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Cholecystocutaneous fistula: a rare presentation of cholelithiasis

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ABSTRACT

Cholecystocutaneous fisutla as a complication of calculus cholecystitis is a rare clinical entity with less than 20 cases reported in literature in last 50 years .It is hardly seen these days due to early diagnosis and treatment with broad spectrum antibiotics and timely surgical intervention. We present such a case in a 40 yr old diabetic female.

Keywords: fistula, cholecystitis, antibiotics.

Introduction

Patients with gall stones may present as biliary colic, acute cholecystitis, chronic cholecystitis, obstructive jaundice, gallstone ileus and rarely as cholecystocutaneous fistula. Though reports of spontaneous cholecystocutaneous fistulae have been found in medical literature dating back to the 17th century, spontaneous cholecystocutaneous fistula is now one of the rarest presentations. It usually presents with a localised abscess that rupture to produce a fistula with or without stones coming out through the external opening. Radiological investigations may help in diagnosis & early management.

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Case report

A forty five year diabetic female patient with known gall stone disease was admitted to our surgical unit as a case of discharging sinus in the epigastric region. There was spontaneous discharge of bilious fluid and stones through the sinus opening for last five years. There was no history of associated jaundice, pancreatitis, cholangitis or previous surgery. On examination, there was a discharging sinus present in the epigastric region with discharge of serous fluid through the external opening (figure 1).

The patient was clinically assessed and investigated. Haematological and biochemical investigations were within normal range. Ultrasonography of abdomen revealed presence of contracted gall bladder with thickened wall and multiple calculi in its lumen. The extension of sinus tract from the subcutaneous space through the parietal wall into the gall bladder with presence of multiple calculi and debris along the tract was noted (figure 2). Based on the presumptive diagnosis of cholecystocutaneous fistula, fistulogram

was done. The fistulogram revealed the entire fistula tract extending from the external subcutaneous opening in the epigastric region to the gall bladder and further delineation of extra hepatic biliary tree (figure 3).

Patient was taken up for elective cholecystectomy and excision of fistula tract. Intraoperative, multiple calculi were found impacted within the fistula tract and the tact could be followed down to the gall bladder (figure 4,5). The gall bladder was found to be collapsed, thick walled with multiple calculi in its lumen. Calot triangle anatomy was well defined and common bile duct was normal. The patient was discharged in a satisfactory condition on tenth postoperative day.

