Coil valve syndrome: a rare complication of percutaneous transhepatic obliteration successfully treated by argon plasma coagulation and double-balloon endoscopy

Percutaneous transhepatic obliteration (PTO) is now widely used for prophylactic treatment of gastric varices [1]. A stray ing coil tip in the stomach is sometimes reported as an adverse event [2, 3], but there have been no reports of one reaching the small intestine from the stomach. In this case, the migrated coil tip with food residue was shaped like a ball and passed into the jejunum, causing a phenomenon resembling ball valve syndrome [4].

A 70-year-old woman was admitted with epigastric pain. She had been treated for gastric varices by PTO with coils (▶ Fig. 1) 4 years earlier. One of these had migrated into the stomach asymptotically 1 year after PTO (▶ Fig. 2) and had been carefully monitored. Esophagogastroduodenoscopy on admission revealed the coil extending through the stomach and hooking into the mucosa at the angular portion of the stomach (▶ Fig. 3). Abdominal computed tomography revealed that the coil tip was now in the jejunum (▶ Fig. 4). Because of the risks of ulceration, perforation, or intussusception, we decided to remove it. Oral double-balloon enteroscopy (DBE) detected the coil tip enveloped by food residue in the jejunum; we carefully grasped it using forceps and pulled it back into the stomach. At first, we failed to cut the coil wire using a scissor-type electrical knife and loop cutter, but we finally succeeded in cutting it using argon plasma coagulation (APC) (▶ Video 1). There were no adverse events during this procedure and the patient’s symptoms improved.

The recovered coil was an 82-cm cerecyte coil. It was only possible to cut it using APC because the coil wire had unraveled and lengthened (▶ Fig. 5). Compared with radiologists, few gastroenterologists know about migrated PTO coils and their characteristics. This case shows a rare complication of PTO that was successfully treated by APC and DBE. We propose to describe this “coil valve syndrome” as “ball valve-like syndrome due to deviated coil.”

Competing interests

None

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