

Common bile duct stone developed due to migrated surgical clip: Rare complication of cholecystectomy

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Introduction: Surgical clip migration is an uncommon complication of laparoscopic cholecystectomy and migrated clips into the common bile duct can lead to stone formation and obstruction. We report a case of acute cholangitis caused by surgical clip migration into the bile duct with stone formation 13 months after laparoscopic cholecystectomy. **Case description:** A 65-year-old male presented with upper abdominal pain and fever for 3 days. He was previously treated with acute suppurative cholecystitis 13 months ago. At that time, he underwent a laparoscopic cholecystectomy (Figure 1) after percutaneous transhepatic gallbladder drainage (PTGBD). His vital signs revealed a body temperature of 39.1°C, heart rate of 112 beats per minute, blood pressure of 87/54 mmHg, and respiratory rate of 22 breaths per minute. On physical examination, his sclera was icteric, and there was tenderness on the epigastric area without rigidity and rebound tenderness. Laboratory investigation revealed a total bilirubin of 8.8 mg/dL, aspartate transaminase of 1031 IU, alanine transaminase of 629 IU, alkaline phosphatase of 524 U/L, and gamma glutamyl-transpeptidase of 216 U/L. An abdominal pancreaticobiliary computed tomography scan showed a radiopaque material in common bile duct and diffuse wall thickening and dilatation of intrahepatic and extrahepatic bile duct (Figure 2). The patient was unstable hemodynamically and percutaneous transhepatic biliary drainage (PTBD) was performed as an emergency. Two days after PTBD, an endoscopic retrograde cholangiopancreatography (ERCP) was performed which showed dilated bile duct with amorphous filling defect in common bile duct. After sphincterotomy, muddy stones and one surgical clip were successfully removed by extraction balloon catheter (Figure 3). The patient had an uneventful recovery and was well at 4-month follow-up. **Conclusion:** Choledocholithiasis caused by surgical clip migration after cholecystectomy is infrequent and most cases have been reported as a case report. The clinical manifestations of clip migration are similar to that of non-iatrogenic choledocholithiasis and ERCP is currently the treatment of choice.

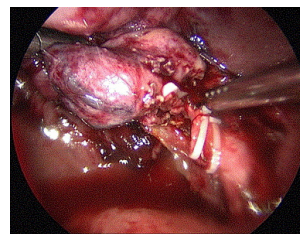


Figure 1. Laparoscopic image during cholecystectomy. Clips are placed on the cystic duct. The cystic duct is incised between clips. There are two clips on the remaining cystic duct.

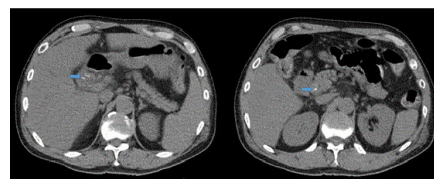


Figure 2. Abdominal computed tomography demonstrating (A) hyperdense material corresponding to surgical clip in the end of remnant cystic duct and (B) hyperdense material in the common bile duct.

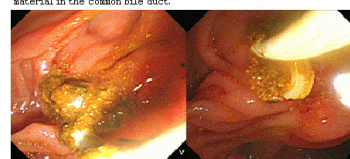


Figure 3. Surgical clip and muddy stones were extracted by balloon sweeping.

A Case of Rescue Removal of Migrated Stent by EUS-guided Insertion Using Large Caliber Metal Stent

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An 89-year-old man visited to our hospital 5 days ago due to abdominal distension and dyspnea. His medical history included liver cirrhosis with spontaneous HBs Ag seroconversion state beginning 5 years ago. Initial vital signs were stable and physical examination revealed shifting dullness in the abdomen, otherwise unremarkable. Laboratory findings were as follows: hemoglobin 13.7 g/dL, platelet 174/uL, AST/ALT 43/17 U/L, albumin 1.9 g/dL, total bilirubin 0.5 mg/dL, BUN/Cr 27/1.52 mg/dL. Chest X-ray revealed that both pleural effusions and abdominal CTs showed large amounts of both pleural effusions and ascites with liver cirrhosis (see Figure a). The patient's symptom gradually improved after diuretics, but he experienced right upper abdominal pain with vomiting and 38°C fever 7 days after admission. Physical examination showed positive Murphy's sign and laboratory findings were as follows: CRP 138 mg/L, WBC 8900/uL, albumin 1.8 g/dL, AST/ALT 39/24 U/L and then follow-up abdominal CT revealed decreased pleural effusion and ascites, but GB distension (4.5x9cm) and thickened wall consistent with acute cholecystitis (see Figure b). The patient and his family declined surgical treatment due to his old age with combined comorbidities. We then recommended percutaneous transhepatic GB drainage or endoscopic ultrasound-guided GB drainage (EUSGBD). The final decision was EUSGBD and EUS showed distended GB with many sludge materials. Inadvertent inward migration of inserted plastic double pigtail stent into the GB lumen occurred and the distal tip of the stent was not visible in endoscopic view. Because the inserted plastic stent would be removed later, we inserted another large caliber covered metal stent under EUS and fluoroscopic guidance and then the migrated inserted plastic stent in GB lumen was successfully removed by retrieval rat-tooth forceps 7 days later (see Figures c,d,e and f). The patient's abdominal pain gradually improved and patient was discharged 14 days later after the first intervention. The metal stent was also removed without any further complication 7 days later after discharge and the patient has been doing well for the past 1 year since discharge.

