

that the procedure is easy to perform in difficult cases and sutures are readily available in any hospital.

The adult esophagus is able to accommodate a standard calibre 9.1 mm adult gastroscope and a SB tube with ease. Once the endoscope with the SB tube has entered the esophagus, angulations, banded varices and diverticular are easily negotiated across or avoided. In a patient with active bleeding varices and clearly failed endoscopic management, securing hemostasis is of utmost importance. The risk of dislodging banded varices with this technique is theoretical and possibly reduced, since the endoscope is inserted under direct visualisation. In comparison, blind insertion of the SB tube in the traditional manner can possibly impinge direct pressure onto the banded varices and may also pose a risk of band dislodgement.

In addition, if a large sliding hiatus hernia is present, the endoscopist will be able to ensure that the gastric balloon is inflated within the stomach and not in the hiatus hernia. One should note that this technique may not be applicable to patients with a narrow esophagus such as a paediatric patient or a patient with an esophageal stricture.

Endoscopic guided insertion of the SB tube by a different method has been described in another case report.⁸ However in that report, an overtube was used to facilitate the insertion of the SB tube past the pharynx followed by an endoscope to push the SB tube down. This is likely to be a semi-blind procedure with the endoscopic view partially obscured. Another option is to use a snare to catch the tip of the SB tube and guide it down the esophagus. Again, with the SB tube and snare in front of the scope, it is likely that endoscopist's view will be compromised.⁹ One benefit of using sutures as opposed to using a snare, is that sutures do not occlude the instrument channel. This allows unobstructed flushing and suctioning of blood when needed which is an important advantage.

Endoscopic insertion of the SB tube allows real-time confirmation of the gastric balloon position, and therefore obviates the risk of intra-esophageal gastric balloon inflation. It does not require guidewires, X-ray or ultrasound confirmation and can be performed at the bedside by any endoscopist.^{10,11} This empowers the endoscopists who have limited experience with SB tube insertions to know with confidence, that it can be successfully performed in difficult cases and that the gastric balloon is placed appropriately.

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Tombstone of surgical clip in common bile duct

Introduction

Laparoscopic cholecystectomy has gained popularity over open cholecystectomy due to the benefits of shorter hospital stay, lesser pain and smaller scar. The frequent use of surgical clips during laparoscopic cholecystectomy occasionally leads to migration of the clip into the bile duct. The migrated clip acts as a nidus for stone formation (cat's eye calculus).¹ These stones

(tombstone for the clips) may cause symptoms like biliary colic, obstructive jaundice, cholangitis and acute pancreatitis.

We report here two patients who underwent laparoscopic cholecystectomy and subsequently developed symptoms due to formation of cat's eye calculi.

Case reports

Case 1

A 57-year-old man underwent laparoscopic cholecystectomy in 2004 for acute cholecystitis. He was asymptomatic till November 2009 when he developed painless jaundice, high grade fever with chills and pruritus. Clinical examination was normal except for icterus and scar of previous laparoscopy. Laboratory investigations revealed a hemoglobin of 11.9 mg/dL; total leukocyte count of 11,100/cumm; differential counts of neutrophils 98%, band forms 1%; and a normal coagulation profile. Liver function tests (LFT) revealed a total bilirubin (TB) of 19.5 mg%, direct bilirubin (DB) of 16.1 mg%; SGOT at 83 U/L (normal 0-37); SGPT at 77 U/L (normal 0-40) and serum alkaline phosphatase (ALP) at 223 U/L (normal 40-125). Serum amylase and lipase were normal. Ultrasound (USG) abdomen revealed a dilated common bile duct (CBD) with a calculus and dilatation of intrahepatic biliary radicles. He was diagnosed to have choledocholithiasis with cholangitis and started on antibiotics. An urgent ERCP showed a 20 mm radiolucent filling defect with linear metallic density within the defect which was initially thought to be cholecystectomy clips left behind in the CBD (**Figure 1**). Since he was on clopidogrel, a 7 Fr, 10 cm double pig tail stent was placed. He became afebrile in 2 days and his LFT and blood counts improved. Seven days later, repeat ERCP and sphincterotomy were performed. Stone retrieval however was unsuccessful. Hence, he underwent surgery (CBD

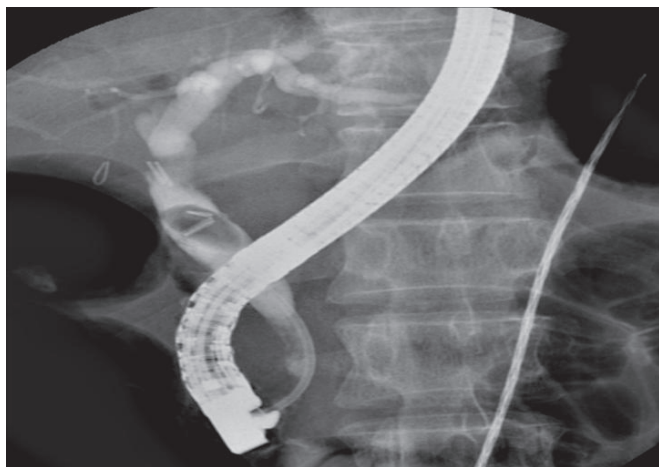


Figure 1: Calculus over surgical clips ('tombstone') in common bile duct

exploration) with removal of stones. Examination of stone revealed 3 clips embedded within it. There were no post-procedure complications. He was asymptomatic at discharge with normal LFT.

