

# Endoscopic removal of swallowed acupuncture needle infiltrated into the kidney from the duodenum

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A 56-year-old woman was transferred for the evaluation of a 5-cm long foreign body observed on simple abdominal radiography (Fig. 1A and 1B). She had undergone tracheostomy and gas-

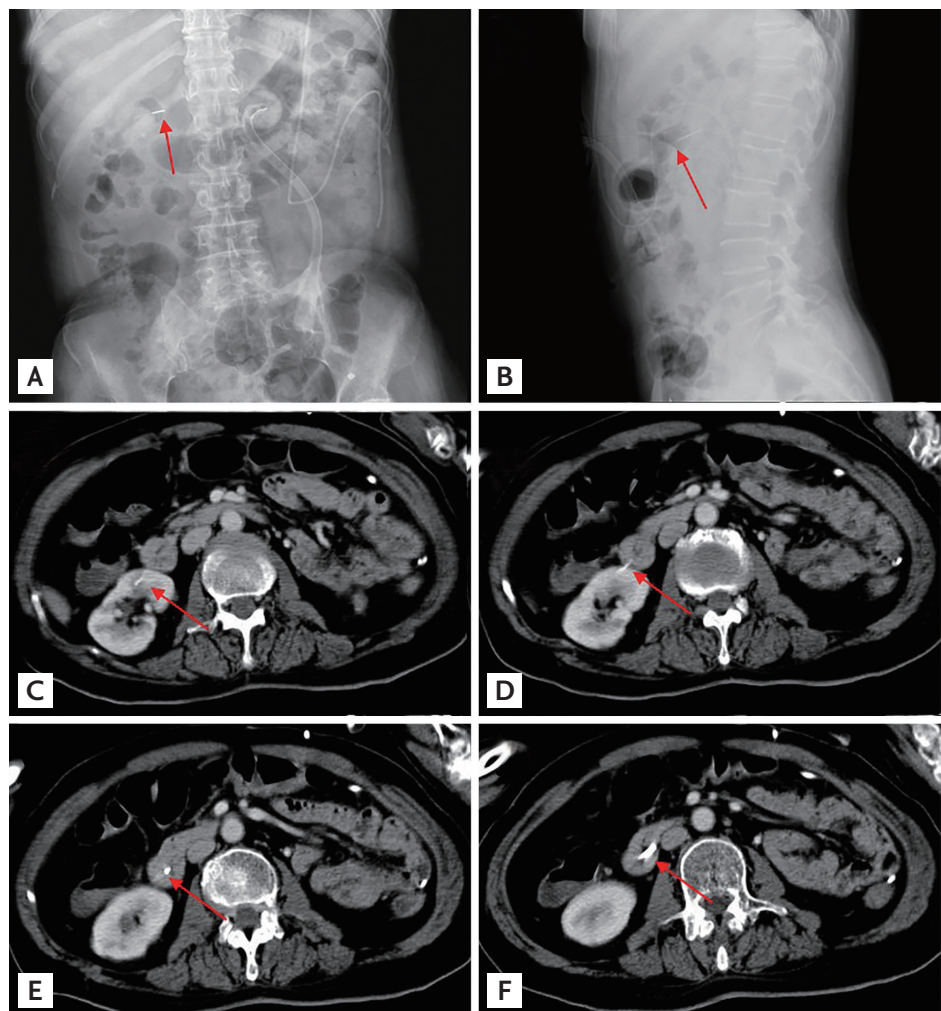
trostomy owing to physical disability following cerebral hemorrhage 3 years. Her medical history recorded treatment with acupuncture around her mouth at the oriental medicine hospi-

