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## **Endoscopic closure of a duodenal perforation secondary to a migrated biliary plastic stent by using hemoclips**

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Keywords: ERCP, Stent, Perforation.

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A 28-year-old female patient was admitted to our hospital with right upper quadrant pain and fever. The patient was diagnosed with acute cholangitis and choledocholithiasis. With a size of one centimeter stone removal was performed with Endoscopic retrograde cholangiopancreatography (ERCP), and a 10-Fr 10 cm straight plastic stent (Flexima™, Boston Scientific) was placed in the common bile duct. The patient was discharged after his symptoms subsided. The patient was admitted to our hospital two months later with abdominal pain, back pain, nausea, and vomiting. On physical examination, mild tenderness was detected in the right upper quadrant. Laboratory tests of the patient such as white blood cell (WBC) 6.82x10<sup>9</sup>/L, hemoglobin 10.3 g/mL, alanine aminotransferase (ALT) 19 U/L,

aspartate aminotransferase (AST) 18 U/L, total bilirubin (TB) 0.76 g/mL, and all other laboratory parameters were normal. Abdominal computed tomography (CT) showed that the distal end of the plastic stent migrated to the lower wall of the third part of the duodenum and protruded the peritoneal cavity. However, there was no evidence of perforation (Fig. 1A). During the ERCP performed on the patient, it was observed that the proximal end of the plastic stent was in the bile duct, and the distal end perforated the duodenal wall opposite the papilla (Fig. 1B). The plastic stent was held with rat-tooth forceps and removed with a slight upward movement towards the common bile duct and then a downward movement towards the lumen (Fig. 1C). A closure to the defect in the duodenum was performed with three hemostatic clips (Fig. 1D). Oral intake started a few days after the procedure, and there were no complications. As a result, duodenal perforation caused by migration of biliary stents is a rare complication. Abdominal CT scanning is mostly preferred in these cases, and endoscopic intervention is an effective method in the treatment.

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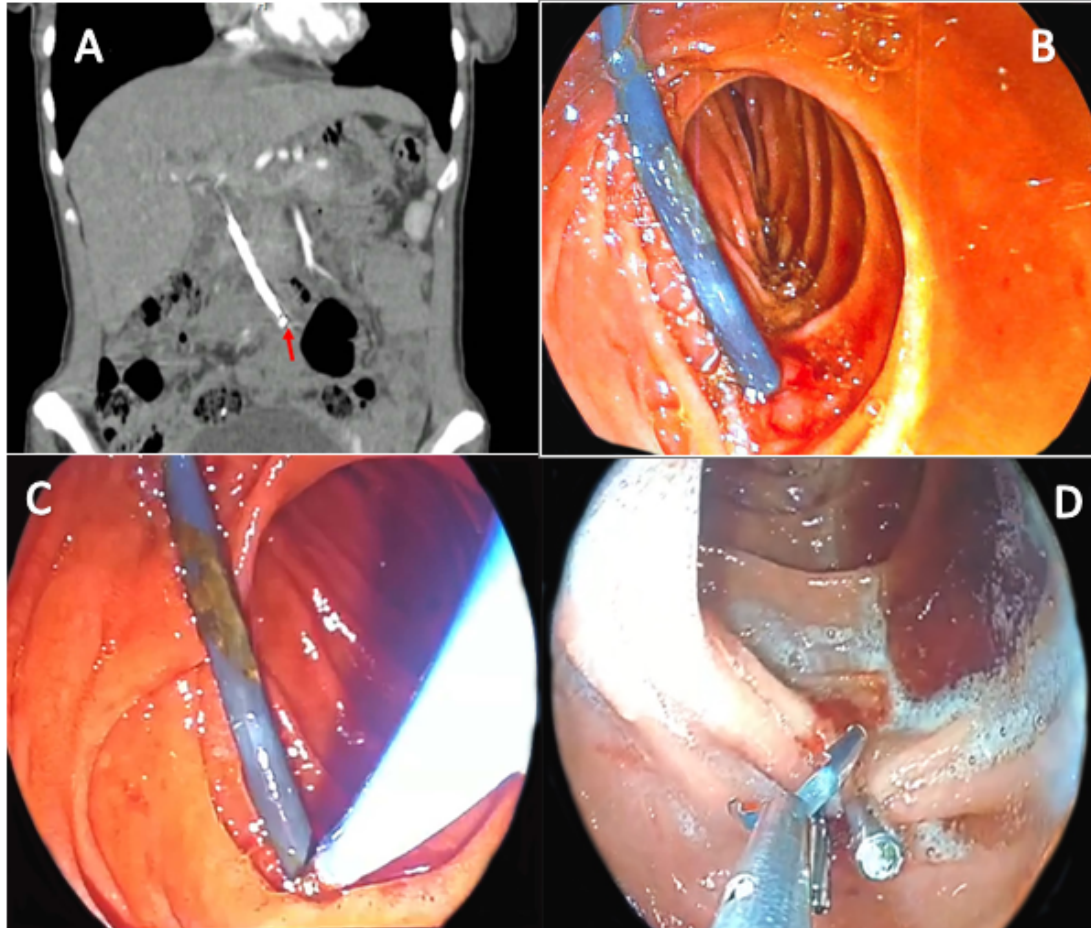


Fig. 1. A. The coronal view of abdominal CT scan showing perforation and migration of the biliary plastic stent to the wall of the third part of the duodenum. B. Endoscopic view of perforation of the distal end of the biliary plastic stent to the duodenal wall. C. The migrated plastic stent was extracted by rat-tooth forceps. D. The defect was successfully closed by hemostatic clips.