Endoscopic introduction of an over-the-scope clip through an overtube to close a gastrocutaneous fistula in a patient with a complex upper esophageal stenosis

A 51-year-old man with a history of laryngeal cancer requiring total laryngectomy and placement of a forearm skin graft into the hypopharynx developed a nonhealing gastrocutaneous fistula after removal of a gastrostomy tube (Fig. 1 a). The injection of indigo carmine through the skin made it possible to determine the precise location of the 3- to 4-mm-diameter gastrocutaneous fistula within thickened gastric folds (Fig. 1 b). A gastroscope could be passed into the stomach after an esophageal stenosis between the hypopharynx and upper esophageal sphincter, induced by radiation fibrosis and the presence of a forearm skin graft, had been dilated sequentially with 9-, 10-, and 12-mm Savary bougies; however, it was still not possible to pass the fistula-closing device, an over-the-scope clip (OTSC System; Ovesco Endoscopy, Tübingen, Germany), through the hypopharynx. Contrast esophagography after the dilation procedure did not show any endoluminal esophageal damage, so an overtube (Guardus overtube-esophageal; inner diameter 16.7 mm, outer diameter 19.9 mm; US Endoscopy, Mentor, Ohio, USA) was inserted into the esophagus. The large-diameter overtube served as a “giant working channel,” allowing smooth passage of the scope with a large fistula-closing device, such as the OTSC System. Therefore, the overtube was used mainly to open the space to facilitate passage of the scope loaded with the device, especially during endotracheal intubation (this procedure was performed with the patient under general anesthesia).

The fistula was closed successfully (Fig. 1 d). Closure was documented by administering water-soluble contrast through the endoscope. The overtube and endoscope were removed, and the additional administration of contrast at the hypopharynx and upper esophagus did not reveal any damage, leak, or extravasation.

This case is an example of “extreme endoscopy.” First, the complex fistula could be found by using interventional chromoendoscopy. The esophageal stricture was dilated, and an overtube was inserted into the stomach. The overtube served as a bridge of the upper esophageal stenosis, allowing smooth passage of the scope with a large fistula-closing device, such as the OTSC System.

In summary, an impossible situation was converted into a therapeutic solution by combining the use of techniques and equipment widely available in the endoscopy suite, such as fluoroscopy, overtubes, dilation balloons, clipping devices, and chromoendoscopy.

Endoscopy_UCTN_Code_TTT_1AO_2AI

Competing interests: None

Marco Aurélio D’Assuncao, Paul T. Kröner, Sandhya Mudumbi, Klaus Mönkemüller
Basil I. Hirschowitz Endoscopic Center of Excellence, Division of Gastroenterology and Hepatology, University of Alabama at Birmingham, Alabama, USA

Bibliography
DOI http://dx.doi.org/10.1055/s-0034-1392561
Endoscopy 2015; 47: E412
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author
Klaus Mönkemüller, MD, PhD, FASGE
Division of Gastroenterology and Hepatology
Basil I. Hirschowitz Endoscopic Center of Excellence
Endoscopy Unit, JT 664
619 19th Street S
Birmingham, AL 35249
USA
Fax: +1-205-297-9411
klaus1@uab.edu

Fig. 1 a Gastrocutaneous fistula in a 51-year-old man, which developed after the removal of a gastrostomy tube. b The fistula was found between the gastric folds by injecting indigo carmine through the opening in the skin. c The presence of an overtube allowed passage of the scope loaded with the over-the-scope clip (OTSC). The overtube functioned as a giant working channel. d The OTSC was successfully deployed over the fistula, which closed immediately.