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Paper

General Surgery



A RARE AND INCIDENTAL FINDING OF CHOLECYSTOGASTRIC FISTULA: CASE SERIES

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ARCT Cholecystogastric fistula is rare complication of chronic and long standing gallstone disease	

ABSTRACT Cholecystogastric fistula is rare complication of chronic and long standing gallstone disease. Cholecystogastric fistula is a type of cholecystoentric fistula (3-5%). Risk of Biliary fistulation causes gastrointestinal obstruction which is occurs most commonly in terminal ileum and ileo-caecal valve.

Biliary fistulas occur in 3 – 5% of patients with gallstones [1], with the duodenum being the most common site of fistulation followed by the stomach [2]. The risk with fistulation is subse- quent obstruction of the gastrointestinal tract which, interestingly, is reported to occur most commonly in the terminal ileum and ileocecal valve Cholecystogastric fistula most commonly occurs in elderly females. Described is an insidious clinical course, so this syndrome remains a rare clinical entity in elderly patients with chronic abdominal pain. Many surgeons and hospital still argue that '1-stage' surgery involving stone removal, fistula repair and cholecystectomy remains the only effective means of treatment. Cholecystogastric fistula is a very difficult problem usually diagnosed intra-operatively. A high degree of suspicion at operation is mandatory. A stapled cholecystofistulectomy may be the procedure of choice since it avoids contamination of the peritoneal cavity. Complete laparoscopic management of cholecystoenteric fistulas is possible in well-equipped high-volume centres.

KEYWORDS : Fistula, cholecystogastric, cholecystoenteric fistula

INTRODUCTION

Cholecystogastric fistula is rare complication of chronic and long standing gallstone disease. Cholecystogastric fistula is a type of cholecystoentric fistula (3-5%). Other types of cholecystoentric fistula are cholecystoduodenal fistula(most common) and cholecystocolonic fistula¹. Very long standing cholecyctitis with cholelithiasis may disposes a numbers of complications i.e Gallbladder empyema , Pancreatitis , Perforation peritonitis, cholecystoenteric Fistulas and malignant Transformations. Some predisposing factors like Diabetes mellitus, biliary tracts diseases and immunocompromised persons. We report a case Series of cholecystogastric fistula in our institution

Risk of Biliary fistulation causes gastrointestinal obstruction which is occurs most commonly in terminal ileum and ileocaecal valve

Patients presented with advance age and associated comorbidities, rate of mortality is high. In last Decades development of many advance including knowledge of intravenous fluid therapy and anesthetic refinement, the mortality rate drops to below 15% (4)

The authors report three cases of Cholecyctogastric fistula that illustrates the difficulty of its diagnosis and do a brief review of the literature on this topic

Case 1.

A 60 year-old female presented with complains of pain in Upper abdomen with fever and vomiting (off/on) for 7 week and there is no previous history of diabetes, hypertension, biliary pain or jaundice or documented gallstone by ultrasonography,chronic Respiratory conditions. Also H/O thyroid swelling (USG s/o benign thyroid nodule). On initial workup, patient haemoglobin was 9.5 gm%, total bilirubin ~ 2 mg/dl (Direct- 1.7) and alkaline phosphatase was 747 U/L. other routine Haematological and biochemical tests were in normal limit including amylase/lipaseand thyroid profile. On Abdominal examination ,there was mild tenderness in epigastrium. USG whole abdomen was suggestive of contracted gallbladder with dilated Common bile duct (12mm) with multiple echogenic foci i.e...choledocholithiasis. CECT whole abdomen s/o Choledocholithiasis with bilobar intra-hepatic radical dilatation with pneumobilia. Working diagnosis of Choledocholithiasis was made and patient was planed for elective surgery.

On exploration, gall bladder was found to be normal, stomach was densely adhered to it and a gastric fistula was observed along with multiple CBD calculi. Fistula was repaired and CBD exploration with T-tube placement was done.

Figure 1- Intraoperative Pictures Of Enterolithotomy Performed With Cbd Exploration



CASE-2

A 40 year old female presented with complaint of pain in right upper abdomen for 4 years (on & off) which was radiating to back. On initial work-up all haematological and biochemical parameters were found to be within normal limits and on abdominal examination no pain or tenderness was present .USG was s/o wall echogenic shadow complex with chronic cholecystitis with cholelithiasis.

The working diagnosis of cholelithiasis was made and patient was planned for laparoscopic cholecystectomy. On scope introduction gall bladder was found to be densely adhered to stomach so laparoscopy converted to open procedure, a gastric fistula seen and was repaired and cholecystectomy done.

