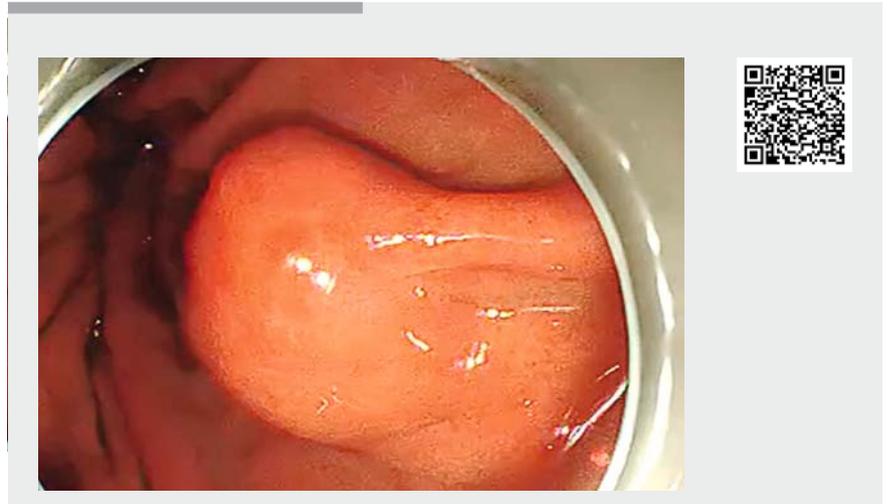


Endoscopic management of the rare situation where a gastric stromal tumor specimen falls into the nasopharynx

Endoscopic submucosal excavation (ESE) is a safe and effective minimally invasive method for the treatment of gastrointestinal submucosal tumors, especially for those originating from the muscularis propria [1–3]. Endoloop or vacuum aspiration are traditionally used to collect large specimens, but shedding or damage to specimens sometimes occurs. Here we describe a case in which unusually an endoscopic specimen dropped into the nasopharynx and provide an endoscopic solution for this rare situation (► **Video 1**).

A 65-year-old man presented to our hospital with an 8-month history of abdominal pain, accompanied by sour regurgitation and belching for 5 months. Physical examination and laboratory studies were unremarkable. Enhanced abdominal computed tomography (CT) scanning indicated a nodular uplift with a clear boundary at the gastric fundus. Esophagogastroduodenoscopy (EGD) revealed a submucosal mass at the gastric fundus (► **Fig. 1**). Endoscopic ultrasonography revealed a mass in the muscularis propria with homogeneous hypoechoic echogenicity (► **Fig. 2**). The patient was clinically diagnosed as having a gastric stromal tumor and he chose to undergo endoscopic treatment.

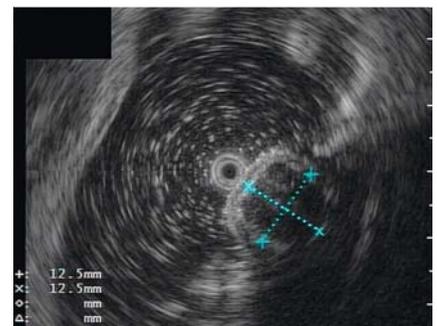
With the patient under general anesthesia, ESE was performed uneventfully and a solid spherical mass was stripped from the gastric fundus. The specimen was drawn to the front of the gastroscope by vacuum aspiration; however, it was found to be missing once the endoscope was fully withdrawn. A second endoscopic examination found no sign of the specimen in the esophagus or oral cavity; however, a pernasal examination using a pediatric gastroscope revealed the specimen within the nasopharynx (► **Fig. 3**). The specimen was pushed forward into the oropharynx and eventually into the cavity (► **Fig. 4**). From there, the specimen was collected successfully. The patient was



► **Video 1** Endoscopic submucosal excavation of a gastric stromal tumor and subsequent retrieval of the resected specimen after it had fallen into the nasopharynx.



► **Fig. 1** Endoscopic view showing a submucosal mass at the gastric fundus.



► **Fig. 2** Endoscopic ultrasonography revealed a mass in the muscularis propria, measuring 12.5 × 12.5 mm, with homogeneous hypoechoic echogenicity.

discharged asymptotically 6 days later and was free of symptoms at 3-month follow-up.

This case suggests that pernasal pediatric gastroscopy could help to deal with the rare situation where an endoscopic specimen has fallen into the nasopharynx. This technique should however not be used in non-intubated patients as pushing the resection specimen into the hypopharynx could result in aspiration.

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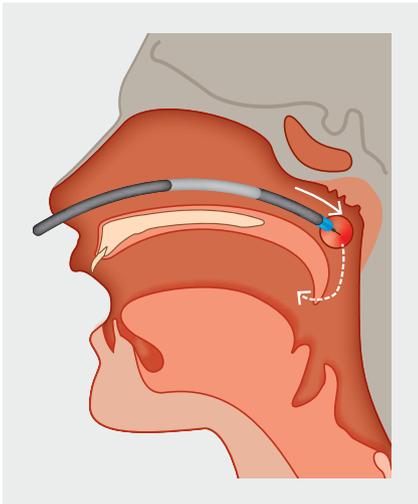
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► **Fig. 3** Image during pernasal examination with a pediatric gastroscope showing the specimen that had fallen into the nasopharynx.



► **Fig. 4** Schematic showing how the specimen was pushed forward into the oral cavity from the nasopharynx.

Competing interests

The authors declare that they have no conflict of interest.

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