

CHOLECYSTOGASTRIC FISTULA: A CASE REPORT OF AN INCIDENTAL FINDING OF A RARE COMPLICATION OF CHOLELITHIASIS

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ABSTRACT

Cholecystogastric fistula is a rare complication of cholelithiasis. Risk factors include recurrent cholangitis, female sex, old age and those with co morbidities [1,2]. It is usually diagnosed intra operatively as non-specific symptoms and failure of pre-operative investigations to diagnose the condition results in its incidental finding [2]. We report a case of a 50-year-old female with cholelithiasis, a hypertensive and diabetic patient. Cholecystogastric fistula was found incidentally during laparoscopic cholecystectomy and due to dense adhesions, the procedure was converted to open cholecystectomy with CBD exploration. Post operative period was uneventful and patient was discharged successfully. High index of suspicion is important for timely and proper management.

KEYWORDS

Cholecystogastric fistula, cholelithiasis, bilioenteric fistula

INTRODUCTION

Cholecystogastric fistula is an abnormal connection between the gallbladder and the stomach [3]. It is a rare complication that occurs as a result of long standing cholelithiasis, peptic ulcer disease, inflammatory bowel diseases and gastrointestinal malignancy. Factors predisposing to this condition include: biliary tract diseases, diabetes mellitus and immunocompromised patients [1,3].

Case Presentation

A 50-year-old female presented to the out-patient department with pain in the right upper abdomen on and off for 1 year. She was under medication for hypertension and diabetes mellitus for the past one year. Haematological and biochemical investigations were within normal range. Ultrasonography of the abdomen showed cholelithiasis with contracted gall bladder and multiple calculi in the lumen (largest measuring 14mm) and CBD was normal. Patient underwent pre-operative check-up and was admitted for elective laparoscopic cholecystectomy. Intra operatively, dense adhesions were present between the antrum of the stomach and gall bladder (fig:1) and Calot's triangle was not defined; subsequent dissection revealed adhesions between fundus of gall bladder and stomach; also, the gall bladder neck was wide and CBD appeared dilated. A cholecystogastric fistula was suspected and the procedure was converted to open cholecystectomy.

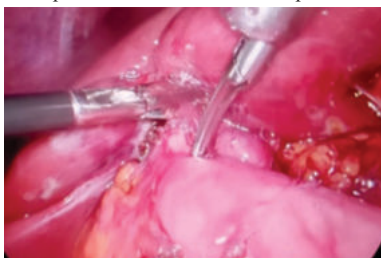


Fig1: Dense adhesions between gallbladder and stomach

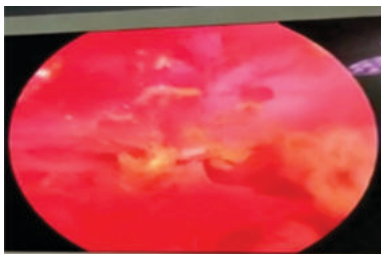


Fig 2: Clearance of ductal system

Gall bladder was contracted with dense adhesions. On further dissection, we found a cholecystogastric fistula between the fundus of the gallbladder and antrum of stomach measuring around 0.5x0.5cm. There were multiple calculi, and cystic duct was short and wide. We proceeded with cholecystectomy and primary repair of the cholecystogastric fistula. CBD was explored with a nephroscope (fig:2) and a CBD calculus of 10mm was found and removed. Subhepatic drain was placed. Immediate postoperative period was uneventful. Abdominal drain output was around 100ml on postoperative day 1 (serosanguinous) followed by 450ml (bilious) on next day which subsequently decreased thereafter. Ryles tube was removed on the 4th postoperative day and patient was allowed clear liquids orally. Soft diet was started from 7th post-operative day onwards. Patient developed surgical site infection for which daily dressing with saline irrigation was done along with antibiotic course based on pus culture sensitivity and secondary suturing was done once the wound became healthy. Ultrasonography of abdomen done on 25th post-operative day showed fatty liver. There was no obvious free fluid collection. Abdominal drain was removed on the 26th post-operative day following nil output. Patient was discharged and was doing well on follow up.

DISCUSSION

Biliary fistulas occur in 3-5% of patients with cholelithiasis. Chronic inflammation and pressure effect from the gallstones cause erosion into nearby enteric lumen (stomach, duodenum or colon) [3]. Bilioenteric fistulas may occur in different parts of the gastrointestinal tract. The most common being Cholecystoduodenal fistula (prevalence of 77%-90%) and the rarest being cholecystogastric fistula (probability of 2%) [4].

Risk factors for bilioenteric fistulas include recurrent cholangitis, large stones, female sex, long history of cholelithiasis, co morbidities such as diabetes mellitus and old age [2,5].

Preoperative diagnosis of bilioenteric fistulas is not easy since patients do not show any specific signs or symptoms. Abdominal film, ultrasonography, barium studies and CT scan are common modalities for diagnosis. Percutaneous transhepatic cholangiography, ERCP, MRCP are more invasive although more specific details can be obtained [6].

Most studies report incidental findings of bilioenteric fistulas during ERCP or other radiological examinations performed for investigation of hepatobiliary-pancreatic diseases. CT is recommended in elderly females with a long history of cholecystitis and ultrasound findings of thick walled and shrunken gallbladder [7].

Advancements in the fields of radiodiagnosis and endoscopic modalities have made early diagnosis and management achievable. Esophagogastroduodenoscopy(EGD) findings of cholecystogastric fistula(CGF) include a fistulous opening in the stomach antrum with pus extruding through the opening. CGF when caused by stone can be managed by endoscopic retrieval of the stone. Other interventions include mechanical, electrohydraulic, laser lithotripsy, endoscopic lithotomy or lithotripsy or surgical intervention with fistula repair. Conservative management may be considered in those unfit for surgery [8,9].

Angrisani L et al, Prasad A et, Chowbey PK et al and Nuzzo G et al [5,10,11] and several other authors have described successful laparoscopic management of bilioenteric fistulas. However, Glenn et al [12] recommended open cholecystectomy with excision and closure of the fistula and many surgeons still prefer the open approach as it allows better tissue dissection especially in cases of inflammation and dense adhesions.

In our study, the patient was an elderly female, with diabetes and hypertension, as well as a history of repeated attacks of cholecystitis. In this case, cholecystogastric fistula was an incidental intra-operative finding. Due to dense inflammatory adhesions, laparoscopic procedure was converted to open cholecystectomy. Primary repair of the cholecystogastric fistula was done along with CBD exploration and extraction of CBD stone.

CONCLUSION

Cholecystogastric fistula is a rare complication usually following prolonged or chronic cholecystitis. As some studies have shown, the risk of developing biliary fistulas may be higher in female patients, elderly patients and those with co morbidities such as diabetes, immunological disorders, malignancies, etc. Diagnosis is often evasive owing to the non-specific presentation of the disease and is usually an incidental finding during endoscopy or CT imaging or intra-operatively. A high degree of suspicion is required for preoperative diagnosis. When diagnosed intraoperatively, cholecystogastric fistulas can be successfully repaired. Conversion of laparoscopic to open approach facilitates proper dissection and repair in case of difficult cases with dense adhesions.

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