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Forgotten CBD stent (102 months) with stone-stent complex: A case report



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ABSTRACT

INTRODUCTION: Cholelithiasis is presence of stone in Common bile duct (CBD) which can be treated by endoscopy or surgery [1]. Retained foreign bodies like stents forms a nidus for stone formation resulting in pain, fever, jaundice.

CASE PRESENTATION: 60 years female patient admitted in surgery ward with features of cholangitis with computed tomography showing cholangitic abscess with dilated common bile duct and sludge around stent in situ. Stone was found at proximal end of stent during surgery.

DISCUSSION: Stents may remain without complications or may migrate, and rarely form nidus for stone formation. If kept for long time they lead to bacterial proliferation, biofilm formation and precipitation of calcium bilirubinate presenting as fever, pain, jaundice. Stent-stone complex can be treated endoscopically and surgically [6,7]. As stent can cause stone formation, infection and other complications, timely removal of stent should be advised.

CONCLUSION: III-effects of stent in-situ should be explained, record should be maintained [8] and patient should be advised regular follow up and stent removal after 6 weeks.

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1. Introduction

Cholelithiasis is evident in approximately 10–15% patients with gallstones, more commonly secondary. However primary common bile duct (CBD) stones are more common in Asia. Cholelithiasis can be treated by endoscopy or surgery [1]. Recent trend is to do ERCP primarily and stone extraction with or without CBD stenting. If not removed within time (4–6 weeks), Stent can act as a nidus for stone formation [2,3]. Here we discuss a case of Cholelithiasis in a forgotten biliary stent (~8.5 years).

2. Case presentation

Our patient, a 60 years old female, presented with pain in abdomen since 8 days with nonbillious vomiting and low grade fever. Past history was suggestive of obstructive jaundice in 2007. CT abdomen (2007) suggested benign stricture in lower CBD but no gallstones, brush cytology was negative for malignant cells. Patient underwent ERCP, sphincterotomy with CBD stenting on 2/8/2007. Patient was advised follow up for stent removal after one month. Patient did not go for stent removal as she had no complaints.

She remained asymptomatic for about 8.5 years. In Feb, 2016 (after 102 months), she presented with fever, abdominal pain and vomiting. On examination, patient was vitally stable with minimal tenderness in right hypochondrium. Blood profile was normal. Abdominal ultrasound revealed 8 mm calculus in gall bladder. Upper gastrointestinal endoscopy revealed grade B esophagitis with discoloured CBD stent in-situ. Endoscopic stent removal was unsuccessful. CECT abdomen (Fig. 2) suggested cholangitic abscesses in both lobes of liver along the biliary system with cholecystitis with 2 cm dilated CBD and hyperdense sludge around the stent. MRCP showed dilated intrahepatic biliary radicles with CBD stent in situ with sludge around with multiple cholangitic abscesses. Patient was planned for open cholecystectomy and CBD exploration. Though laparoscopy has advantages over open method [4], open surgery was chosen due to diagnostic dilemma (calculus with sludge around stent) and considering difficulty in dissection. On exploration, cholecystectomy was done. Gallbladder was oedematous and friable. CBD explored, stone was found at proximal end of CBD stent giving a lollipop like appearance to the stent-stone complex (Fig. 1). Stent-stone complex was removed along with sludge. CBD clearance was done and patency of distal end into duodenum confirmed by passing Bakes' dilators. T-tube (14 Fr) kept and incision over CBD closed. Postoperative course was uneventful. T-tube cholangiogram was done on postoperative day 10 which showed contrast entering in duodenum. T-tube was removed on

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Fig. 1. Stent-stone complex.

day 10. Patient was followed up every month till now. Presently, patient has no complaints.

3. Discussion

CBD stones are of two types: primary (formed in CBD) and secondary stones (retained stones when found within 2 years of

cholecystectomy). Primary stones are formed due to biliary stasis and infection [5]. The de novo radiolucent stones are formed around and above the stent in the proximal and distal part. The stones are usually more than 2–3 cm in diameter. The stent-stone complex more often takes the shape of the inside of the bile duct (often dumb-bell shape). Stent-stone complex can be formed because of infection, retained suture, surgical clips and secondary to traumatic strictures. Foreign bodies form a nidus for CBD stone formation [2]. Plastic stent blockage presents at a median patent interval of 62–165 days; these stents may be exchanged prophylactically at scheduled intervals or when stent dysfunction develop [6]. These plastic stents if kept for a prolonged period promote bacterial proliferation [7], biofilm formation [8] and release of bacterial beta-glucuronidase, which results in the precipitation of calcium bilirubinate. Calcium bilirubinate is then aggregated into stones by an anionic glycoprotein. CBD stones can present as pain, fever, jaundice. They can be removed endoscopically but if endoscopy fails, surgical intervention is required. [9,10].