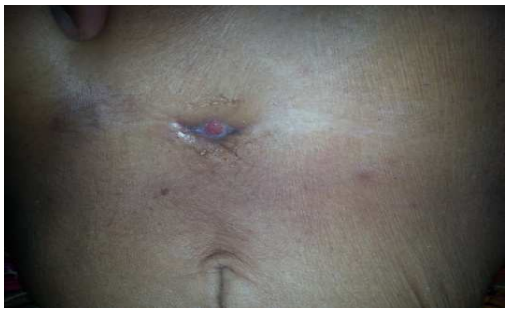

Figure 1: showing external opening of the fistula

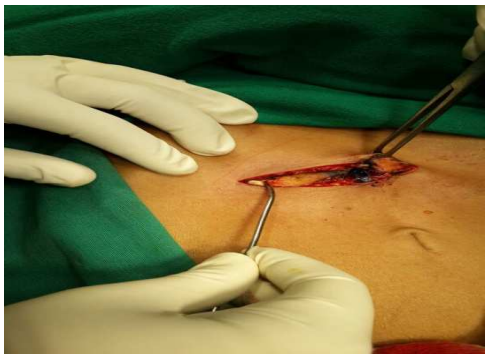

Figure 2: showing stone in the fistula tract

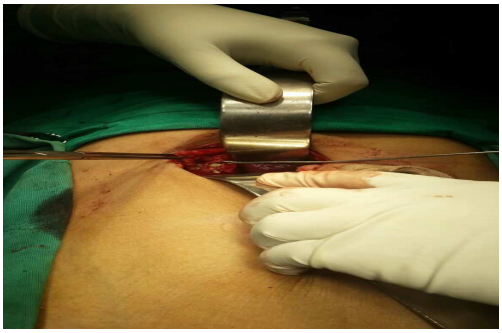

Figure 3: showing gall bladder with multiple stones

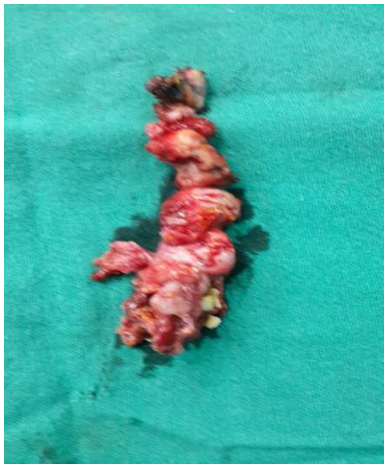

Figure 4: showing the excised fistula tract along with gall bladder

Discussion

Cholecystocutaneous fistula is defined as an abnormal epithelial lined tract between skin and gall bladder which occurs due to rupture of gall bladder through all layers of abdominal wall. It was first described by Thilesus in 1670. Spontaneous perforation of gall bladder secondary to calculus cholecystitis to internal organs has been described mostly to the duodenum and colon, less frequently to bronchial tree and urinary tract and least frequently to skin manifesting as cholecystocutaneous fistula. It is usually found in 4th-5th decade of life with female preponderance though it may be found at any age. It is usually found in cases of recurrent and neglected cases of chronic calculus cholecystitis where perforation of gall bladder occurs resulting in communication with abdominal wall and hence fistula formation[1] .Other causes include blunt trauma abdomen, previous abdominal surgery ,iatrogenic causes and biliary malignancies particularly cholangiocarcinoma. In almost all cases, obstruction of cystic duct due to stone or malignancy causes distention of gall bladder leading to the compromise of vascular and lymphatic supply of gall bladder .This in turn leads to transmural necrosis and perforation with superadded infection resulting in peritonitis in acute cases ,abcess formation in subacute cases and biliary fistulas in chronic cases. The various risk factors include steroid intake, dibetes mellitus, ,immunocompromised states, typhoid, polyarteritis nodosa etc[2] .It usually presents as a painless chronic discharging sinus tract with serous mucoid or bilious discharge mostly in right upper quadrant though it has also been reported in right iliac fossa, right lumbar region, umbilical region, left hypochondrium and as far as gluteal region[3] .Elderly patients usually present with nonspecific and atypical signs and symptoms hence delaying the diagnosis and exacerbating the morbidity and mortality. Differential diagnosis include infected epidermal inclusion cyst, pyogenic granuloma, metastatic carcinoma. The various modalities of diagnosis include ultrasonography, CECT abdomen and CT fistulography[4] . USG abdomen shows presence of gall stones as well abcess as surrounding echogenic material but fails to depict the tract and is highly operaor dependent .CECT abdomen clearly demonstrates amount of abcess, its communication with abdominal organs but fails to delineate course of fistula. Fistulography is modality of choice as it delineates the origin and course of fistula, its relation with surrounding organs and also rules out associated internal fistula if any. Management includes conservative approach in acute phase of the disease including incision and drainage of abcess, broad spectrum antibiotics and analgesics and general supportive care. .Definitive management include exploratory laparotomy with complete excision of fistulous tract and cholecystectomy as one stage or two stage procedures . Other less invasive modalities include CT guided percutaneous drainag ,ERCP and laparoscopic cholecystectomy with variable success especially in patients with associated comorbidities[5,6]. Spontaneous healing of fistula has been described rarely in few patients in absence of predisposing factors

Conclusion

This case underscores the fact that high index of suspicion and liberal use of diagnostic modalities along with sound clinical judgement can go a long way

in ensuring correct diagnosis and management of abdominal wall abcesses and avoiding surgical catastrophes.

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