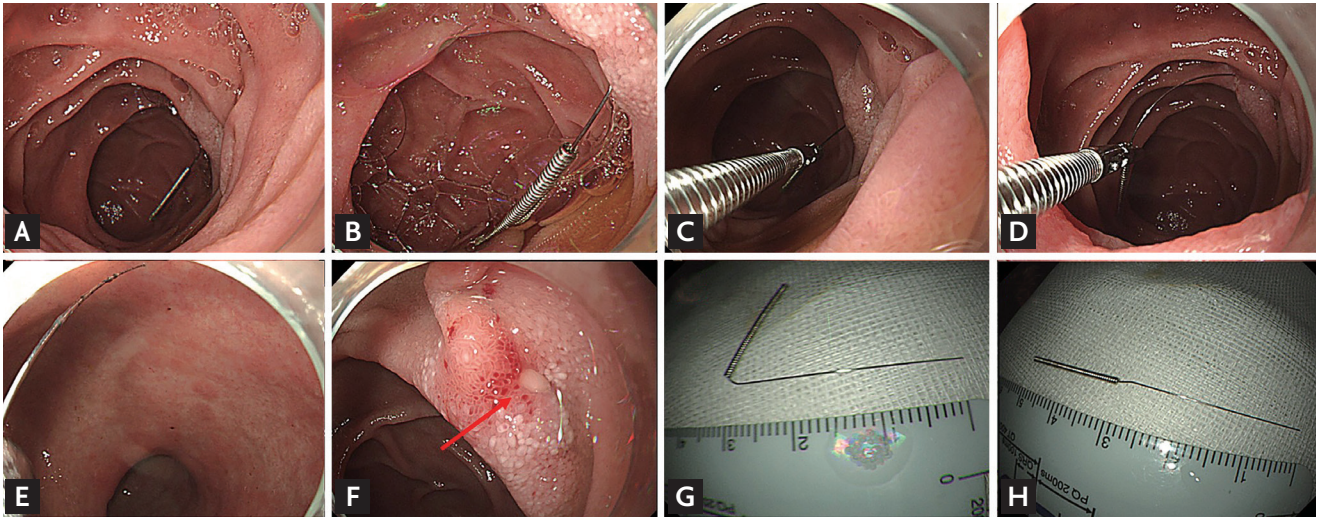
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**Figure 1.** (A, B) Plain abdominal radiography showing linear radiopaque material (arrows). (C, D, E, F) Abdominal computed tomography showing penetration of an acupuncture needle into the duodenum and right kidney (arrows).





**Figure 2.** (A) Endoscopic finding showing linear metal acupuncture at the distal second portion of the duodenum. (B) The handle is visible and the thin needle has penetrated the lateral wall. (C, D) The foreign body was removed endoscopically using rat-tooth forceps. (E) The needle was thin and pulled into the cap in order to remove it. (F) No obvious perforation or hemorrhage is observed at the site of removal and only small ulcer (arrow) is seen. (G, H) The foreign body included a 3-cm long and thin needle and a 2-cm handle, with a total length of 5 cm.

tal. Abdominal computed tomography (CT) scan showed the linear radiopaque foreign body was inserted through the duodenum into the right renal cortex (Fig. 1C-1F). No free air or hematoma was observed on CT scan. Because the patient's general condition is poor for surgery under general anesthesia, endoscopic removal of the foreign body was attempted. Handle of the acupuncture was observed in the distal end wall of the 2nd portion of the duodenum (Fig. 2A and 2B). Using rat-tooth forceps, the foreign body was grabbed and pulled down to the medial vertical as much as possible to minimize further damage. Subsequently, the needle was thin and folded by pulling the center into the endoscope cap. (Fig. 2C-2E) There was no perforation or hemorrhage other than a small ulcer at the site of removal. (Fig. 2F) The total length of the foreign body was 5 cm, with a 3-cm long thin needle and 2-cm long handle. (Fig. 2G and 2H) The patient was maintained on fasting for 2 days with the ad-

ministration of antibiotics and proton pump inhibitors. She was discharged on the 4th day after the endoscopic removal of the foreign body.

The duodenum is narrow and steeply angulated, and diverticulum is common; therefore, the foreign body can stagnate. In addition, various organs are located around the duodenum, and the foreign body can puncture the duodenum and penetrate the surrounding organs, causing complications. Almost all cases of foreign bodies that infiltrated the kidney were treated by surgical removal, but our case could be removed by simply upper endoscopy. The patient has provided informed consent for publication of the case.

#### Conflict of interest

No potential conflict of interest relevant to this article was reported.