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Diagnosis and treatment of Gallstone ileus with Cholangitis and Cholecysto-enteric fistula in an Elderly Female

(Case Report)

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Summary
A 88yr old female known case of diabetes, hypertension and CKD presented with fever and Chills for 15 days with yellowish discolouration of sclera and urine for 5 days. On evaluation she was found to have evidence of Calculus Cholecystitis, Choledocholithiasis and Cholangitis. Patient was managed with IV fluid, IV antibiotics and other supportive treatment. ERCP was planned. After CBD Cannulation with Sphincterotomy and ballon sweeping, Pus, fragmented stones and black bile came out. After multiple ballon sweeping and clearing CBD plastic stent was placed.Patient was discharged as she was asymptomatic after 7 days. Removal of GB was deferred as patient's family denied the same. However after 15days she presented with recurrent vomiting and abdominal distension. CT abdomen revealed large Cholecysto-enteric fistula and Calculus within mid small bowel suggestive of gall stone ileus. Exploratory laparotomy with enterostomy was done.
Investigations-*Sonography, CT abdomen, LFT*
Diagnosis-*Cholangitis, Cholecysto-enteric Fistula and Gall stone ileus*
Management-*ERCP, Stenting,Surgery (Exploratory laparotomy with enterostomy)*
Key words-*Cholecysto-enteric fistula, Gall stone ileus, Cholangitis*

Introduction

Gall stone ileus is an uncommon complication of gallstone disease. It is associated with a mortality rate of 18%.(1) Female and older patients are disproportionally affected. (2,3) It accounts for only 1-4% of all intenstinal obstruction.(4) In patients with cholilithiasis only 0.3-0.5% develop gallstone ileus. (5) It is a rare form of small bowel obstruction caused by an impaction of a gall stone within the lumen of small intenstine. Such a gallstone is hypothesized to enter the gut lumen via cholecysto-enteric fistula. Large stones more than 2.5cm in diameter are thought to predispose to fistula formation by gradual erosion through the gall bladder fundus.(6) In gallstone ileus, gallstone migrate through fistula and become lodged in gastrointenstinal tract with the most common site of obstruction in the ileum (60%), followed by the jejunum (15%), stomach (15%) and colon (5%).(7) Stones less than 2.5 cm in diameter may traverse

the alimentary canal without causing obstruction.[8] When the gallstone lodges in the duodenum and cause gastric outlet obstruction, it is called Bouveret's syndrome.[9] Here a case was diagnosed in 88yr female as gallstone ileus and treatment was done by doing exploratory laparotomy with enterostomy.

Case

88 YRS old female, a known diabetic, hypertensive and CKD presented with fever and chills for 15days with yellowish discoloration of sclera and urine for 5 days. On evaluation she was found to have evidence of calculus Cholecystitis, Choledocholithiasis and Cholangitis (USG abdomen-Gall stones and CBD stones,Hb-9.2 mg%, TLC-12,200,T.Bili/D.Bili-9.5/7.2,AST-47, ALT-29,SAP-724,GGTP-511, ALP-2.7 and INR-1.2, KFT was normal).

Patient was managed with IV fluid, IV antibiotics and other supportive treatment. In view of extreme age with other co-morbidity it was carrying a high risk. However ERCP was planned for Billiary decompression and after CBD cannulation with spincterotomy and ballon sweeping pus under pressure came out followed by fragmented stones and black bile. After multiple ballon sweeping 10fr X 10 cm plastic stent was placed. Both surgeon and patient were reluctant for a Cholecystectomy, hence patient was discharged and on next follow up after 7 days she was asymptomatic with near normal LFT.

However 15 days later she again presented with recurrent vomiting and abdominal distension. She was managed in the line of sub acute intenstinal obstruction and CT abdomen revealed large cholecysto-enteric fistula and a round calculus of 37X29 mm with concentric fat rim within mid small bowel with fluid filled dilatation of proximal jejunal loop suggestive of gall stone ileus. Exploratory laparotomy with enterostomy, removal of gall stone and closure done. Gall bladder was not resected as cholecysto-enteric fistula was sealed off. Post operatively she had dyselectrolytimia and altered sensorium for 2 days but eventually recovered and discharged. She was doing well till her next follow up.

Discussion

Gall stone ileus is an uncommon cause of small bowel obstruction. [10,11] This pathology occurs three to five times more frequently in women than in men.[5]

The gallstone enters the intenstinal tract through a fistula formed between the gallbladder and the duodenum, stomach or colon. In particular, a cholecystodudenal fistula was identified in 68%of patients with gall stone ileus.[12] The clinical signs and symptoms of gallstone ileus are usually nonspecific, contributing to a delay in diagnosis. However, the common symptoms of intenstinal obstruction, such as abdominal pain, nausea, vomiting and constipation predominate, usually intermittently as the stone remains in the bowel.[13] Computed tomography (CT) scanning invariably demonstrates a fistulous communication, intraluminal gallstone in the small bowel, pneumobilia and any other co-existing pathology contributing to the impaction of the gallstone. The interpretation of subtle signs on CT scanning requires skill but can increase the accuracy of the diagnosis.[14] Computed tomography (CT) scanning has been reported to offer prompt and rapid pre-operative diagnosis of gallstone ileus with sensitivity of 93%.[15]

Treatment

The management of gallstone ileus remain controversial. Open surgery has been the mainstay of treatment, more recently other approaches have been employed, including laparoscopic surgery and lithotripsy, although too few cases have been reported to come to any conclusion as to the role of these newer approaches.[16,17,18] One-stage procedure with cholecystectomy, closure of the cholecysto-enteric fistula and enterolithotomy to prevent future recurrence of gallstone ileus or gallbladder cancer.[19,20,21]

But in this case Exploratory laparotomy with enterostomy, removal of gall stone and closure

done. Cholecystectomy was not done as cholecystoenteric fistula was sealed off.

Conclusion

Among the complications of Gall stones, Cholangitis is life threatening. Gallstone ileus is a disease of elderly females associated with nonspecific abdominal symptoms such as pain, vomiting and constipation. CT abdomen revealed large cholecysto-enteric fistula and gall stone ileus. Surgery was the treatment of choice to resolve the obstruction. In this case ERCP with biliary decompression was done. And for Cholangitis enterostomy and closure with stone removal done without Cholecystectomy.

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