Use of mechanical lithotripter to assist in the endoscopic removal of an impacted long chicken bone in sigmoid diverticula

A 56-year-old woman without relevant medical history was admitted to the emergency room with persistent lower left abdominal pain for the previous 15 days. Abdominal computed tomography revealed diverticulosis of the left colon, with a 55-mm linear foreign body in the sigmoid colon, located transversely to the colon axis, with thickening of the bowel wall and adjacent fat, without perforation (Fig. 1). The patient was referred for endoscopic removal.

The impacted bone was stuck crosswise, 30 cm from the anal verge, with both ends embedded in diverticula on opposite walls (Fig. 2). Multiple removal attempts with a foreign body forceps were unsuccessful. We decided to use a mechanical lithotripter to assist in endoscopic removal (Video 1).

A 0.035-inch guidewire was looped around the bone by advancing the guidewire on one side of the bone and capturing the distal tip on the other side. With the two ends of the guidewire outside the anus, a lithotripter cable was advanced over the ends until the tip reached the impacted bone. Lithotripter

Fig. 1 Coronal abdominal computed tomography showing the chicken bone measuring 55 mm in length located in the sigmoid colon, transversely oriented to the colon axis, without signs of perforation.

Fig. 2 Endoscopic image of the chicken bone located crosswise, 30 cm from the anal verge, with both ends embedded in diverticula on opposite walls.

Fig. 3 Constant catching of the mucosa near one end of the bone while positioning the lithotripter, despite several changes in scope and patient position.

Video 1 Use of mechanical lithotripter to assist in the endoscopic removal of an impacted long chicken bone in sigmoid diverticula.
positioning on the center of the bone was difficult due to angulation of the colon, with constant catching of the mucosa near one end of the bone (▶ Fig. 3). A foreign body forceps was used to grab the guidewire and position it centrally while adjusting the lithotripter cable (▶ Fig. 4). The lithotripter handle was then attached to the cable and progressively ratcheted down until the guidewire cut through the bone. The bone could then be easily removed with foreign body forceps (▶ Fig. 5). Mucosal ulceration was seen, without contrast extravasation on fluoroscopy. The patient was discharged home the following day without symptoms and remains well 4 months later.

Most foreign bodies can pass through the gastrointestinal tract without consequence, but obstruction can occur [1]. The mechanical lithotripter-assisted technique [2] allowed us to cut the bone, facilitating subsequent removal without causing complications.

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Competing interests

The authors declare that they have no conflict of interest.

The authors

Eduardo Rodrigues-Pinto 1,2, Emanuel Dias 1, Renato Medas 1,2, Guilherme Macedo 1,2

1 Gastroenterology Department, Centro Hospitalar Universitário de São João, Porto, Portugal
2 Faculty of Medicine of the University of Porto, Porto, Portugal

Corresponding author

Eduardo Rodrigues-Pinto, MD, PhD
Gastroenterology Department, Centro Hospitalar Universitário de São João, Al. Prof. Hernâni Monteiro, 4200 – 319 Porto, Portugal
edu.gil.pinto@gmail.com

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