

Esophageal anastomotic severe stenosis after atresia repair: effectiveness of a multi-step strategy for an unusual endoscopic recanalization

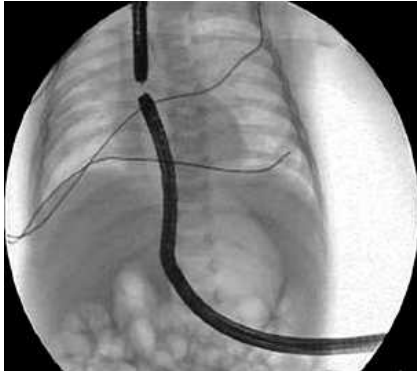


Fig. 1 Radiograph showing correct position of the two endoscopes.



Fig. 3 EchoTip needle entering the upper end of the esophagus.

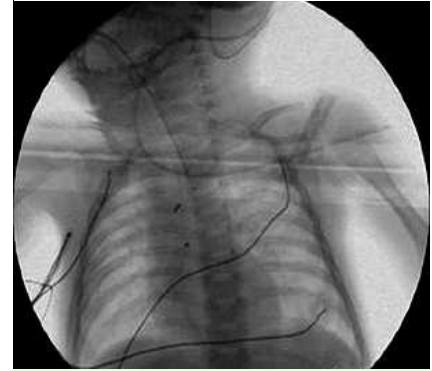


Fig. 5 Radiography verified the correct position of the pledgets.



Fig. 2 Transillumination of the esophagus.



Fig. 4 Polypropylene stitches hold a radio-opaque silicon pledget in place at the esophageal ends.



Fig. 6 After 7 days, a chest radiograph showed migration of the pledgets into the lower esophagus.

Esophageal atresia occurs in one in every 2500–3000 live births [1]. Long gap esophageal atresia (LGA) represents 10%–30% of cases, with gaps ranging from 2 cm to greater than 6 cm. The best treatment results are obtained if the native esophagus is preserved. Stenosis is estimated to be prevalent in up to 40% of cases [2], most of which require repeated endoscopic dilatations. Rarely, the stricture can be so tight that endoscopic dilatation is impossible.

A 3-month-old baby who had undergone surgery for LGA at another hospital was

admitted to our unit because of severe malnutrition. Barium swallow showed the absence of an anastomotic esophageal lumen. We used two scopes – one in the mouth and one via gastrostomy. Correct positioning of the scopes was verified by radiography (● Fig. 1) and transillumination (● Fig. 2).

We located a suitable site and then perforated the lower esophageal end with an EchoTip (Ultra 19G, Cook Medical Inc., Winston-Salem, North Carolina, USA), entered the upper end of the esophagus, and inserted a guide wire (● Fig. 3).

The guide wire was retrieved by the upper scope from the oral cavity. After conventional dilatation, two radio-opaque silicon pledgets were placed in the esophageal ends, and held in traction by two polypropylene stitches (● Fig. 4). Repeat radiography verified the correct position of the pledgets (● Fig. 5). After 7 days, a chest radiograph showed migration of the pledgets into the lower esophagus (● Fig. 6).

Our standardized method of esophageal stenting [3] followed to achieve good caliber. The stent was left in place for 40 days.

Resolution of the remnant stenosis was achieved by endoscopic radial section of the stenotic ring using a mucosectomy needle-knife.

Takamizawa [4] described a case of severe stenosis treated by magnetic compression of esophageal pouches. More than 20 years ago, Sauer and Kurz applied classical Rehbein's thread-and-olive technique to children with type I esophageal atresia [5]. Similar studies were made by other authors in the early 1980s.

Endoscopy_UCTN_Code_TTT_1AO_2AH

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DOI 10.1055/s-2008-1077650
Endoscopy 2008; 40: E254–E255
© Georg Thieme Verlag KG Stuttgart · New York ·
ISSN 0013-726X

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