

## Use of endoscopic nasobiliary drainage tube for treating mediastinitis caused by insertion of an esophageal self-expanding metal stent

Self-expanding metal stents (SEMS) are relatively easy to deploy, with a high technical success rate, and provide rapid relief of dysphagia [1], which is the major factor affecting quality of life in patients not suitable for resection. Since Domschke et al. first reported the use of SEMS in 1990 [2], the technique has been widely used for malignant esophageal stenosis [3], although there have been many reports of complications associated with the combination of SEMS and chemoradiation therapy (CRT) [4,5].

A 56-year-old man was diagnosed as having carcinoma of the lower esophagus in July 2008. After CRT, he was admitted to our hospital for second-line chemotherapy in October 2008. The patient had developed uncontrollable salivation in the

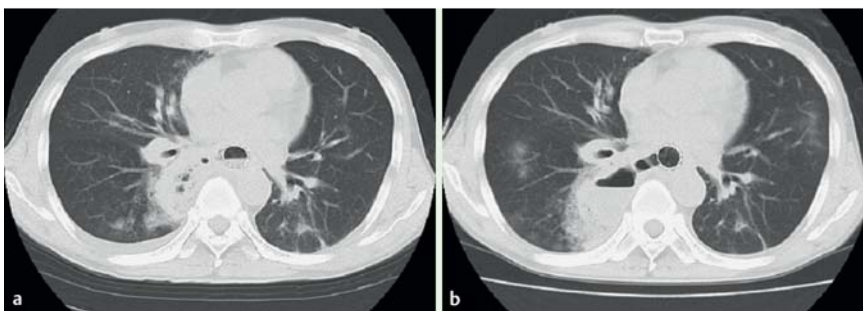
month prior to admission. A SEMS was placed successfully, but he developed fever and low blood pressure on November 28, 2008. Computed tomography (CT) examination revealed a fistula between the esophagus at the oral end of the SEMS and the mediastinum, and mediastinitis was suspected. Despite the administration of antibiotics, and steroid pulse and  $\gamma$ -globulin combination therapy, an abscess with liquefaction was confirmed in the mediastinum 7 days later (● Fig. 1). An endoscopic nasobiliary drainage (ENBD) tube was placed in the mediastinal abscess along a guide wire to allow drainage (● Fig. 2).

A CT scan demonstrated improvement in the abscess 12 days after insertion of the ENBD tube (● Fig. 3).

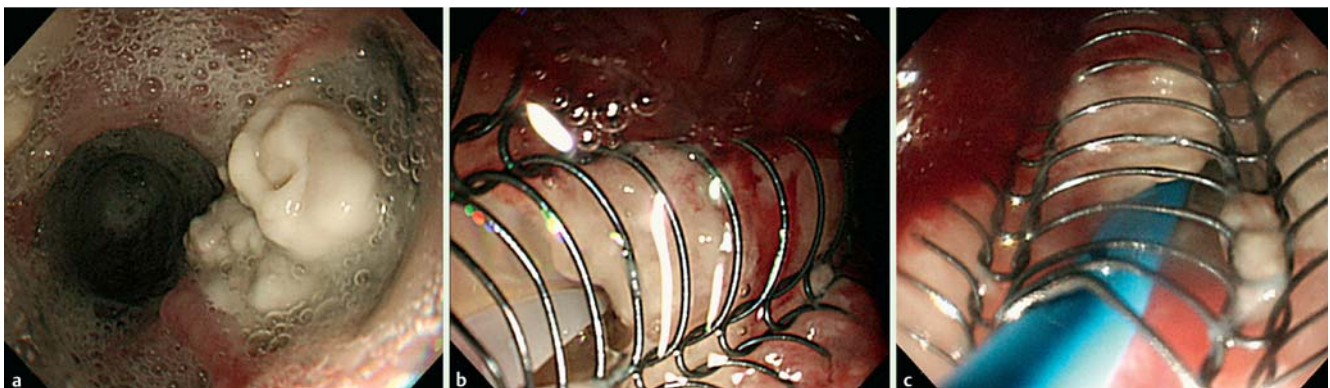
The risks and benefits of SEMS insertion must be weighed in light of the existing illness and the patient's quality of life. We report the case of a patient with esophageal carcinoma treated with CRT who developed mediastinitis after SEMS insertion. Mediastinitis was treated by esophago-mediastinal drainage of the mediastinal abscess via the insertion of an ENBD tube. This technique has not been previously reported, but appears to represent a useful method for management of mediastinitis after SEMS insertion.

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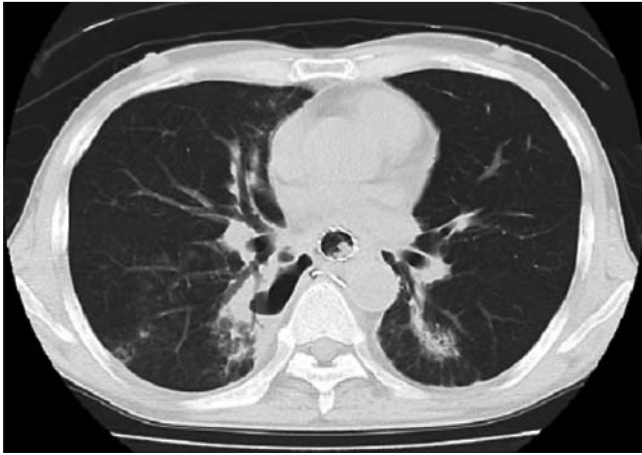
Competing interests: None



**Fig. 1** CT examination after first SEMS insertion. **a** There is an infiltrative shadow between the mediastinum and the esophagus. Consolidation on the dorsal side suggests air inclusion. Formation of a fistula between the esophagus and the mediastinum was suspected. Septic shock caused by mediastinitis was diagnosed. **b** An abscess with liquefaction in the mediastinum, noted 7 days later despite the administration of antibiotics, and steroid pulse and  $\gamma$ -globulin combination therapy.



**Fig. 2** Upper gastrointestinal endoscopy. **a** Partial granulation accompanied by white necrotic tissue at the oral edge of the stent. **b** Removal of the granulation tissue revealing the fistula between the esophagus and the mediastinum. An endoscopic retrograde cholangiopancreatography (ERCP) catheter was inserted into the fistula. **c** A 6-Fr endoscopic nasobiliary drainage (ENBD) tube was placed in the mediastinal abscess along the guide wire.



**Fig. 3** Radiological follow-up after endoscopic nasobiliary drainage (ENBD) tube drainage. Computed tomography (CT) examination confirmed adequate drainage of the mediastinal abscess, and revealed improvement of the abscess 12 days after tube insertion.

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### Bibliography

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