

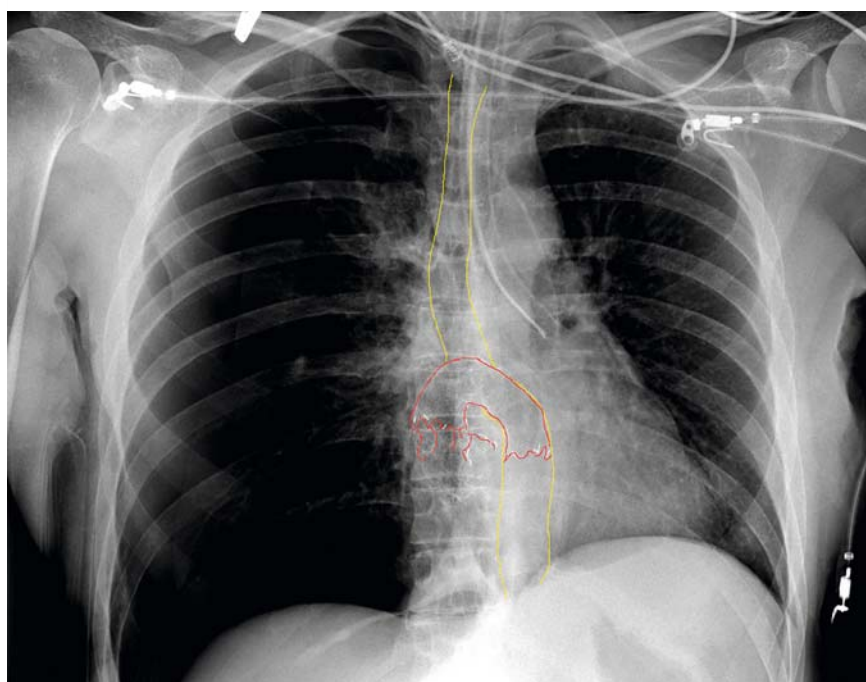
Endoscopic removal of a fractured esophageal stent from the mediastinum and leak closure with endoscopic vacuum therapy

Self-expanding metal stents (SEMSs) are effective and safe for the treatment of esophageal leaks [1, 2]. However, optimal timing of stent removal is vital, as hyperplasia of the tissue can make it challenging [3, 4]. Complications range from bleeding and stent overgrowth requiring multiple endoscopic procedures to perforation requiring surgical repair [5].

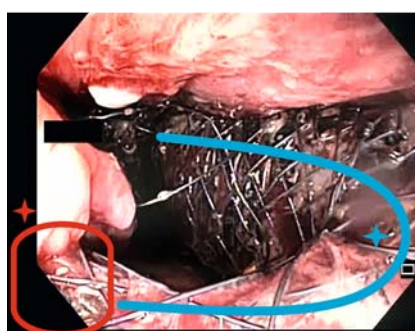
We present the case of a 36-year-old woman with an esophageal perforation due to partial stent dislocation of a SEMS into the mediastinum. The dislocation occurred during an endoscopic extraction procedure at another hospital 35 days after implantation (► **Fig. 1**, ► **Fig. 2**, ► **Video 1**).

The patient was transferred to our hospital, and we performed a flexible endoscopy (GIF-HQ190; Olympus, Tokyo, Japan) during which we discovered a partially broken SEMS (Hanarostent; Olympus Europa, Hamburg, Germany) that had moved into the mediastinum. Equipped with a forceps (MTW Endoskopie Manufaktur, Wesel, Germany), we tried to pull the SEMS into the esophagus but did not succeed because of a remaining embedded lower flare end. We then used an endoscopic knife (HookKnife, Olympus Europa) to cut the remaining nitinol filaments out of the tissue in the distal area of the stent. Then, we used a forceps to elevate the lower flare end circumferentially until it was freed from the mucosa. Finally, we removed the SEMS completely.

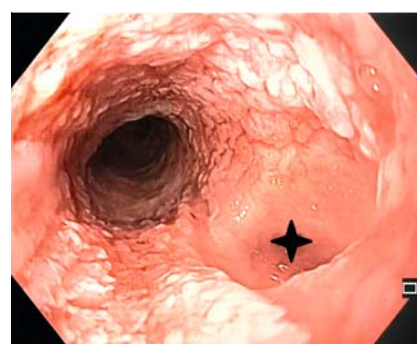
The final screening showed a 3-cm esophageal perforation with a view into the mediastinum. Endoscopic vacuum therapy was performed, and all tailored sponges (Eso-SPONGE; Aesculap AG, Tuttlingen, Germany) were placed intraluminally in the esophagus. All four consecutive endoscopies conducted to exchange the sponge system showed a remarkable healing process. In the final endoscopy (13th post-interventional day), the leak



► **Fig. 1** Stent dislocation after unsuccessful removal (red: stent; yellow line: course of the esophagus).



► **Fig. 2** View into the mediastinum: esophageal perforation (red star) and broken stent (blue star) in the mediastinum (blue line: direction of the stent).

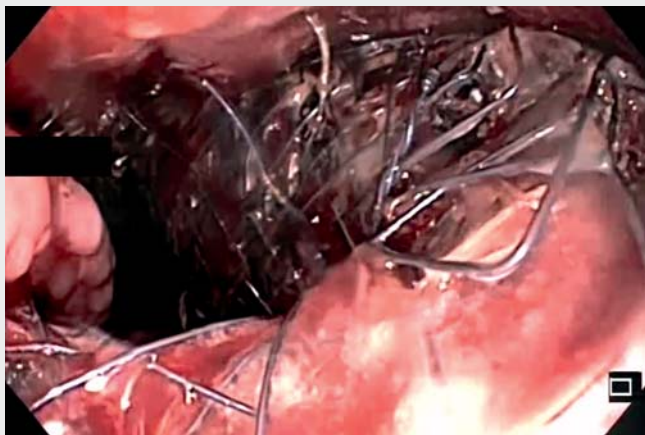


► **Fig. 3** Sealed esophageal leak with a small clean cavity (black star).

was sealed with a small and encapsulated cavity (► **Fig. 3**). Endoscopic vacuum therapy was terminated, and a computed tomography (CT) scan of the chest confirmed the improvement. An aspergillus pneumonia delayed hospital discharge.

On the 24th post-interventional day, the patient was discharged without any remaining pathology.

Endoscopy_UCTN_Code_TTT_1AO_2AZ



Video 1 Endoscopic removal of a fractured esophageal stent from the mediastinum and leak closure with endoscopic vacuum therapy.

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Competing interests

The authors declare that they have no conflict of interest.

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