

Kidney injury and hematuria as a result of duodenal perforation by an ingested toothpick

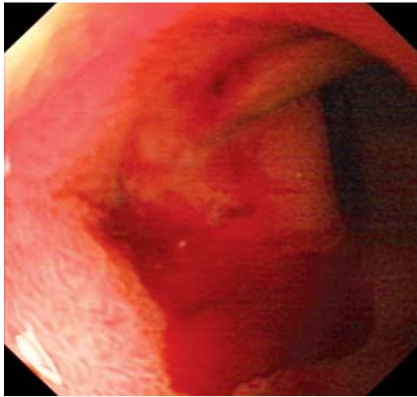


Fig. 1 Upper gastrointestinal endoscopy in a 49-year-old man showed a toothpick embedded in the duodenal flexure.



Fig. 3 The toothpick was not observed in the second endoscopy.

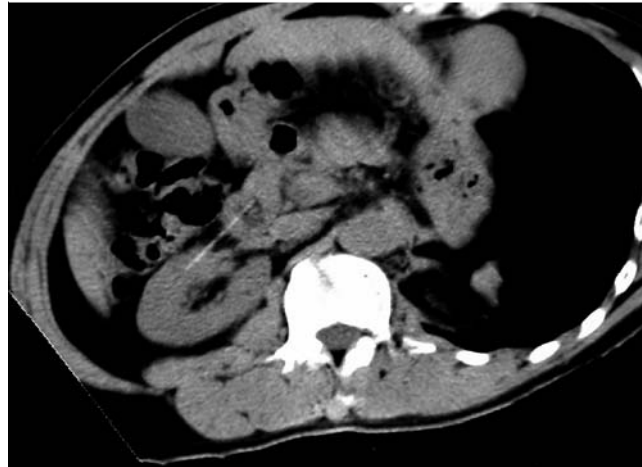


Fig. 2 Abdominal computed tomography (CT) showed a hyperdense needle-shaped structure penetrating the duodenal wall and into the right kidney.



Fig. 4 A repeat abdominal CT scan showed that the toothpick was still located in the duodenum.

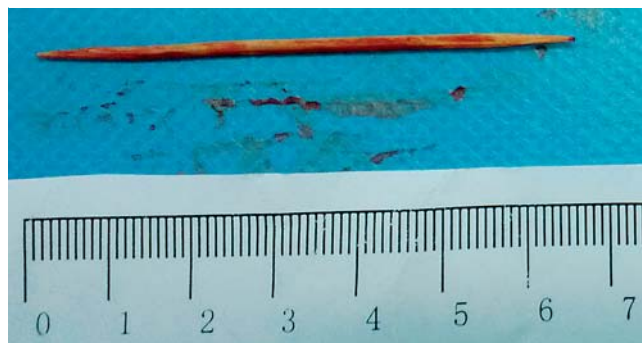


Fig. 5 The 6.5-cm toothpick retrieved during surgery.

A 49-year-old man presented to our hospital with upper abdominal pain which had lasted for the previous 5 days. The pain was not accompanied by nausea or emesis but was more intense after he had consumed dry, hard food. Gastroscopy at another hospital showed a toothpick embedded in the duodenal flexure (● Fig. 1). When admitted to our hospital, the patient reported hematuria without urinary frequency, urgency or odynuria. His vital signs were stable and his abdomen was soft. There was slight tenderness on the left upper quadrant with no rebound tenderness. Complete blood count and blood chemistry were normal. An abdominal computed tomography (CT) scan showed a hyperdense needle-shaped structure penetrating the duodenal wall and into the right kidney (● Fig. 2). Contrast enhanced CT demonstrated no vessel injury

or hematoma. An attempt to remove the toothpick endoscopically was unsuccessful because the toothpick was not located (● Fig. 3). A repeat abdominal CT showed that the toothpick was still present in the duodenum (● Fig. 4). The patient then underwent exploratory laparotomy and duodenorrhaphy. During surgery, a 6.5-cm

toothpick was found (● Fig. 5). His post-operative recovery was uneventful and he was discharged after a week. Diagnosis of gastrointestinal foreign bodies is sometimes very difficult. Some patients do not remember swallowing foreign bodies and can then present with nonspecific symptoms or symptoms

which manifest as other diseases. Although endoscopy has a sensitivity of 70% [1], it cannot reach the majority of the small intestine. In our case, the toothpick was not observed on the second endoscopy. This may have been because only a small portion of the toothpick was in the duodenal lumen and the remainder may have penetrated through the intestinal cavity as a result of peristalsis of the intestine. Therefore, negative endoscopic findings cannot exclude foreign body ingestion. In such cases, CT can help determine the location of the foreign body and confirm the absence of vessel injury before removing the foreign body endoscopically [2].

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Competing interests: None

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Bibliography

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