This is one of the cases in which CBD stent with stones remained asymptomatic for almost 8.5 years. Endoscopy is easy and safe method of CBD stone extraction with stenting and also for stent removal. In this case, after a period of 8.5 years, endoscopic stent removal was tried but failed and patient required surgery. Patient with CBD stent should be informed about ill-effects of stent in-situ and strictly advised to review for stent removal after 6 weeks.

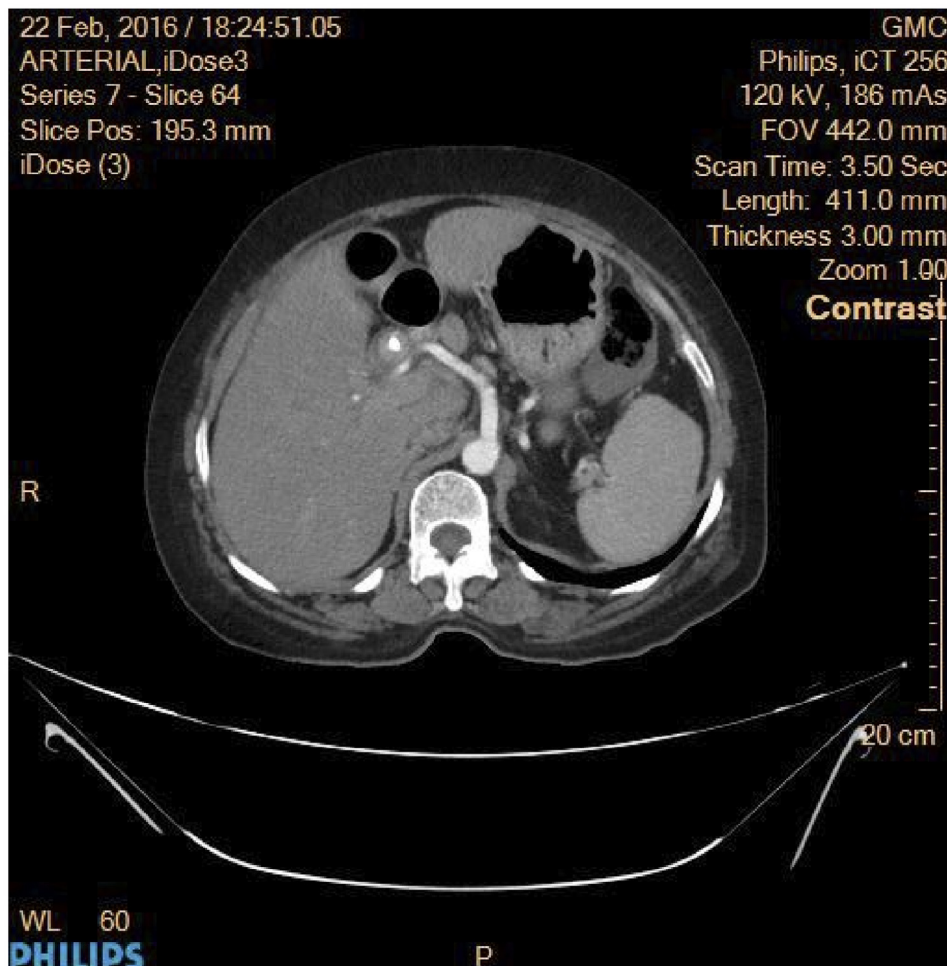


Fig. 2. CT image of stent.

4. Conclusion

Ill-effects of stent in-situ should be explained; record should be maintained [11] and advised regular follow up and stent removal after 6 weeks.

The case report is compliant with the SCARE Guidelines [12].

Conflicts of interest

The authors have no conflicts of interest to declare.

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Ethical approval

Ethical approval was not required and patient identifying knowledge was not presented in the report.

Consent

Written informed consent has been obtained.

Author contribution

Dr. Varsha Barai—Data collection, study concept, writing the paper.

Dr. J.B.Hedawoo—Data analysis, data interpretation.

Dr. S.Changole—Data analysis.

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