Endoscopic Management of a Surgical Clip Found Within the Common Bile Duct Following Remotely Performed Laparoscopic Cholecystectomy

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Successful endoscopic management of choledocholithiasis with cholangitis due to a surgical clip found within the common bile duct after laparoscopic cholecystectomy.

Introduction
Minimally invasive surgery with surgical clip placement has become the gold standard for management of cholecystitis and biliary colic due to its favorable safety profile and low rate of complications. Though generally safe, surgical clips may cause complications days to years after the cholecystectomy by migrating into the common bile duct and serving as a nidus for stone formation. To date, very few cases of this have been reported. While uncommon, this possibility should be considered in the differential diagnosis for choledocholithiasis with or without cholangitis post laparoscopic cholecystectomy.

Case Description
A 35-year-old female presented to the hospital with a two-week history of right upper quadrant abdominal pain, chills, and nausea without fever. Prior medical history was positive for rectal carcinoma. Surgical history was positive for a laparoscopic cholecystectomy ten years prior. Physical exam showed scleral icterus and abdominal tenderness. Laboratory studies showed elevated white blood cell (WBC) count and liver function tests (LFTs) in a cholestatic pattern. The patient was started on antibiotics for suspected cholangitis and underwent magnetic resonance cholangiopancreatography (MRCP) which suggested the presence of a metallic clip within the common bile duct. Subsequent endoscopic retrograde cholangiopancreatography (ERCP) revealed a large stone impacted against the ampulla of Vater. Sphincterotomy and balloon sweep of the common bile duct were performed with subsequent extraction of a large stone (12mm) that had formed around a surgical clip. The stone extraction was followed immediately by the release of copious amounts of purulent bile. Following the procedure, the patient’s LFTs trended downward and symptoms resolved.

Discussion
Though the exact incidence and mechanism of surgical clip migration into the common bile duct is unknown, it is thought to be a slow process. The subsequent stone formation may occur years after surgery. The clinical presentation is the same as for non-iatrogenic choledocholithiasis, which may include biliary type pain (RUQ pain, nausea, vomiting) and cholestatic pattern of liver disease. In most reported cases, stone extraction required surgical intervention due to the large size of the stone. This case was successfully managed with a sphincterotomy and balloon extraction.

Though rare, the potential for a surgical clip within the common bile duct serving as a nidus for stone formation should be considered in post-cholecystectomy patients presenting with symptoms of choledocholithiasis and/or cholangitis, regardless of how remote the surgery was. Since minimally invasive cholecystectomy and the intro-operative the use of surgical clips has become almost ubiquitous; clinicians should be aware of this possible complication and options for management.

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