

A degradable esophageal stent in the treatment of a corrosive esophageal stenosis in a child

A 10-year-old boy accidentally ingested drain cleaner (15% NaOH solution; pH 12.5) from a bottle. He vomited and developed dysphagia and retrosternal pain. Endoscopy showed major circumferential ulcerations (grade IIb) [1]. Follow-up endoscopy after 4 weeks showed a stenosis at the mid esophagus, allowing passage of a neonatal endoscope (diameter 4.9 mm). A self-expandable, biodegradable SX-Ella esophageal stent (diameter 25 mm, length 80 mm; Ella-CS, s.r.o., Hradec Králové, Czech Republic) was inserted 6 weeks after the ingestion with the patient under anesthesia (● Fig. 1). Retrosternal pain, dysphagia, and nausea occurred for a few days. About 10 days later, the boy became asymptomatic. During all this time, oral omeprazole (20 mg/day) was given. Further follow-up endoscopy after 3 weeks showed that the distal end of the stent had extended into the stomach (● Fig. 2). About 12 weeks after insertion, the stent was 50% degraded. At that time, the esophageal mucosa had healed. Although the patient remained symptom-free for 4 months, he developed a severe distal esophageal stenosis over 4 cm about 10 months after the initial ingestion and 6 months after the stent placement.

Strictures typically develop during proliferation of fibroblasts, with deposition of collagen after 1–3 months. Stenting, which has been performed for more than 20 years, provides a better outcome than dilation (68% healing versus 33%) [2,3]. Poor patient compliance and gastroesophageal reflux resulting from esophageal shortening during scar formation were the reasons for failure [3]. In another reported series 8 out of 11 patients had a normal feeding pattern, even after stent removal (follow-up 3.5 years) [4]. Self-expanding stents are easily introduced and are removed endoscopically. Common complications of these stents are chest pain, dysphagia, and nausea [5]. Recently, biodegradable stents were developed which maintain their integrity and radial force for 6–8 weeks. Disintegration occurs 11–12 weeks after inser-

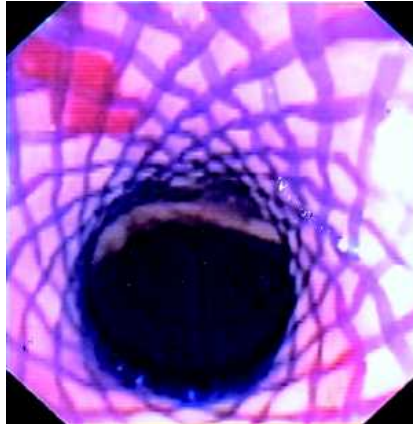


Fig. 1 View of the stent immediately after esophageal insertion.



Fig. 2 Retrograde view of the stent protruding into the stomach after 3 weeks.

tion. The SX-Ella esophageal degradable BD Stent should be further evaluated as first-choice intervention in patients developing a corrosive esophageal stenosis.

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References

- 1 Zargar SA, Kochhar R, Mehta S, Mehta SK. The role of fiberoptic endoscopy in the management of corrosive ingestion and modified endoscopic classification of burns. *Gastrointest Endosc* 1991; 37: 165–169
- 2 Coln D, Chang JH. Experience with esophageal stenting for caustic burns in children. *J Pediatr Surg* 1986; 21: 588–591
- 3 Mutaf O. Treatment of corrosive esophageal strictures by long-term stenting. *J Pediatr Surg* 1996; 31: 681–685
- 4 Atabek C, Surer I, Demirbag S et al. Increasing tendency in caustic esophageal burns and long-term polytetrafluoroethylene stenting in severe cases: 10 years experience. *J Pediatr Surg* 2007; 42: 636–640
- 5 Holm AN, de la Mora Levy JG, Gostout CJ et al. Self-expanding plastic stents in treatment of benign esophageal conditions. *Gastrointest Endosc* 2008; 67: 20–25

Bibliography

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