

Two cases in which electrohydraulic lithotripsy was used in adults to treat an impacted pill in the esophagus



Electrohydraulic lithotripsy (EHL) is a well-established technique for breaking stones in the genitourinary and hepatobiliary tracts using hydraulic shockwaves created by electric discharge sparks in liquid [1]. The removal of gastric bezoars with EHL has been previously reported [2], and there was also one report of the application of EHL in a child with an impacted esophageal pill in 2015 [3]. We present our experience using EHL to remove impacted pills in adults, which has not previously been described in the literature (► **Video 1**).

Case #1: A 28-year-old man with heartburn presented with a complaint of pill impaction. Initial upper gastrointestinal endoscopy revealed ringed and crepe-paper esophagus, suspicious for eosinophilic esophagitis (EoE). A tablet was found to be impacted within a stricture at 29cm from the incisors, and there was an adjacent mucosal tear. The tablet was dislodged using rat-tooth graspers, but re-impacted at 34cm, with worsening of the esophageal tear, which was then partially closed with clips. Repeat endoscopy with fluoroscopy showed no contrast leakage at the level of the tear and there was an abrupt cutoff of contrast at the level of the impacted pill. A 1.9-Fr biliary EHL probe was advanced through a pediatric gastroscope, and we were able to successfully fragment the pill under direct visualization at a setting of 30 pulses per activation at low power. The remainder of the examination was normal.

Case #2: A 23-year-old man with longstanding dysphagia and two prior suspected impactions that had been managed conservatively presented with a further episode of suspected pill impaction. Upper gastrointestinal endoscopy showed mucosal changes suspicious for EoE. Pill impaction was noted at 30cm from the incisors within an esophageal stricture. EHL was used to obliterate the pill using the same settings as in case



► **Video 1** Two cases in which gastroscopy showed mucosal changes suspicious for eosinophilic esophagitis and an impacted pill was identified in the esophagus that was fragmented using electrohydraulic lithotripsy.

#1. The remainder of the examination was completed using a pediatric gastroscope because of the stricture and was unremarkable.

Endoscopy_UCTN_Code_TTT_1AO_2AL

Competing interests

N.A. Hoerter has equity in a company called Redesign Health. B.B. Rao, B.H. Yoon, and J.Y. Yoon declare that they have no conflict of interest.

The authors

Bo Hyung Yoon¹, **Ji Yoon Yoon²**, **Bhavana Bhagya Rao²**, **Nicholas A. Hoerter²**

- 1 Department of Gastroenterology and Hepatology, Icahn School of Medicine at Mount Sinai (West, Morningside, Beth Israel), New York, New York, USA
- 2 Dr. Henry D. Janowitz Division of Gastroenterology, Icahn School of Medicine at Mount Sinai, New York, New York, USA

Corresponding author

Nicholas A. Hoerter, MD

Division of Gastroenterology, One Gustave L. Levy Place, Box 1069, New York, NY 10029, USA
nicholas.hoerter@mountsinai.org

References

- [1] Burhenne HJ. Electrohydrolytic fragmentation of retained common duct stones. *Radiology* 1975; 117: 721–722
- [2] Kuo JY, Mo LR, Tsai CC et al. Nonoperative treatment of gastric bezoars using electrohydraulic lithotripsy. *Endoscopy* 1999; 5: 386–388
- [3] Iqbal S, Daum F, Joutovsky AR et al. Successful application of electrohydraulic lithotripsy in a child with impacted esophageal foreign body (pill). *J Pediatr Gastroenterol Nutr* 2015; 60: e2–e3

Bibliography

Endoscopy 2023; 55: E114–E115

DOI 10.1055/a-1944-9126

ISSN 0013-726X

published online 14.10.2022

© 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>