We present a rare case of choking caused by a duodenal subepithelial tumor resected by endoscopic mucosal resection (EMR). The Heimlich maneuver was performed successfully to relieve the patient’s choking.

A 56-year-old man was found to have a large subepithelial tumor at the duodenal bulb (Fig. 1), with the initial presentation of postprandial epigastric fullness. Endoscopic ultrasonography (EUS) (Olympus UM-3R, 20-MHz radial miniprobe; Olympus, Tokyo, Japan) revealed a 21.4 × 18.0 mm inhomogeneous isoechoic tumor with a cystic component (8.9 × 6.2 mm) inside, arising from the submucosal layer of duodenal wall (Fig. 2). A Brunner’s gland adenoma was suspected; however, the possibility of malignancy could not be excluded by EUS [1].

EMR was performed for both therapeutic and diagnostic purposes. The endoscopic overtube (MD-48518; Sumitomo Bakelite Co. Ltd., Tokyo, Japan), which had an inner diameter of 15 mm, was not used, because the tumor might have been too large to be taken out through it. With the patient under intravenous conscious sedation (Rapifen, 0.5 mg; midazolam, 3 mg; propofol, 400 mg in total), the tumor was resected with a snare (Olympus SD-9U-1) after submucosal injection with saline. The resected tumor was partially captured by a retrieval net (Roth Net foreign body standard; US Endoscopy, Mentor, Ohio, USA). However, the specimen fell out in the hypopharynx and was sucked into the trachea (Video 1).

We moved the patient from the left decubitus position to a supine position and performed the Heimlich maneuver by compressing the patient’s epigastric area with our fists. Immediately, the specimen went back into the oral cavity, and a foreign body removal forceps (rotatable grasping forceps; Olympus) was used to take it out (Fig. 3). Histopathological analysis confirmed the diagnosis of Brunner’s gland adenoma. The patient recovered well without any complications.

EMR was performed in this case mainly to relieve the patient’s partial gastric outlet obstruction caused by the tumor. Endoscopic removal of a large Brunner’s gland adenoma has been suggested to prevent hemorrhage, obstruction, or intussusception [2]. In addition, the diagnostic accuracy of EUS in subepithelial tumors is low [1]. A malignant tumor can sometimes mimic a benign subepithelial tumor [3]. Moreover, although most Brunner’s gland adenomas are benign tumors, they still have malignant potential [4].

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