

Successful treatment of anastomotic leakage by endoscopic stenting after esophageal atresia repair in an infant

A 1-day-old infant was admitted with dyspnea and increased oral secretion following birth. Chest X-ray obtained after failure of nasogastric tube placement revealed tube curling in the upper esophagus. The diagnosis was esophageal atresia with tracheoesophageal fistula, re-



► **Fig. 1** Esophagography revealed contrast leakage from the chest tube (arrows).

quiring thoracoscopic repair of the fistula and atresia on Day 3 after birth.

He resumed feeding with milk, but turbid fluid was observed in the chest tube 1 week after the surgery. Anastomotic leakage was considered, and parenteral nutrition and antibiotic therapy were initiated. He experienced intermittent fever, and esophagography revealed contrast medium leakage from the anastomotic site on hospital Day 50 (► **Fig. 1**, arrows).

Endoscopic therapy was performed due to lack of clinical improvement after conservative medical therapy. Severe stenosis with ulceration over the anastomosis was observed using an ultra-thin endoscope (► **Fig. 2 a**, ► **Video 1**). Argon plasma coagulation was performed for suspected fistula tract, and a fully covered biliary metal stent (8 mm × 6 cm) was placed over the fistula (► **Fig. 2 b**), which was removed 2 weeks later. The stenosis improved and the anastomotic mucosa healed (► **Fig. 2 c**). Follow-up esophagography disclosed no contrast leakage, and the patient's condition improved;

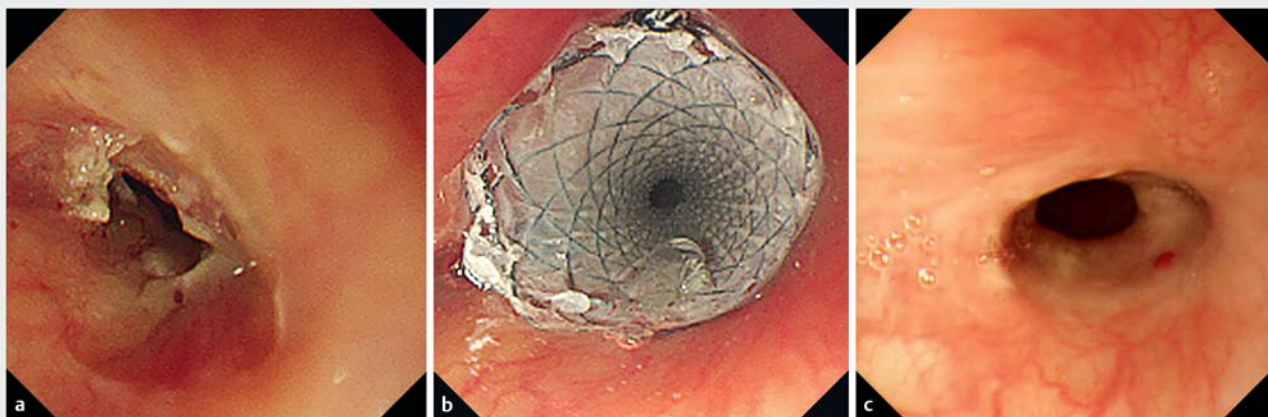
he was initiated on an oral diet and discharged on hospital Day 93.

Anastomotic stricture and leakage are the two most frequent complications after esophageal atresia repair [1–3]. The management of minor esophageal leakage is mainly supportive, and surgery is reserved for those cases refractory to medical therapy. An esophageal metal stent is used to treat either esophageal stricture or leakage in adults but the experience is lacking in pediatric patients [2]. Because of the absence of manufactured, age-related stents, we utilized a biliary stent as an alternative in order to successfully treat this difficult disease.

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► **Fig. 2** Endoscopic views. **a** Stenosis and ulceration over the anastomosis site. **b** View after successful placement of a covered biliary stent over the anastomosis. **c** View after removal of the stent.



Video 1 Successful treatment of anastomotic leakage after esophageal atresia repair by endoscopic stenting in an infant.

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Competing interests

The authors declare that they have no conflict of interest.

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