INTRODUCTION

Despite increasing number of cases of laparoscopic cholecystectomy, choledocholithiasis due to surgical clip migration into the common bile duct (CBD) is a rare phenomenon. We report a case that underwent laparoscopic cholecystectomy 2 years ago. Endoscopic ultrasound revealed linear nature of hyper-echoic lesion casting acoustic shadow in the distal common bile duct suggestive of metallic surgical clip, which was later confirmed by endoscopic cholangiography.

DISCUSSION

Clip-induced bile duct stones have been a rare but emerging complication of cholecystectomy ever since clips came into use in surgery. Choledocholithiasis due to surgical clip migration into the CBD has been recognized since 1979 and was first reported in 1992 after laparoscopic procedure.\textsuperscript{1,2} Despite the increasing number of cases of laparoscopic cholecystectomy, extensive literature review revealed less than 100 cases of post-cholecystectomy surgical clip migration.

Post-cholecystectomy clip-migration can occur at any time, but generally occurs after a median of 2 years after cholecystectomy. Clinical presentations are similar to those with primary or secondary choledocholithiasis. In a review of 69 cases of post-cholecystectomy clip-migration, most common presentations reported were obstructive jaundice...
(37.7%), cholangitis (27.5%), biliary colic (18.8%) and acute pancreatitis (8.7%).

It is not clear how surgical clips are able to pass the intact layers of the choledochal ducts. However, many factors have been incriminated including local bile duct–associated factors such as short cystic duct (CD) stump after cholecystectomy, CD ischemic necrosis and infective complications resulting in necrosis and weakening of the CD stump. Most consider technique-related factors as pivotal in the process of migration and stone formation. The likely chain of postulated events that leads to the migration of the clip is initiated by pressure exerted by the clip and on the clip by movement within the intra-abdominal cavity leading to erosions and migration along a path of low pressure or resistance (usually a hollow viscus).

As the clip protrudes into the CBD, it acts as a nidus for stone formation. With time, the stone gets bigger and with biliary duct activity, more of the clip migrates inward. Eventually the clip dislodges from the wall into the CBD. Proper placements use of minimal numbers of clips and use of absorbable clips may reduce the incidence of migration and complications.

CONCLUSION

Our case shows that in case of recurrence of symptoms following cholecystectomy, clip migration related biliary stone should be considered in the differential diagnosis.

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