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Forgotten CBD Stent A Bane of Myriad Complications: A Case Report

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Abstract
Choledocholithiasis is the presence of stone in Common bile duct (CBD) which can be treated by endoscopy or surgery [1]. Choledocholithiasisis is present in 10 to 20 % of patients with gall stones [2]. ERCP has become a gold standard for the management of intraluminal biliary abnormalities with or without sphincterotomy and stent placement. If CBD stent is not removed within time 6 to 8 weeks, it can act as a nidus for the stone-stent complex. Forgotten CBD stents may lead to serious complications [6]. Here, we report a case of a 48 years old female presented to us with acute cholangitis due to retained CBD stent (117 months old). The patient underwent open cholecystectomy with CBD exploration, retrieval of the stent along with lateral choledochoduodenostomy and recovered well postoperatively.

Keywords*: Choledocholithiasis, CBD stent, Acute Cholangitis, CBD exploration, Choledochoduodenostomy.*

Abbreviations*: CBD-Common Bile Duct*
ERCP-Endoscopic Retrograde Cholangiopancreaticography
CECT-Contrast Enhanced Computed Tomography

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I. Introduction

Patients presenting with choledocholithiasis primarily undergo ERCP with or without CBD stenting. These patients may be lost in follow up due to non-compliance to instructions. We are reporting a case of a 48 years old female who presented to the emergency department with acute cholangitis due to forgotten CBD stent which was placed in- situ 117 months back.

II. Case Report

Forty eight years female, reported with complaints of pain abdomen associated with non-bilious vomiting, jaundice, and fever for the past 3 weeks. Past history was suggestive of similar complaints 10 years back for which the patient had undergone ERCP with CBD stent placement in June 2010. The patient was advised to follow up for cholecystectomy and stent removal but she was lost in the follow up.

In March 2020 (after 117 months), the patient presented in the emergency department with pain abdomen, vomiting, jaundice, and fever. Clinically the patient's vitals were stable and the patient had tenderness in the right hypochondrium with icterus.

In blood profile, total leukocyte count, total and conjugated bilirubin, alkaline phosphatise and CA 19-9 were significantly raised. Abdominal ultrasound revealed distended gall bladder with sludge, dilated CBD in proximal and mid part with echogenic contents and dilatation up to 18 mm with central and peripheral intra hepatic biliary radicles(IHBR) dilatation. X-ray abdomen depicted stent in situ. CECT abdomen was suggestive of bilobar IHBR dilatation with a dilated CBD measuring up to 20 mm with the stent in situ.

Patient was planned for open cholecystectomy with CBD exploration, retrieval of stent and lateral choledochoduodenostomy. At operation cholecystectomy was performed along with CBD exploration. An eight fr CBD stent was retrieved. Stent was impregnated with sludge(figure 1). There were few calculi in CBD. After CBD clearance and ensuring its patency, lateral choledochoduodenostomy was done. Single-layered, interrupted anastomosis was fashioned using 3-0 PDS sutures. Postoperative period was uneventful. Gram negative organism E.Coli was present in culture sensitivity of CBD Stent.

Figure 1: An 8 Fr CBD stent with impregnated sludge

III. Discussion

Choledocholithiasis is present in 10 to 20% of patients with cholelithiasis. In patients with choledocholithiasis several treatment options are available which are determined by the patient's age and condition, the presence of jaundice or cholangitis, the size of the CBD and stone, and the availability of a skilled endoscopist [2].

ERCP and stone extraction with or without CBD stenting is primarily performed in patients with choledocholithiasis[3].The stents placed in the CBD should be removed within 6-8 weeks to avoid complications such as occlusion, migration of the stent or cholangitis[5].

Acute cholangitis is a clinical syndrome characterized by fever, right upper quadrant pain, and jaundice which is called Charcot's triad. Stenolith also known as the stent-stone complex of the common bile duct, is an extremely rare long term complication of a forgotten or retained stent in the CBD, with only a handful of cases reported[6]. If the stenolith is not removed, it can become life-threatening. In our patient, dilated CBD up to 2cm with stenolith lead to acute cholangitis.

A large duct measuring >2cm is indicative of prolonged obstruction or loss of tone leading to biliary stasis. Prolonged biliary stasis has a potential for primary stones formation within the duct and therefore, size alone is a relative indication for choledochoduodenostomy. Therefore, a lateral choledochoduodenostomy should be considered in patients with dilated CBD secondary to distal obstruction from the benign process[4].

IV. Conclusion

All patients undergoing ERCP and CBD stenting must be counselled in detail regarding complications of retained CBD stent. Proper documentation and clear instructions regarding stent and follow up must be explained to the patient and their attendants in their own language. Timely follow-up and removal of the stent can avoid potentially lethal complications, additional cost and hospital stay it entails, as forgotten CBD stents is an entirely avoidable situation.

In the presence of dilated CBD above 2cm with neglected stent and gall bladder in situ, open choledocholithotomy is the preferred modality of choice with drainage procedure.

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