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Case Report

A case report of spontaneous passage of large (>1.5 cm) common bile duct calculi (4 in number) through faeces

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ABSTRACT

Gallbladder (GB) stones are commonly associated with common bile duct stones (CBDS). While they may remain asymptomatic, some may present with symptoms like biliary colic, jaundice and cholecystitis. Most of these stones in the CBD, if small, pass through faeces. Passing larger stones through faeces is relatively rare and if it does occur, is usually associated with fatal complications like acute pancreatitis. The authors reported a case wherein symptomatic large CBD stones were spontaneously passed through faeces and the patient was relieved of the symptoms and did not suffer any further complications. Choledocholithiasis is usually managed by endoscopic retrograde cholangiopancreatography or by laparoscopic or open choledocholithotomy. Spontaneous passage of small CBD and GB calculi through faeces although common is associated often with the development of pancreatitis. Passage of large CBD calculi (size >1.5 cm) through faeces is rarely seen.

Keywords: Common bile duct stones, Gallbladder calculi, CBDS in stool

INTRODUCTION

Gall stones are the most common biliary pathology. Although, in a majority of cases they are asymptomatic, in some cases they may cause symptoms.[1] Usually, stones form in the gallbladder and then they may migrate into the bile duct causing CBDS, causing jaundice due to obstruction.[1,2]

Symptomatic CBDS may meet various outcomes, out of which 50% are passed spontaneously in faeces, a phenomenon that is commonly seen. A majority of the stones passed are of smaller size (3-10 mm) and spontaneous passage of larger stones is a lesser known phenomenon.

This is a case report of a case of a patient of CBDS with jaundice and biliary colic that ended up with spontaneous passage of large (>1.5 cm) CBDS (4 in number) through faeces.

CASE REPORT

A 40 year old female presented to our outpatient department with a 3 day history of right upper quadrant pain with a transient episode of jaundice, vomiting and fever. The pain was sudden in onset, colicky, gradually progressive, non-radiating with no aggravating or relieving factors. The pain was associated with non-projectile bilious vomiting for 2 days (3-4 episodes) and high-grade persistent fever without rigors for a day. There were no changes in bowel habits and no street food intake in the recent past was noted. Examinations revealed an ill looking, averagely built patient with a mild tinge of jaundice. The abdominal examination, on superficial palpation, revealed tenderness and rigidity in the right upper quadrant. No organomegaly was detected

on deeper palpation. The presentation with pain, fever, and jaundice (Charcot's Triad) was suggestive of ascending cholangitis due to the presence of a gallstone within the common bile duct (CBD).

On investigations, haemoglobin was found to be 9.1 gms% and TLC of 9800 per cumm, with N-82%, L-14% and E-1%. Urine analysis was normal. Liver function tests showed serum bilirubin of 4.13 mg% of which direct bilirubin was 3.54 mg%, total proteins-7.5 gms%, albumin-3.2 gms%, globulin-4 gms%, serum alanine transferase- 166 K.A. units; serum aspartate transferase-94 K.A. units. The patient underwent ultrasonography of the abdomen to reveal an enlarged liver measuring 16.1 cm in size, a distended gall bladder with a thickened wall of 8.0 mm with echogenic focus with posterior acoustic shadow measuring 14.3 mm within it, suggesting the presence of calculus (Figures 1-4).

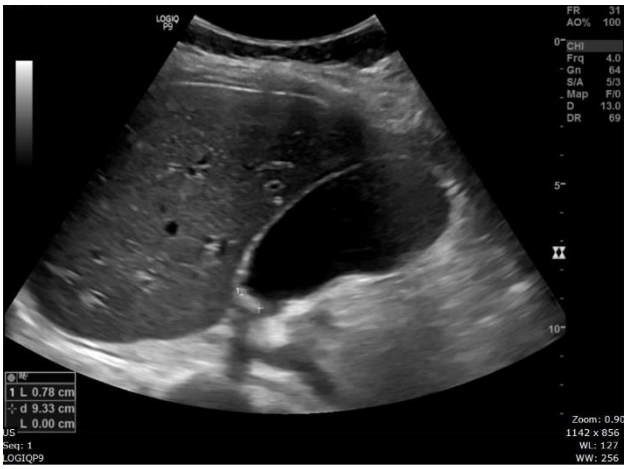

Figure 1: Gall bladder is well distended, wall of normal thickness; an echogenic shadow of approximately 9.3 mm seen in lumen, suggestive of calculus.

