Case Report

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Spontaneous Cholecystocolic Fistula: Case Report

Surgery Section

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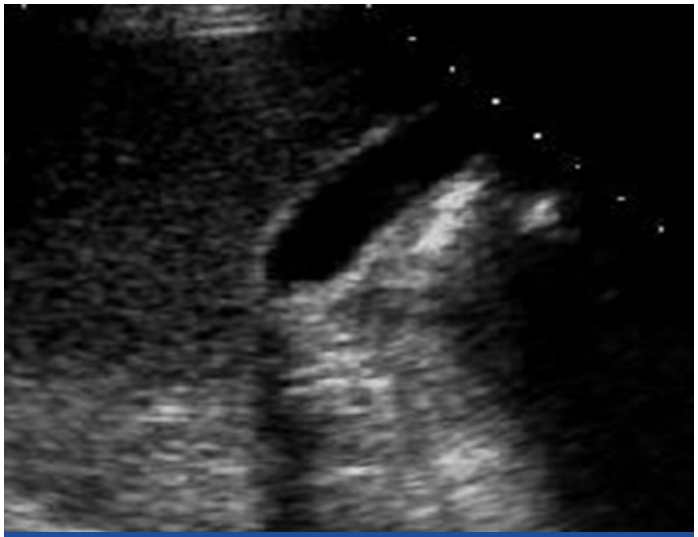
ABSTRACT

Cholecystocolic fistula is a rare billiary-enteric fistula with variable clinical presentation. Despite modern diagnostic tool a high degree of suspicion is required to diagnose it preoperatively. These fistulae are treated by open as well as laparoscopic surgery, with no difference in intraoperative and postoperative complications. We are describing a 50-year-old female patient with the diagnosis of chronic cholecystitis with cholelithiasis, which was investigated with routine lab investigations, and abdominal ultrasonography but none of these gave us any clue to the presence of fistula, were discovered incidentally during an open surgery and were appropriately treated.

Keywords: Biliary-enteric fistula, Cholecystectomy, Cholelithiasis

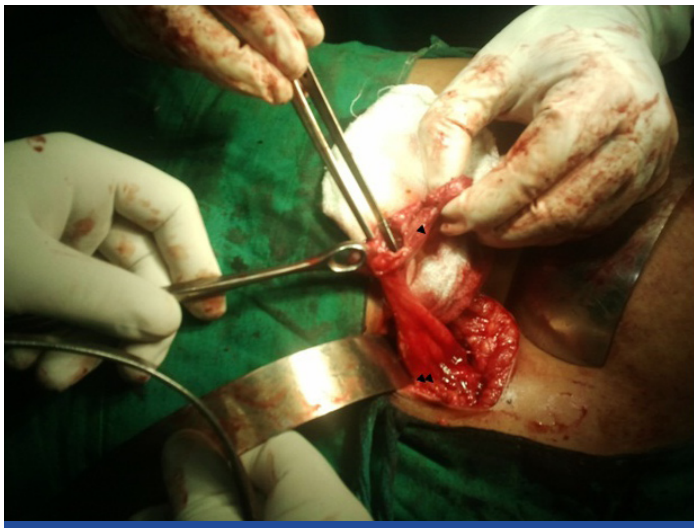
CASE REPORT

A 50-year-old woman presented to the outdoor patient department of our hospital with chief complaint of right-upper quadrant pain, dyspepsia, nausea especially after meals and on-and-off fever for one year. On examination there was no icterus and mild tenderness was present in right hypochondrium but there was no guarding, rigidity or rebound tenderness. No underlying swelling or lump could be appreciated. Bowel and bladder habits were normal. Patient was admitted and investigated with provisional diagnosis of gallstone disease. All blood investigations are essentially normal except serum alkaline phosphatase which is slightly increased. Abdominal ultrasound revealed multiple echogenic shadowing area in lumen with contracted gallbladder, common bile duct and gallbladder wall appears to be normal [Table/Fig-1]. A diagnosis of chronic cholecystitis with cholelithiasis was made. Patient was prepared for laparoscopic cholecystectomy. During laparoscopy, it was evident that there were dense adhesions between the gallbladder, transverse colon and the omentum. The callot's triangle was virtually inaccessible. It was therefore decided to convert to an open cholecystectomy and a right subcostal incision was used. Dissection in callot's triangle was extremely difficult. Dense adhesions between gallbladder and omentum were separated. A tubular structure was connected to body of gallbladder and right transverse colon, which was not disturbed. Cystic duct and cystic artery was dissected, tied and cut. Gallbladder was separated from liver without disturbing the tubular structure. Now gallbladder was opened from body and multiple tiny calculi were removed. On removing the gall stones it became evident that there was a fistula between gallbladder and right transverse colon [Table/Fig-2].



