Transabdominal esophago-cutaneous fistula closure with endoscopic negative pressure therapy using a thin open-pore film drain in a pull-through technique

A 77-year-old patient underwent gastrectomy for AEG III (G3, pT3, pN0). The postoperative course was complicated by insufficiency of the esophageal-jejunal anastomosis after gastrectomy to the external cutaneous fistula opening. The patient was transferred to us 4 weeks after surgery, with the surgical drain and a stent still in place. The stent was removed. The surgical drain was seen through the anastomotic defect, which was approximately 1 cm in diameter. With a small endoscope, a 30-cm transabdominal fistula channel was examined from the anastomotic defect to the cutaneous opening (Fig. 1). The surgical drain was removed. Using the endoscope, an open-pore film drainage (OFD) with a 25-cm open-pore film drainage element in the middle section for endoscopic negative pressure treatment. The length of the drainage element was adjusted to the length of the surgical drain so that the entire fistula tract could be set under negative pressure. The open-pore film drain (OFD) used for the pull-through method. In this type of drainage, the open-pore drainage element is placed with the middle section of the drain. It consists of a very thin, open-pored double-layered film (OF) wrapped around the lateral perforation (IP) holes of the drain (D). The OFD is 6 mm in diameter and the drain element was 25 cm long. The distal end of the OFD is blocked (B) with a knot or a clamp. Vacuum is applied at the oral end (VAC).
was closed with a clamp. The oral end was led out nasally and connected to an electronic pump (ACTIV.A.C; KCI, San Antonio, Texas, USA). Continuous negative pressure of –125 mmHg was applied. Secretion through the fistula stopped immediately. Fluoroscopy confirmed adequate fistula closure (▶ Fig. 4).

After 4 days, the OFD was exchanged for a thinner OFD (4 mm in diameter, 25 cm drainage element) again using the pull-through technique. The collapsed fistula channel was completely lined with a typical regular suction pattern along its entire length (▶ Fig. 5).

After a total of 10 days ENPT ended. The patient was allowed to drink water. On the following day, radiological contrast examination confirmed fistula closure and patient started with a soft diet. Endoscopy showed the healed leak without stenosis during further follow-up.

Endoscopy_UCTN_Code_CPL_1AH_2AG

Acknowledgments

We like to thank the nursing staff of the interdisciplinary endoscopic unit of the Marienkrankenhaus Hamburg for their excellent technical assistance. We gratefully acknowledge the support of the Department of Anesthesiology and Intensive Care Medicine.

Competing interests

Gunnar Loske is consultant of Lohmann & Rauscher GmbH & Co.KG. Johannes Müller, Lilith Boon Kyung Braun, Dalia Majert, Burkhard Riefel, Martin Zeile and Christian Theodor Müller declare no conflict of interest.

The authors

Gunnar Loske1, Johannes Müller1, Lilith Boon Kyung Braun1, Dalia Majert1, Burkhard Riefel1, Martin Zeile1, Christian Theodor Müller1

1 Katholisches Marienkrankenhaus Hamburg gGmbH, Department for General, Abdominal, Thoracic and Vascular Surgery, Hamburg, Germany

2 Katholisches Marienkrankenhaus Hamburg gGmbH, Institute for Diagnostic and Interventional Radiology, Hamburg, Germany

References


Bibliography

Endoscopy

DOI 10.1055/a-1948-1816
ISSN 0013-726X
published online 2022 © 2022. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial license, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)

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