

A RARE CASE OF CHOLECYSTOCUTANEOUS FISTULA

Liyakat Ali Chowdhury, Sudipta Saha, Ruchira Das, Madan Karmakar, Samiran Samanta, Surajit Das,

Department of Radiodiagnosis, Institute of Post-Graduate Medical Education and Research and Seth Sukhlal Karnani Memorial (IPGME&R and SSKM) Hospital, Kolkata, West Bengal, India

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ABSTRACT

Spontaneous cholecystocutaneous fistula is an unusual complication of chronic calculous cholecystitis. The remarkable drop in incidence is probably associated with the introduction of antimicrobial therapy and early surgical management of biliary tract diseases. It occurs due to adhesions formed between the gallbladder and abdominal wall, secondary to cholecystitis, which results in perforation through the abdominal wall. The diagnosis is confirmed with a fistulogram, USG or CT. Traditional treatment consisted of broad-spectrum antibiotics, cholecystectomy and fistula excision. Laparoscopic approach appears feasible even though the conversion rate is high. We report a case of spontaneous cholecystocutaneous fistula in a patient who presented with a chronic discharging sinus in the umbilical region.

Keywords: Cholecystocutaneous fistula; Spontaneous; Gall bladder perforation; Chronic cholecystitis

Introduction

Cholecystocutaneous fistula is a vanishing entity. First described in 1670, it had been quite prevalent in the early centuries. However, since 1900, only 72 cases have been reported in medical literature. Fewer than 25 reports have been published in the past 50 years.¹ The marked reduction is possibly due to early diagnosis and treatment of gall stone disease. Most of the reported cases were secondary to post operative complications of biliary tract surgery. It was also commonly found in neglected cases of gallstone disease.

Case Presentation

A 45 year woman presented with chronic discharging sinus above the umbilicus for the last 6 months with passage of occasional small stones with pain during

the episode. She had an episode of acute right hypochondrial pain which subsided with medication. She did not require any hospitalization. She had no significant past medical history.

On examination, the patient was afebrile with a discharging sinus above the umbilicus. The white cell count was $10.0 \times 10^9/l$, C-reactive protein was 68 mg/l and liver function tests were normal.

Ultrasound examination (Fig. 1 & Fig. 2) demonstrated contracted gallbladder packed with multiple calculi. The sinus tract from the skin could be traced into the fundus of gallbladder. Fistulogram (Fig. 3) demonstrated the contrast material from the sinus tract into the gallbladder along with multiple small filling defects within the opacified sinus tract and gallbladder lumen.

Correspondence : Dr. Liyakat Ali Chowdhury
Department of Radiology, (IPGME&R and SSKM) Hospital, Kolkata 700020,
West Bengal, India.
Mobile: +917699907909
Email: lachowdhuryrd@gmail.com

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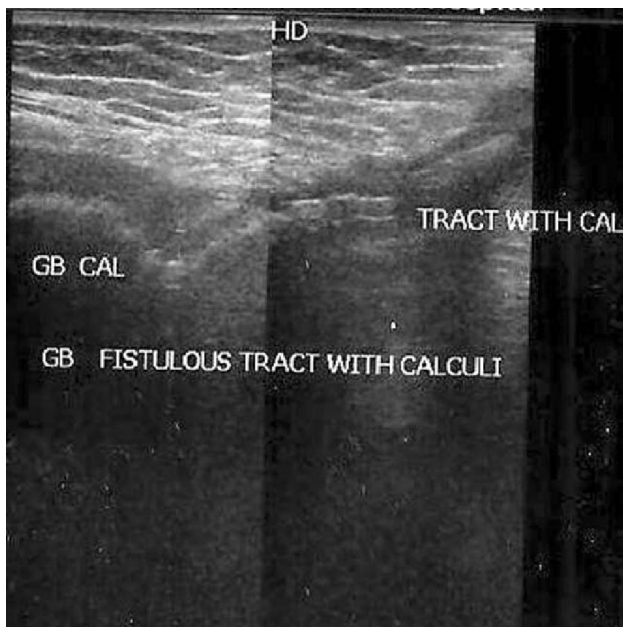


Figure 1: USG in longitudinal section demonstrating the fistulous tract extending from gall bladder fundus to the skin. Hyperechoic calculi is noted in the GB fundus and subcutaneous tissue.

