

Single Case

Endoscopic Retrieval of Mis-Swallowed Table Spoon

Chun-Sheng Shen^a Yu-Chung Su^{a, b}

^aDivision of Gastroenterology, Department of Internal Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan; ^bDepartment of Medicine, Faculty of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

Keywords

Endoscopy · Foreign body · Spoon

Abstract

Mis-swallowed foreign body is a common scenario for endoscopy intervention. Although a long object is rarely seen in our clinical setting, limited published articles could be found for proper retrieval. We hence report a 30-year-old female who mis-swallowed a long table spoon, which was retrieved by a snare from the duodenal second portion with conventional endoscopy.

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Published by S. Karger AG, Basel

Introduction

Patients with ingested foreign bodies seeking treatment are a common encounter in clinical practice. According to previous studies, a variety of swallowed foreign bodies were reported, although the majority are fish bones and bones [1]. If feasible, a foreign body in the upper gastrointestinal tract could be removed by utilizing esophagogastroduodenoscopy. Most ingested foreign bodies pass spontaneously, although 10–20% require endoscopic removal and 1% or less require surgery [2]. Velitchkov et al. [3] found that in 542 cases of foreign body ingestion retained within the stomach, 17 cases having spoons with handles longer than 6 cm could not be retracted with endoscopy. Appropriate endoscopy retrieval of the

foreign body prevented patients from inevitable surgical intervention. Successful removal of a tablespoon with a two-channel endoscope has been previously reported [4], but to the best of our knowledge, no previous retrieval was achieved by conventional endoscopy. We present the first case of endoscopic retrieval of a tablespoon from the duodenum with a single endoscopy snare.

Case Report

A 30-year-old female presented to our hospital at night having accidentally swallowed a tablespoon, which she used for scratching coatings on her tongue after brushing her teeth in the afternoon. She had no other significant past medical history. Prior to this encounter, she tried to gag out the tablespoon she mis-swallowed, but the effort was in vain. She denied any throat discomfort, dysphagia, or abdominal discomfort.

Upon arrival in our emergency department, she had stable vital signs. Physical examination showed no obvious abnormality. The respiratory pattern and examinations were all within normal limits. Her abdomen was not distended, and the foreign body was not palpable. There was fair bowel sound, no significant tenderness over the epigastrium, and no peritoneal sign. Her complete blood cell count and coagulopathy test were all within normal limits. Plain abdominal imaging revealed a tablespoon lying horizontally in the center of her abdomen (Fig. 1). Emergent endoscopy examination disclosed that the entire spoon passed through the antrum and the handle end of the spoon was extended to the second portion of the duodenum (Fig. 2). A snare was used to grasp the thin part of the handle, and the tablespoon was rotated in the fully insufflated duodenum so that the handle end could be retracted from the pylorus. By rotating the orientation in the duodenum, the handle of the spoon was now pointing toward the distal part of the second portion so that the endoscopy snare could grasp the bowl part of the spoon firmly. With exertion on the endoscopy shaft, the bowl part of the spoon was extracted via the pylorus first, and then the handle part of the spoon was dragged into the stomach. The spoon was later retracted successfully from the stomach with the snare tightly attached to the junction between the handle end and head part of the spoon (Fig. 3) and passed through the esophagocardiac junction readily. The spoon measured 14 cm in length (Fig. 4) and was removed as an intact piece. The patient denied any discomfort after retrieval of the tablespoon and was discharged after examination without complication of hemorrhage or perforation.

Discussion

In terms of foreign bodies in the gastrointestinal tract, endoscopic intervention is necessary in 1 out of 5 cases. The procedure is popular as its cost is low and effectiveness is high. The safety mainly relies on the confirmation of the size, shape, and material of the mis-swallowed foreign body, and the extraction of the foreign body depends on the skill of the endoscopist and proper instrument. Most ingested foreign bodies have a smaller size and are easier to be retrieved. The tablespoon is a long object, with a smooth outline and without any sharp angle. Still, longer objects tend to possess a higher risk of hemorrhage and perforation per se. Currently, due to the rare incidence of such long foreign bodies, there are no conventional endoscopy accessories available. In the published report of tablespoon retrieval, a polypectomy snare was proposed and proved useful in the previously published report [4, 5].