Case 2

A 53-year-old male underwent laparoscopic cholecystectomy in 2001 for symptomatic gallbladder stones. He was apparently well until October 2008, when he developed severe epigastric pain radiating to the back, associated with nausea and vomiting, with the episode lasting for 24 hours. He had had a similar episode of pain in early December 2009, which was diagnosed as acute pancreatitis (serum amylase: 1650 U/L). During the third episode in late December 2009, he was admitted to our hospital. Clinical examination was unremarkable. Hemoglobin, blood counts and coagulation profile were normal. LFT revealed TB - 1.8 mg%, DB - 1.4 mg%, SGOT - 351 U/L, SGPT - 282 U/L and ALP - 249 U/L. Serum amylase and lipase were normal.

In view of the recurrent episodes of abdominal pain, he underwent MRCP which showed a metallic density at the terminal CBD. ERCP revealed a filling defect with a metallic clip in the distal bile duct. Biliary sphincterotomy and balloon extraction of the stone was performed. Examination of the stone showed a 1 cm metal clip embedded in it. Following the procedure, his pain settled and LFT normalized.

Discussion

Stones in CBD post-cholecystectomy are an important clinical problem seen in about 10% of patients.² While post-cholecystectomy stones most commonly form de novo, a proportion of them occur as a direct complication of the surgery. The causes of stone formation directly attributable to surgery are: (a) formation of stone proximal to a post-operative biliary stricture and (b) suture material / metallic clip migrating into the CBD, which forms a nidus for stone formation.²

The first case of post-cholecystectomy clip migration and stone formation was reported in 1979 by Walker et al.³ Clip migration can occur following both laparoscopic and open cholecystectomy. The exact mechanism of clip migration and stone formation remains unclear. Some authors suggest that clips can cause erosion and necrosis of the wall of the CBD leading to migration of the clip into the CBD and subsequent formation of stones.⁴ Predisposing factors for clip migration include short cystic duct stump, inappropriate placement of

clips and local infection or suppurative complications around the CBD.⁵

A recent review by Chong et al⁶ showed that most of the patients with clip migration present at an elderly age with the average time interval from cholecystectomy to clinical presentation being two years. Common presentations are obstructive jaundice, cholangitis, biliary colic and acute pancreatitis. While our first patient had only cholangitis, the second patient had recurrent biliary colic and biliary pancreatitis.

Since the clips get embedded inside the stones, they are often missed during evaluation. The clips can be seen on a plain X-ray abdomen, CT abdomen or MRCP. On a plain X-ray it is difficult to ascertain the exact position of the clip in relation to the stone and the bile duct. Ultrasound abdomen is not a good modality as it is difficult to identify the clips. Although CT and MRCP can detect clips and their relation to the stone and bile duct, ERCP is the preferred investigation because it can simultaneously aid in removal of these calculi. The success rate of managing these calculi using ERCP is almost 80%.⁶ The remaining patients usually require surgical intervention. One of our patients had successful removal of the stone by ERCP while the other was successfully managed by laparotomy after a failed ERCP.

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Conservative surgical treatment for jejuno-ileal angiodysplasia

Introduction

An accurate diagnosis to locate the cause of gastrointestinal (GI) bleeding in children can be very challenging; often the final diagnosis is made only at laparotomy. Amongst the unusual causes for GI hemorrhage in children are various vascular lesions which are described as angiodysplasia. This report describes the case of a young boy who manifested GI hemorrhage as malena, but could not be accurately diagnosed as angiodysplasia until the laparotomy and was successfully managed by a conservative surgical treatment.

Case report

A ten-year-old boy presented with history of malena for last 8 years. The episodes of malena were intermittent and self limiting, varying in frequency and amount of bleeding. There was no history of abdominal pain, lump, vomiting, hematemesis or altered bowel habits. There was no history of anorexia, weight loss, jaundice or bleeding from other sites. The patient had a past history of multiple hospitalizations across different hospitals for anemia and multiple blood transfusions. He was referred to us from another hospital for further management.

Physical examination was unremarkable except for pallor. Laboratory investigations revealed a normal platelet count and prothrombin time. Digital subtraction angiography revealed normal superior and inferior arterial systems. MRI of abdomen and pelvis was normal. Colonoscopy was unremarkable. 99mTc labelled RBC scintigraphy could not identify the source of bleeding. Capsule endoscopy revealed prominent vessels distal to the ligament of Treitz in the jejunum and proximal ileum. Upper gastrointestinal endoscopy revealed a suspicious polypoidal lesion in the proximal jejunum with prominent vessels on it.

Since the patient continued to be symptomatic and a definite diagnosis could not be reached, an exploratory laparotomy