Figure 2: Gallbladder is well distended, an echogenic shadow of approximately 8.3 mm seen in lumen near neck suggestive of calculus.

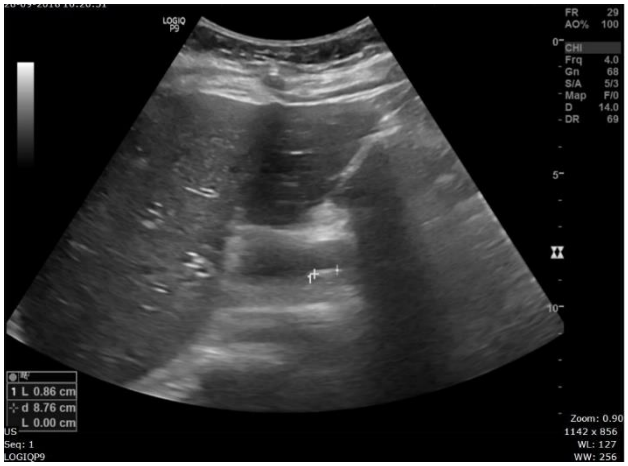

Figure 3: A calculus of approximately 8.8 mm seen in middle of CBD; proximal CBD is dilated.

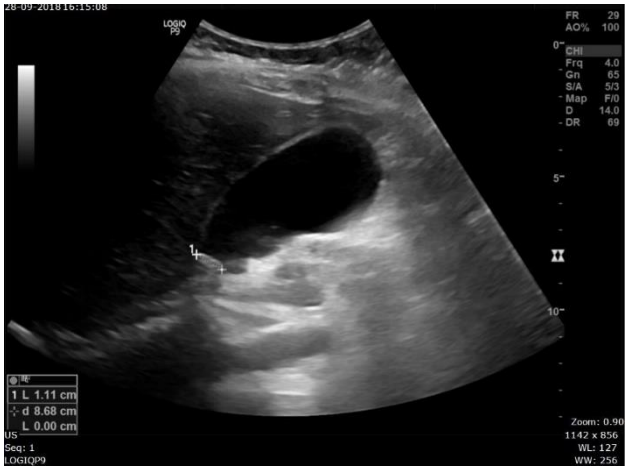

Figure 4: Gall bladder is well distended, wall of normal thickness; an echogenic shadow of approximately 11.1 mm seen in lumen, suggestive of calculus.

The CBD diameter at the porta was in the normal range for the patient's age. The patient also underwent a contrast-enhanced computed tomography of the abdomen, that showed a distended gall bladder with a thickened wall and pericholecystic fluid collection. It also revealed a dilated CBD, common hepatic ducts and intra hepatic biliary radicals. 3-4 calculi were noted in CBD more in the distal region, making the proximal region dilated.

The patient was kept on conservative treatment and was planned for an ERCP followed by a laparoscopic cholecystectomy as a therapeutic procedure, which would have relieved her of the stones in the CBD but on the 4th day of her hospitalization, she spontaneously passed 4 calculi of size >1.5 cm and had no further complaints and complications (Figures 5).

Follow-up ultrasonography of her abdomen after passing of calculi showed gallbladder with thickened wall with

gallbladder calculi. CBD at porta was of normal diameter and hence was discharged on the next day. Blood investigations conducted one week post her discharge revealed significant improvement in her liver function tests.