In our case, retrieval of a long ingested foreign body was difficult as a metallic table spoon is prone to slip from the grasp in the first place. A double-snare technique for spoon removal from the stomach by applying a two-channel endoscope has been reported previously [5], either with assistance of a balloon or manual abdominal compression technique on the body surface [4, 5]. However, manual compression may be a dangerous technique because the handle end of the spoon could perforate the duodenum lumen, and the spoon was not palpable from the abdominal wall in our case. We encountered a dilemma when the spoon was tightly lodged in the duodenal bulb. The two-channel endoscope has a larger bore that carries more suffering for those patients who undergo endoscopy retrieval of foreign body and is not accessible everywhere in our daily practice. We tried adjusting the orientation of the spoon handle in the fully insufflated duodenal bulb rather than manual compression from the abdominal wall for propelling the spoon from the duodenum into the stomach.

If endoscopy intervention for the retrieval of a spoon from the duodenum fails, surgical intervention is the last resort. Fortunately, by adjusting the orientation of the long object, successful retrieval with a single snare by single-channel endoscopy was demonstrated.

Statement of Ethics

The authors have no ethical conflicts to disclose.

Disclosure Statement

The authors have no conflicts of interest to declare.

Funding Sources

The authors have no funding sources.

Author Contributions

Chun-Sheng Shen wrote the manuscript. Yu-Chung Su supervised the final version of the manuscript.

References

- 1 Sung SH, Jeon SW, Son HS, Kim SK, Jung MK, Cho CM, et al. Factors predictive of risk for complications in patients with oesophageal foreign bodies. *Dig Liver Dis*. 2011 Aug;43(8):632–5.
- 2 Schwartz GF, Polsky HS. Ingested foreign bodies of the gastrointestinal tract. *Am Surg*. 1976 Apr;42(4):236–8.
- 3 Velitchkov NG, Grigorov GI, Losanoff JE, Kjossev KT. Ingested foreign bodies of the gastrointestinal tract: retrospective analysis of 542 cases. *World J Surg*. 1996 Oct;20(8):1001–5.
- 4 Aoyagi K, Maeda K, Morita I, Eguchi K, Nishimura H, Sakisaka S. Endoscopic removal of a spoon from the stomach with a double-snare and balloon. *Gastrointest Endosc*. 2003 Jun;57(7):990–1.

- 5 Watanabe T, Aoyagi K, Tomioka Y, Ishibashi H, Sakisaka S. Endoscopic removal of a tablespoon lodged within the duodenum. *World J Gastroenterol*. 2015 Apr;21(16):5096–8.



Fig. 1. Plain abdomen imaging revealed the opacity outline of the mis-swallowed spoon.

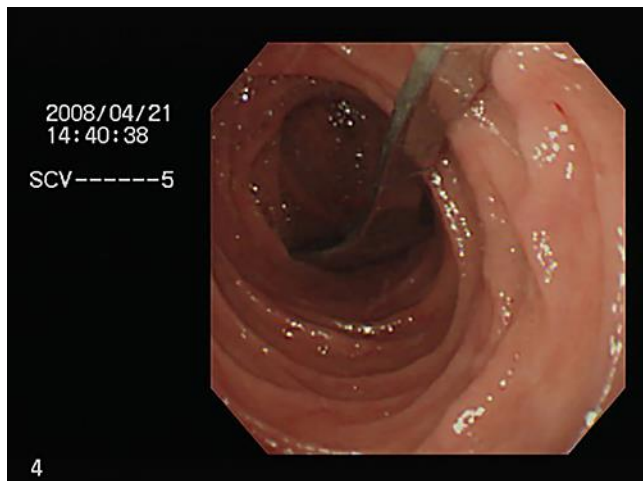


Fig. 2. Endoscopy view of the mis-swallowed spoon. The spoon was incarcerated in the duodenum with the handle tip toward the proximal part of the duodenum.

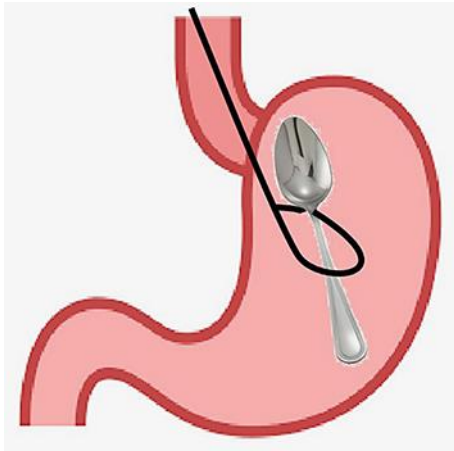


Fig. 3. An endoscopic snare was used for spoon retrieval.



Fig. 4. The spoon measured 14 cm in length.