Safe endoscopic removal of a swallowed partial denture with a grip-seal plastic bag

The accidental ingestion of foreign bodies is becoming more frequent in an aging population. Sharp foreign bodies in the upper gastrointestinal tract should be removed as soon as possible to avoid perforation [1]. Various methods of removal have been reported, in which an overtube, a distal attachment, polypectomy snares, baskets, nets, or forceps have been used [2]. However, each of these methods has associated problems. We report a new method for the safe removal of a swallowed partial denture from the stomach.

We use a small grip-seal plastic bag (10 × 5 cm), cutting off unnecessary parts of the bag and puncturing the bag with an 18-gauge needle to allow venting. To dilate the opening of the bag, each side of the edge is folded into a Z-shape by passing a nylon thread (100 cm) and tying it (Fig. 1a). Then, the scope is inserted, with the tip covered by the bag, through an overtube (Fig. 1b). In the stomach, an alligator forceps is passed through the scope to move the bag so that it does not cover the endoscope tip. The partial denture is then grasped and placed into the bag with the alligator forceps (Fig. 1c). The bag is removed from the patient, together with the endoscope, by pulling on the nylon threads (Fig. 1d). Covering the sharp portion of the denture completely with the bag prevents mucosal injury or perforation. We have successfully used this method to remove dentures in four consecutive patients without complications (Fig. 2, Video 1).

The use of a small grip-seal plastic bag to remove a swallowed denture from the stomach is simple, effective, and safe. The method can also be applied for the removal of other sharp foreign bodies, such as needles and press-through packs, or large resected specimens after endoscopic submucosal dissection.

Endoscopy_UCTN_Code_TTT_1AO_2AL

Competing interests: Author Hironori Yamamoto has a consultant relationship in FUJIFILM Corporation and has received honoraria, grants and royalties from the company.

The other authors declare no Conflict of Interests for this article.
Wataru Sasao¹, Tomonori Yano¹, Yoshikazu Hayashi¹, Hiroyuki Sato¹, Yoshimasa Miura¹, Alan K. Lefor², Hironori Yamamoto¹

¹ Department of Medicine, Division of Gastroenterology, Jichi Medical University, Shimotsuke, Tochigi, Japan
² Department of Surgery, Jichi Medical University, Shimotsuke, Tochigi, Japan

References

Corresponding author
Hironori Yamamoto, MD, PhD
Department of Medicine
Division of Gastroenterology
Jichi Medical University
3311-1 Yakushiji
Shimotsuke
Tochigi 329-0498
Japan
Fax: 81-285-44-8297
ireef@jichi.ac.jp