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) was placed with the long, open-pore drainage element 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 surgical drain was still in situ. Using the endoscope, an open-pore film drainage (OFD) was placed with the long, open-pore drainage element 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.
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.

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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.

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