Endoscopic fundoplication in a pediatric patient: a new concept

Endoscopic transoral incisionless fundoplication (TIF) has been shown to be efficacious and safe in the management of gastroesophageal reflux disease (GERD) [1–3], including in patients with GERD who have undergone peroral endoscopic myotomy (POEM) for achalasia [4]. However, the safety of TIF in the pediatric population is unknown. This video case report is the first to evaluate the role of TIF for the management of GERD in a pediatric patient.

A 13-year old patient developed symptomatic reflux after undergoing POEM. Because of the potential side effects of long-term proton-pump inhibitor (PPI) use, the patient opted to undergo TIF (▶ Video 1). The Esophyx Z device (Endogastric Solutions, Redmond, Washington, USA) was passed over a flexible endoscope (GIF-190; Olympus) into the stomach. The plastic jaw was closed, and a retroflexed view of the device confirmed it was in the knuckle position. The plastic jaw was positioned at the lip of the gastroesophageal junction at the 11-o’clock position. The helical retractor was advanced, and the gastric tissue was coiled, retracted, and rotated counterclockwise to create the wrap (▶ Fig. 1). After the plastic jaw was locked, an invigator was activated. Polypropylene fasteners were deployed through the retracted tissue. Once the tissue was secure, the invigator was inactivated and the wrapped tissue was released. The procedure was repeated at the 1-o’clock, 5-o’clock, and 7-o’clock positions, forming a 270-degree fundoplication. After the wrap had been created, a flexible endoscope was used to examine the fundoplication (▶ Fig. 2). A total of 20 fasteners were deployed in the procedure. Post-procedure, the patient was admitted for a single night’s observation. At 6 months after the procedure, the patient remains asymptomatic and does not require PPI medications.

TIF is an efficacious and safe intervention in the treatment of GERD. This is the first case of a successful TIF procedure being conducted in a pediatric patient, suggesting the feasibility of TIF in pediatric patients.

Competing interests

M. Kahaleh has received grant support from Boston Scientific, Fujinon, EMCison, Xlumena, W. L. Gore, MaunaKea, Apollo Endosurgery, Cook Endoscopy, ASPIRE Bariatrics, GI Dynamics, NinePoint Medical, Merit Medical, Olympus, and MI Tech; he is a consultant for Boston Scientific, Xlumena, Concordia Laboratories, ABBvie, and MaunaKea Tech. A. Tyberg is a consultant for Boston Scientific, EndoGastric Solutions, and NinePoint Medical.
The authors

Amy Tyberg¹, Kopal Jha², Monica Gaidhane¹, Michel Kahaleh¹

¹ Rutgers University, Robert Wood Johnson Medical School, New Jersey, USA
² Cornell University, Ithica, New York, USA

Corresponding author

Michel Kahaleh, MD
Rutgers, The State University of New Jersey, Robert Wood Johnson University Hospital, 1 RWJ Place, MEB 464, New Brunswick, NJ 08901, USA
Fax: +1-732-235-5537
mkahaleh@gmail.com

References


Bibliography

DOI https://doi.org/10.1055/a-0889-7199
Published online: 2019
Endoscopy
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X