Endoscopic extraction of a gastric foreign body by means of an esophageal self-expanding metal stent

A 39-year-old man with a history of self-injurious behavior, presented at the emergency department and publicly swallowed a bunch of keys. He was asymptomatic and the initial X-ray identified the foreign body (approximately 90 mm × 20 mm) in the epigastric region of the abdomen (▶ Fig. 1). He underwent endotracheal intubation and esophagogastroduodenoscopy for removal of the keys after 2 hours. The endoscopy showed the bunch of keys in the antrum of the stomach. Endoscopic balloon dilation of the upper esophageal sphincter (UES) was performed. Initial attempts of extraction using rat-tooth forceps and snare were unsuccessful because the bunch of keys could not pass through the lower esophageal sphincter (LES). Therefore, we decided to deploy a fully covered 23 × 125-mm esophageal self-expanding metal stent (SEMS) (WallFlex; Boston Scientific, Marlborough, Massachusetts, United States) across the cardia, to dilate the LES and protect the esophageal mucosa from laceration during retrieval. The bigger key was captured from the distal end to create an axis parallel to the esophagus and gently pulled through the cardia inside the SEMS (▶ Video 1).

During the retrieval maneuver, the foreign body got stuck in the stent; eventually the removal of both foreign body and SEMS was obtained (▶ Fig. 2a, b; ▶ Video 1). No mucosal injuries were observed at the immediate post-procedural endoscopy. Large (> 25 mm) and long (> 50 mm) foreign bodies usually present a challenge to endoscopic management [1]. The use of overtubes [2, 3] and double device techniques [4, 5] can be useful but endoscopic extraction can be hazardous in certain cases. We proposed a novel technique for peroral extraction of a large and long foreign body employing the off-label use of SEMS. It is demonstrated to be a safe and effective option and should be considered, on a case-by-case basis, as a nonsurgical alternative in the hands of an expert endoscopist.

Endoscopy_UCTN_Code_TTT_1AO_2AL
Competing interests

The authors declare that they have no conflict of interest.

The authors

Nico Pagano¹, Giovanna Grazia Cirotta², Flavio Metelli³
¹ Gastroenterology Unit, Department of Oncological and Specialty Medicine, University Hospital Maggiore della Carità, Novara, Italy
² Department of Gastroenterology and GI Endoscopy, Azienda Ospedaliero Universitaria di Ferrara Arcispedale Sant’Anna, Cona, Emilia-Romagna, Italy
³ ASST Bergamo Est, Gastroenterology Department, Seriate, Lombardia, Italy

Corresponding author

Flavio Metelli, MD
ASST Bergamo Est, Gastroenterology Department, Bognini Hospital, Via Paderno, 21, 24068 Seriate, BG, Italy
flaviomet90@gmail.com

References


Bibliography

Endoscopy
DOI 10.1055/a-1901-0957
ISSN 0013-726X
published online 2022
© 2022. The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS
https://eref.thieme.de/e-videos

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos