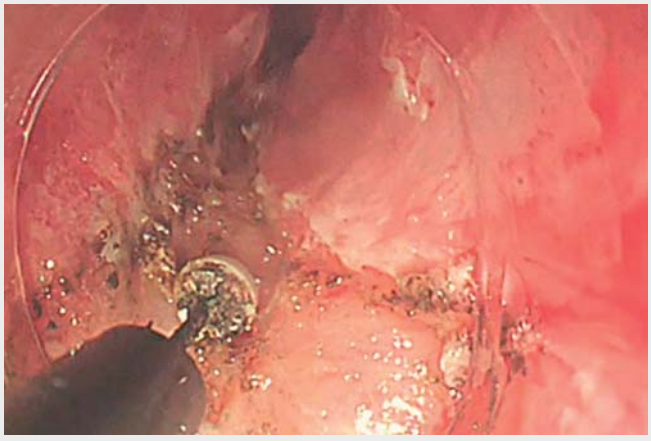
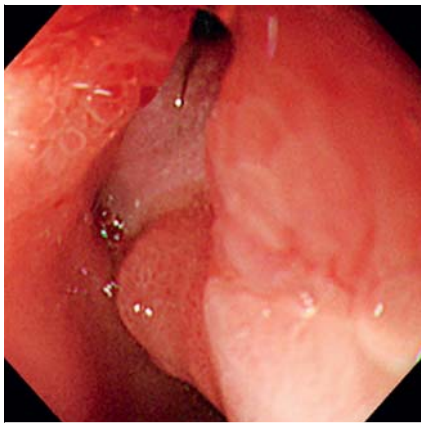
Published online: 2019-04-12

Radial incision and cutting for releasing severe stricture enables successful delivery of an over-the-scope clip



Video 1 Radial incision and cutting to release a benign, severe esophageal stricture enables successful passage of an over-the-scope clip (OTSC) beyond the stricture. The gastrocutaneous fistula was then completely closed with one OTSC deployment.

▶ **Fig. 1** Gastrocutaneous fistula, cutaneous side, in an 81-year-old woman following percutaneous endoscopic gastrostomy. There is severe dermatitis due to leakage of gastric contents.



▶ **Fig. 2** The gastrocutaneous fistula, located in the first portion of the duodenum.

Nonhealing gastrocutaneous fistula (GCF), a rare refractory complication after percutaneous endoscopic gastrostomy, has traditionally required invasive surgery. Recently, the over-the-scope clip (OTSC) (Ovesco Endoscopy, Tübingen, Germany) has been reported to be a minimally invasive, effective device to achieve fistula closure [1]. However it is associated with one drawback: because the outer diameter of the OTSC application cap is large and the bear claws at the clip's tip are sharp, the presence of a severe gastrointestinal stricture makes delivery of an OTSC difficult. The standard treatment for refractory benign strictures, balloon dilation, is sometimes limited and an endoscopic radial incision and cutting technique has been developed as an alternative [2, 3]. We describe the release, by means of radial incision and cutting, of a stenosis due to severe esophageal stricture; this allowed successful delivery of an OTSC and closure of the gastrointestinal fistula.

An 81-year-old woman presented with a 3-month history of non-healing GCF following percutaneous endoscopic gastrostomy. It had resulted in skin denudation caused by leakage of gastric contents (▶ **Fig. 1**). She underwent esophagogastroduodenoscopy, which showed the fistula in the inferior duodenal wall (▶ **Fig. 2**). There was also a benign, severe esophageal stricture due to severe gastroesophageal reflux disease. After giving written informed consent, the patient underwent several sessions of endoscopic balloon dilation, which were unsuccessful in permitting passage beyond the stricture of the endoscope with the OTSC system (▶ **Fig. 3**). The endoscopic radial incision and cutting method was then carried out and successfully released the esophageal stricture, thereby allowing OTSC delivery (▶ **Fig. 4**). Finally, the fistula was completely closed by means of one OTSC deployment (▶ **Fig. 5**). No procedure-related complications occurred.

This case shows that the radial incision and cutting technique is an effective option for OTSC delivery and deployment in patients with a benign, severe esophageal stricture.

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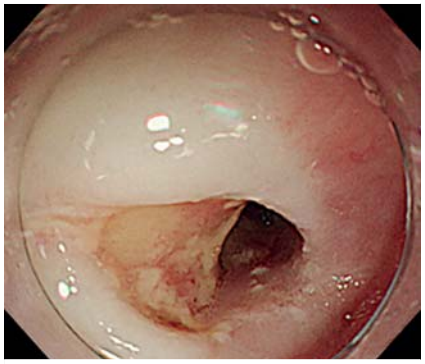
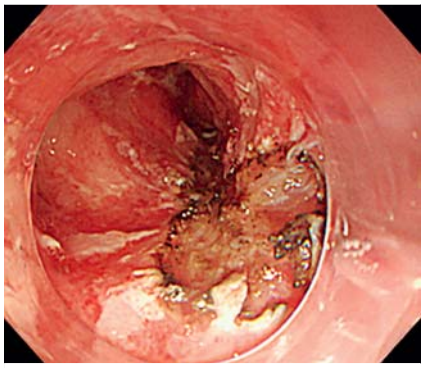
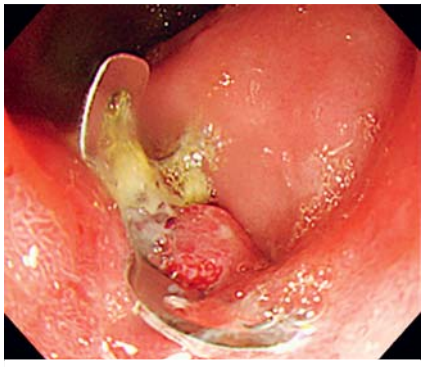


▶ **Fig. 3** The severe esophageal stricture.



▶ **Fig. 4** Release of the esophageal stenosis using the endoscopic radial incision and cutting technique, thereby allowing passage of the over-the-scope clip (OTSC) system.



▶ **Fig. 5** Endoscopic view shows successful over-the-scope clip (OTSC) deployment, with closure of the fistula.

Competing interests

The authors declare no conflicts of interest and have no financial arrangements with any company.

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DOI https://doi.org/10.1055/a-0871-1749
Published online: 12.4.2019
Endoscopy 2019; 51: E179–E180
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Stuttgart · New York
ISSN 0013-726X

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