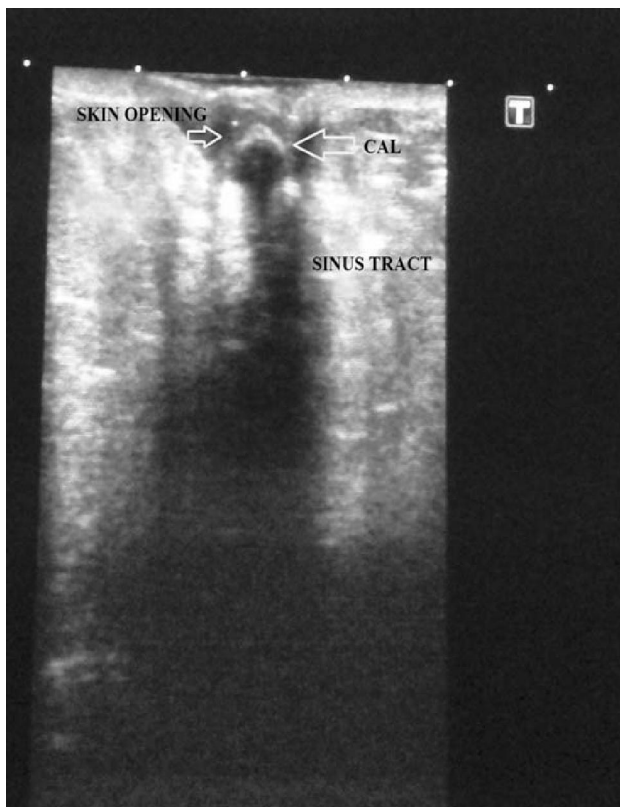


Figure 2: USG in transverse section showing calculi at the sinus opening in the subcutaneous tissue.

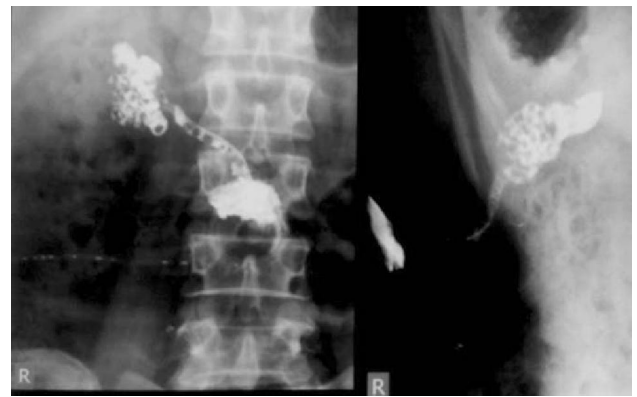


Figure 3: Fistulogram in AP and lateral view showing the fistulous tract with multiple filling defects.

Management and Outcome

The patient underwent open cholecystectomy with en bloc excision of the fistulous tract. Drains were left at the gall bladder bed and in the abdominal wound. The macroscopic specimen showed a thick walled gall bladder with multiple calculi (Fig. 4) and a defect in the fundus forming a subcutaneous fistulous tract opening near the umbilicus. Histopathological report revealed chronic cholecystitis without any evidence of malignancy. Post-operative course was uneventful.



Figure 4: Specimen showing multiple small calculi discharged from sinus tract

Discussion

Cholecystocutaneous fistula is an abnormal communication between gallbladder and skin. The incidence

of complications like cholecystocutaneous fistulae has fallen dramatically since the advent of intravenous antibiotics and the emergence of elective and emergency cholecystectomies for gallbladder disease. Cholecystocutaneous fistulae typically present in the elderly female, as a painless draining sinus tract in the right upper quadrant of the abdomen (48%), however, this tract may alternatively drain to the right iliac fossa, right groin, right gluteal region, umbilicus or left upper quadrant.^{1,2} There is usually a history of chronic biliary tract disease, however patients usually do not report a previous distinct episode of acute cholecystitis.¹ Perforation of the gallbladder without stones is said to complicate 0.6-1% of all cases of acute cholecystitis.³ The aetiology of perforation in such cases is not clear, although bacteraemia, steroids, polyarteritis nodosa, typhoid and trauma have all been implicated.³

Increased intraluminal pressure in the gallbladder secondary to obstruction by calculus or malignancy is thought to impair blood flow and lymphatic drainage, thereby leading to mural necrosis and perforation.⁴ It can either be an acute or an indolent process. Acutely, gallbladder may perforate leading to peritonitis or an abscess around the gallbladder. A chronic perforation can lead to an internal or external biliary fistula and these arise most commonly from the fundus of the gallbladder. Biliary fistulas are mostly enteric (duodenum 77%, colon 15%).³ Rarely inflammatory adhesion to the abdominal parietes allows external fistula formation after perforation.

The treatment of acute fistula requires adequate drainage, antibiotics and general supportive measures. Once acute phase subsides fistulography can be performed followed at a suitable interval by elective cholecystectomy and excision of the fistula. However, up to 20% of all external biliary fistulae heal spontaneously.³ Laparoscopic approach to cholecystocutaneous fistula is safe and associated with fewer risks to patients. We recommend this approach especially for patients with other co-morbidities.⁵

Conclusion

This case underlines the fact that all patients presenting with cholecystocutaneous fistula need to be investigated thoroughly for underlying pathology,

particularly on a background of calculous biliary tract disease.

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