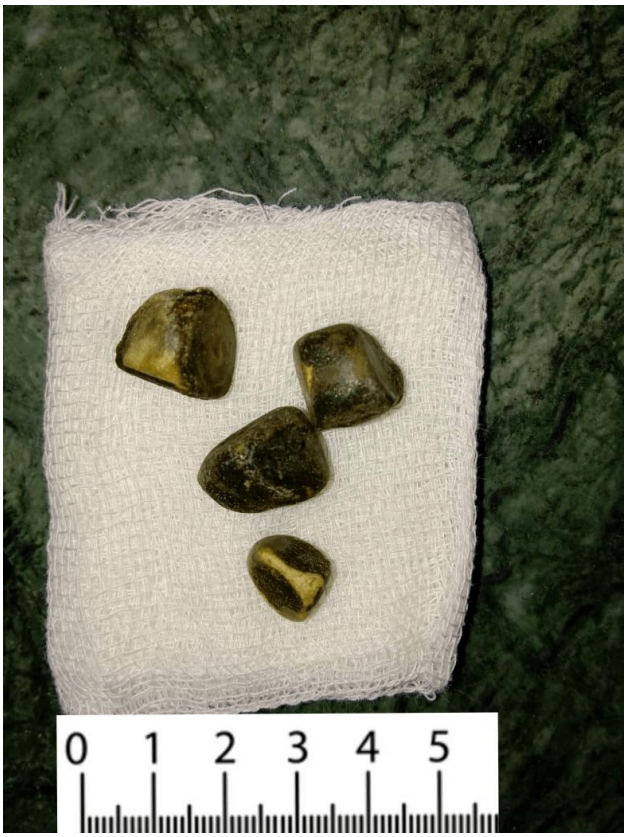

Figure 5: 4 common bile duct stones, spontaneously passed in faeces, measure scale for scale.

DISCUSSION

Gall stones are the most common biliary pathology. Although, in a majority of cases they are asymptomatic, in some cases they may cause symptoms, that too of different severities and complications.[1] Usually, stones form in the gallbladder and then they may migrate into the bile duct causing CBDS, causing jaundice due to obstruction.[1,2] Patients with symptomatic CBDS may present with pancreatitis, biliary colic, cholecystitis or jaundice.

Symptomatic CBDS may meet various outcomes, out of which 50% are passed spontaneously in faeces, a phenomenon that is commonly seen. The majority of the stones passed are of smaller size (3-10 mm) and spontaneous passage of larger stones is a lesser known phenomenon and only a few studies have reported them. The prevalence of spontaneous passage of CBDS is known to be different with different clinical presentations: in patients presenting with pancreatitis, biliary colic, cholecystitis and jaundice it is approximately 80%, 84%, 93% and 50%, respectively.[3] A study done by Khoury et al noted the factors that predicted the spontaneous passage of CBDs. It stated that factors like improvements in GGT, ALKP and total bilirubin levels and radiologically, dilated intrahepatic biliary ducts, distally located CBDS and smaller stone diameter predicted positive spontaneous passage of CBDS in stool, while factors like advanced age and male gender negatively affected the spontaneous passage of CBDS in faeces. The number of stones in CBD held no implications on the same.[4]

It is hence pertinent to note the various non-operative methods developed in recent years for the management of gallstones and its related conditions. Radio diagnosis along with other many techniques have helped in efficient visualization of the biliary tree, to detect and locate CBDSs more accurately. The treatment of CBDSs, nowadays, usually involves laparoscopic or ERCP guided techniques.[5] Obstructive biliopathy due to CBD calculi with cholelithiasis requires evacuation via laparoscopic CBD exploration or ERCP followed by cholecystectomy.

This is a case report of a case of a patient of CBDS with jaundice and biliary colic that ended up with spontaneous passage of large (>1.5 cm) CBDS (4 in number) through faeces.

Large obstructing calculi seldom pass through the faeces; spontaneous passage of small CBD stones occurs in up to 50% of the cases, however, they are associated with the development of complications like acute pancreatitis.[3] There has been no study reported claiming passage of CBD calculi of size >1.5 cm without any complication. Here we reported such a case which was planned for ERCP for CBD calculi followed by laparoscopic cholecystectomy, but on her 4th day of admission, she spontaneously passed 4 calculi (which the patient preserved with her after passing) in stools, showed clinical improvement in her symptoms, had no further complications and was hence discharged the following day. Blood investigations performed one week later showed significant improvement in her liver function tests. It was concluded that the patient had spontaneously passed 4 calculi >1.5 cm in size through faeces.

CONCLUSION

In our case report where a patient passed large (>1.5 cm) CBD calculi (4 in number) through faeces and suffered no further complications, no operative or non-operative intervention was needed to resolve the patient of her complaints. Hence, use of interventional radiology and other operative methods were avoided and patient was saved of the cost of treatment, long hospitalization and its hazards did not have to go through operative and post-operative risks and/or complications.

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