

Endoscopic incision plus esophageal stenting for refractory esophageal stricture in children

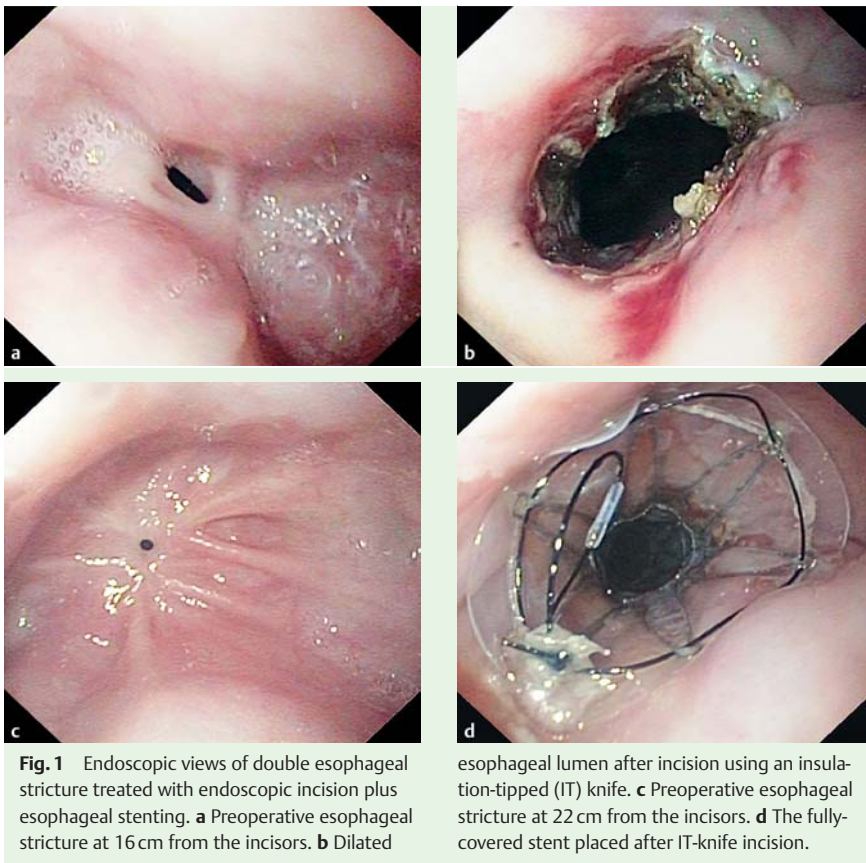


Fig. 1 Endoscopic views of double esophageal stricture treated with endoscopic incision plus esophageal stenting. **a** Preoperative esophageal stricture at 16 cm from the incisors. **b** Dilated

esophageal lumen after incision using an insulation-tipped (IT) knife. **c** Preoperative esophageal stricture at 22 cm from the incisors. **d** The fully-covered stent placed after IT-knife incision.

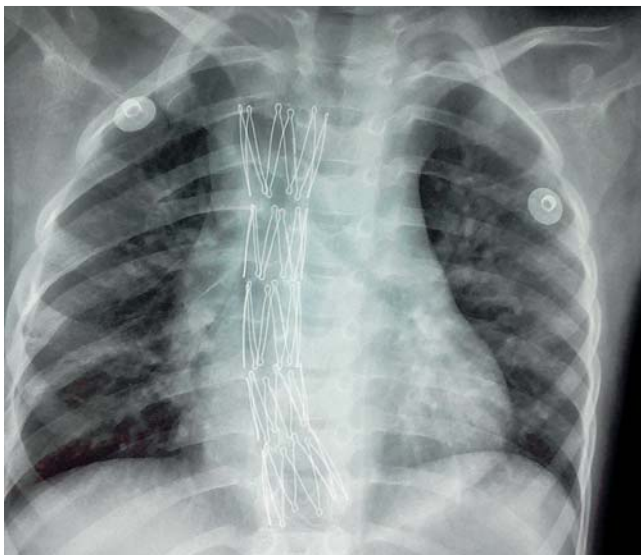


Fig. 2 No stent migration occurred during the 4-week period.



Fig. 3 At follow-up endoscopy 6 months later, the stenotic diameter had increased to 1.0 cm.

whole procedure was performed under general anesthesia. Incision was performed under direct visualization with a single-accessory channel endoscope (GIF-Q260; Olympus, Tokyo, Japan) with a transparent cap attached to the front (D201-11804; Olympus). The first stricture site was located at 16 cm from the incisors (● Fig. 1 a). Radial incisions were made along a virtual line between the esophageal lumen on the anal side and the lumen on the oral side of the stricture. Sufficient incision depth was defined as the muscularis propria or to the level of the esophageal mucosa on either side of the stricture. Each part of the stricture between adjacent incisions was sliced off (● Fig. 1 b). Another stricture at 22 cm from the incisors (● Fig. 1 c) was similarly managed. After the procedure, a fully covered retrievable metal stent (Polyflex; Willy Rüsçh GmbH, Kernen, Germany) was placed at the stricture site (● Fig. 1 d, ● Video 1). The whole procedure was completed uneventfully within approximately 60 minutes. No migration occurred and the stent was removed 4 weeks later (● Fig. 2). Sustained symptom improvement was achieved. The diameters enlarged during a 6-month follow-up (● Fig. 3).

Refractory stricture refers to those that do not respond to repeated dilations. While

A 4-year-old boy was admitted to our hospital with a 4-year history of vomiting and bucking. He had a diagnosis of esophageal atresia at Day 2 after birth and underwent surgery. Stricture formed 1 year after surgery. Prior to admission, he had under-

gone balloon dilation four times, stenting twice, and surgery once. Esophageal barium meal examination showed two strictures in the middle and lower segments. Informed consent was signed for endoscopic treatment of the strictures. The

Video 1

Two strictures were treated by endoscopic incision and placement of a fully covered retrievable metal stent.

few studies of endoscopic incision for refractory esophageal stricture in adults have shown exciting results [1,2], use of this technique has not been reported for pediatric cases. In contrast to the procedure reported by Muto et al. [2], we employed stenting rather than dilation to prevent re-stenosis. Stenting is performed prior to dilation in order to provide continuous, radial dilation pressure over a longer period of time [3] and to reduce the frequency of anesthesia and invasive operations [4]. In conclusion, this case demonstrates that endoscopic incision is feasible and appears to be safe and effective for refractory esophageal stricture in children.

Endoscopy_UCTN_Code_TTT_1AO_2AH

Competing interests: None

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Bibliography

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