[Table/Fig-1]: Abdominal ultrasonography revealed multiple echogenic shadowing area in lumen of gallbladder

A cholecystectomy was performed with excision of the fistula and primary repair of colon. The patient made an uneventful recovery and was discharged on the 8th postoperative day. Histopathological examination of specimen revealed no evidence of malignancy. The patient was followed-up for a period of two months and no complaints were noted.



[Table/Fig-2]: Intraoperative findings show open gallbladder and fistula tract to right transverse colon

DISCUSSION

Billiary-enteric fistulae have been found in 0.9% patients undergoing biliary tract surgery. Most common site of communication is cholecystoduodenal fistula, followed by cholecystocolic fistula, and least common is cholecystogastric fistula. Spontaneous cholecystocolic fistulae comprise 10-20% of all biliary-enteric fistulas [1]. A sequence of events occurs in acute calculus cholecystitis. During these attacks, the adjacent serosal surface becomes inflamed and adherent to the gallbladder. The ischemic area in the wall of gallbladder becomes gangrenous, and because of the increase pressure within, its contents penetrate its own necrotic wall first, and then, the wall of the adjacent colon, forming a cholecystocolic fistula [2]. Another cause is from pressure necrosis of an impacted gall stone usually at the neck of the gallbladder, which gradually erodes into the colon.

In the majorities of cases, they are a sequel to cholecystitis but are reported to complicate only 0.13% cases [3]. However, they have also been reported in chron's disease, ulcerative colitis, abdominal trauma, and malignancy of the biliary tract, the bowel, and the head of pancreas [4].

Cholecystocollic fistulae can present with abdominal pain, nausea, weight loss, diarrhoea, and dyspeptic symptoms. This fistula can alter enterohepatic circulation of bile acids, leading to their malabsorption. The bile acids also stimulate the colonic mucosa directly to secrete water and electrolytes excessively, leading to steatorrhea and diarrhoea [5].

The combination of pneumobilia, chronic diarrhoea, and vitamin K malabsorption has been proposed as a pathognomonic triad for cholecystocolonic fistula by Savvidou et al., [6]. However, this triad is not present in all patients and no studies have been performed to calculate the sensitivity or specificity of this triad. Cholecystocolonic fistulas are most commonly discovered incidentally during cholecystectomy, being diagnosed in 0.5% of these procedures [7]. Failure to identify these fistulas during operation can have catastrophic complications, resulting in division of the fistula, perforation of the colon, and resultant fecal peritonitis. In the most severe of cases it can progress to sepsis and death. If found incidentlly during laparotomy, these fistulae should be taken down because of the increased risk of cholecystitis, cholangitis, and a 15% chance of malignancy in the gallbladder [8].

The most useful technique for diagnosis are a plain film of the abdomen, abdominal ultrasonography, barium studies, biliary scintigraphy, and ERCP. Although a diagnosis of cholecystocolic fistula is rarely suspected clinically, it should be in elderly patients with unexplained pneumobilia or unexplained persistent diarrhoea [1]. ERCP can be helpful in establishing the diagnosis, especially if barium studies give negative results [9].

The standard treatment of cholecystocolic fistula is open cholecystectomy and closure of fistula. However, recent development in laparoscopic surgery has shown its potential use in treating these rare fistulas. Similar technique of open surgery has been used in laparoscopic surgery. The results have shown no significant difference or better outcome in intraoperative and postoperative complications [7,10]. This surgical dictum has been questioned over the past several years. Several groups have advocated for observation of the asymptomatic patient, reserving surgery for those that present with biliary sepsis. These authors have argued that given the life expectancy and medical co morbidities of some patients, surgery as a preventative measure would be of limited benefit [11].

CONCLUSION

Cholecystocolic fistula is a rare complication of gallstone disease. The most common presentation is diarrhoea, but symptoms may be unspecific and variable. The present experience has shown that despite modern diagnostic tools available, a high degree of suspicion is required to diagnose it preoperatively. Surgical closure of fistula is a treatment of choice, but clinical observation and palliative treatment may be reserve for asymptomatic and co-morbid patients.

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