Fluoroscopy-guided endoscopic recanalization of an obstructed gastroesophageal junction in a child

There are various conditions that can lead to complete obstruction of the esophagus, with possible causes including radiotherapy, ingestion of caustic agents, foreign bodies, peptic esophagitis, and iatrogenic factors. In most situations, major surgical intervention is required to restore the patency of the alimentary tract. Standard endoscopic dilation is not possible because no lumen exists [1,2].

We performed esophagogastroduodenoscopy (EGD) using a gastroscope (Olympus 180; Olympus, Tokyo, Japan) and found total occlusion of the distal esophagus (Fig. 1; Video 1). The gastrostomy site was used to inject air into the stomach, making the stomach bubble clearly visible on fluoroscopy, and the esophagus was filled with water-soluble contrast (Fig. 2a). We then measured the distance of the fibrotic separation between the esophagus and the stomach, which was about 10 mm.

A 19G endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) (Boston Scientific, Massachusetts, USA) was used to puncture across the fibrosis into the stomach (Fig. 2b). The position of the needle in the stomach was documented by injection of contrast. After this a 0.035-inch guidewire (Jagwire; Boston Scientific) was inserted through the needle into the gastric lumen. The path was dilated initially with a Soehendra dilator (7 – 8.5Fr; Cook Medical, Winston-Salem, North Carolina, USA) and afterwards with a 10-mm Titan biliary balloon (Cook Medical) (Fig. 2c), resulting in complete recanalization of the esophagus (Fig. 3a). Following this it was possible to easily pass the endoscope into the stomach and scheduled dilations were performed every 3 – 4 weeks over a period of 12 months (Fig. 3b).

After the recanalization of her esophagus, for the first time in her life, the child was able to ingest food without vomiting it, and her general condition, social life, and quality of life have markedly improved since then.

Video 1

Fluoroscopy-guided endoscopic recanalization and endoscopic treatment of a total occlusion of the distal esophagus, showing the final result.

Competing interests: None

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Fig. 1 Endoscopic view showing total occlusion of the distal esophagus.

Fig. 2 Radiographic images showing: a the stomach, which has been been filled with air via the gastrostomy tube, and the esophagus, which has been filled with water-soluble contrast; b a fine needle aspiration (FNA) needle that has been inserted into the stomach; c balloon dilation of the stenosis.
Saverio T. N. Armellini, Daniel Moribe, Joao Seda, Paulo Chap Chap, Rubens Sallun, Marco A. D’Assuncao

1 Department of Digestive Endoscopy, Hospital Sirio Libanes, Sao Paulo, Brazil
2 Department of Surgery of Hospital Sirio Libanes, Sao Paulo, Brazil

Fig. 3 Endoscopic views showing: a the esophagus immediately after successful dilation of the stenosis; b the appearance 21 days after recanalization.

References


Bibliography

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Corresponding author
Marco Aurelio D’Assuncao, MD
Hospital Sirio Libanes
Digestive Endoscopy Unit
Rua Adma Jafet, 91 1o SS
Sao Paulo, SP
01308-050
Brazil
Fax: +55-11-31553721
mada.endoscopia@hotmail.com