

## Duodenal perforation from a pen



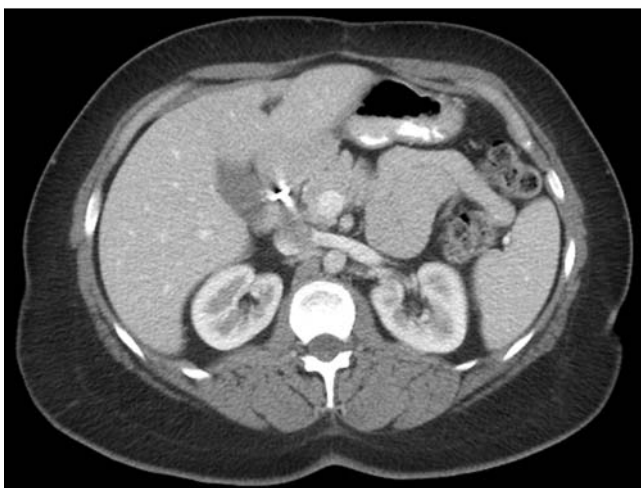
**Fig. 1** Abdominal radiograph showing two small, linear, radiopaque foreign bodies resembling the tips of the ingested pen refills.



**Fig. 2** Endoscopic image showing one of the pen refills perforating through duodenal wall.



**Fig. 3** The two ingested pen refills after their removal.



**Fig. 4** Computed tomography (CT) scan image following endoscopic placement of a hemostatic clip showing the linear radiopaque metal clip in the second portion of the duodenum but no signs of intestinal perforation or fluid collection.

A 25-year-old woman, who was a long-term resident of a neighboring psychiatric hospital because of schizophrenia, presented to our institution following the ingestion of a foreign body. She had a history of multiple foreign body ingestions and had required 19 esophagogastroduodenoscopies (EGDs) over the previous 18 months. In compliance with the American Society for Gastrointestinal Endoscopy (ASGE) guidelines, not all foreign body ingestions necessitated endoscopic retrieval. Foreign bodies not requiring removal include AA batteries, coins, belt buckles, zippers, and door hinges, among others, while other sharp-pointed objects and those >6 cm in length require endoscopic intervention [1].

The patient's current presentation to hospital followed the ingestion of two ballpoint-pen refills 24 hours previously. The positions of the pen refills were confirmed with an abdominal radiograph (▶ Fig. 1). Given the length of the foreign bodies, an EGD was arranged. The first object was removed from the stomach with a snare through an overtube. The second object, however, was found to have penetrated deeply through the wall of the duodenal sweep (▶ Fig. 2). Removal of the second pen refill was accomplished by gently pulling it out of the perforated duodenum using a rat-toothed forceps, followed by carefully withdrawing it back into the stomach. A hemostatic clip was successfully placed over the site of the duodenal perforation, and the pen refill was subsequently removed through the overtube (▶ Fig. 3).

After the endoscopy, a computed tomography (CT) scan was obtained to check for free air or a fluid collection, neither of which was present (▶ Fig. 4). The patient was treated with broad-spectrum antibiotics for 1 week, and had no adverse effects.

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**Competing interests:** None

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**Reference**

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**Bibliography**

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