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 29 cm from the incisors, and there was an adjacent mucosal tear. The tablet was dislodged using rat-tooth graspers, but re-impacted at 34 cm, 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 long-standing dysphagia and two prior suspected impactions that had been managed conservatively presented with a further episode of suspected pill impaction. Upper gastrointestinal endoscopy revealed mucosal changes suspicious for EoE. Pill impaction was noted at 30 cm from the incisors within an esophageal stricture. EHL was used to obliterate the pill under direct visualization at a setting of 30 pulses per activation at low power. The remainder of the examination was normal.

#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