Figure 2 - Second Modality- Enterolithotomy With Cholecyctectomy And Fistula Closure



CASE-3

A 54 year old male presented to our hospital with complain of pain in Right upper abdomen with multiple episodes of vomiting for 5 weeks. His previous medical history was significant for Serologically negative Rheumatoid arthritis with Diabetes Mellitus (type2), there is no history of any malignancy,inflammatory bowel disease or any GI tract obstruction.

On examination he was vitally and haemodynamically stable. Abdomina was found to be soft and mild tenderness present on right upper abdomen on deep palpation and Murphy's Positive. His blood examination was found to have Haemoglobin level-11.9 g/dl with total leucocyte count-6400 and platelet count was 2.4 lac cells/mm². His renal profile within normal limit and Liver function was Total Bilirubin 3.8mg/dl (direct-2.5), Serum Alkaline phosphate-482 IU/L,amylase-65.7 U/L, Lipase-87 U/L

On Radiological examination USG Whole Abdomen suggestive of Distended gallbladder with extensive thickening of gallbladder wall with chronic cholecystitis with cholelithiasis and normal common bile duct(~7.5mm). X-Ray chest and abdomen found to be Normal. Working Diagnosis of cholelithiasis was made and patient was planned for elective laparoscopic cholecystectomy. Camera scope was inserted and gallbladder was found to be densely adhered to omentum, liver and stomach and laparoscopy converted to open cholecystectomy. Adhesions removed and gastric fistula observed which was repaired and cholecystectomy done.

Figure 3 - Intraoperative Pictures Of Enterolithotomy With Fistula Closure



DISCUSSION :

Biliary fistulas occur in 3-5% of patients with gallstones [1], with the duodenum being the most common site of fistulation followed by the stomach [2]. The risk with fistulation is subsequent obstruction of the gastrointestinal tract which, interestingly, is reported to occur most commonly in the terminal ileum and ileocecal valve

Biliary fistulas(3-5%) occur in patients of chronic cholecystitis with cholelithiasis and most common site of fistulation are duodenum followed by stomach (pyloric). The risk of Gastrointestinal obstruction following fistulation, is most commonly in terminal ileum and ileo-caecal valve. The fistula tract forms from the gradual erosion of the chronically inflamed and closely adherent gall bladder wall and stomach. Cholecystogastric fistulas have been first reported as far back as 1968.

In our cases, 1 patient shown signs of gastic obstruction, due to fistulating gallstone to stomach and in another patient incidental peri-operative finding. Cholecystogastric fistula most commonly occurs in elderly females. Described is an insidious clinical course, so this syndrome remains a rare clinical entity in elderly patients with chronic abdominal pain.

The advancement of radiology,endoscopy and surgical modalities has led to successful management of Cholecystogastric fistula. Computed T omography appearance of cholecystogastric fistulas consist of a slight deficiency of the G.B wall and Edematous wall of the gastric antrum and the thickened wall of the gall bladder fundus. A small speck of gas in the fundus of the gallbladder was seen in our patient's CT s/o fistulisation to the bowel.

Endoscopic repair of cholecystogastric fistulas is safe and practical. However, the presence of large gallstones (>3 cm), GIT- hemorrhage, impaction of stone, and improper or partial stone manipulation are often mitigating factors for endoscopic failure, so surgical intervention are treatment of choice.

Many surgeons and hospital still argue that '1-stage' surgery involving stone removal, fistula repair and cholecystectomy remains the only effective means of treatment. However, our patient also underwent '1-stage' surgery, In first case she did fistula repaire and her gallbladder was left intact with CBD clearance and second one and third one patient also did fistula repaired and cholecystectomy.

Some surgeons prefers 2-stage stone removal, fistula repair and cholecystectomy, laparoscopic cholecystoenteric fistula transaction (Chowbey et al.), laparoscopic intraperitoneal suturing of the fistulous tract, endoscopic treatment, or only stone removal without fistula repair and cholecystectomy.

CONCLUSION :

Although rare, the possibility of Cholecystogastric fistulas is worth considering in elderly diabetic females with Chronic recurrent cholecystitis with cholelithiasis. Cholecystogastric fistula is a very difficult problem usually diagnosed intraoperatively. A high degree of suspicion at operation is mandatory. A stapled cholecystofistulectomy may be the procedure of choice since it avoids contamination of the peritoneal cavity. Complete laparoscopic management of cholecystoenteric fistulas is possible in well-equipped highvolume centres.

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