



ORIGINAL RESEARCH PAPER

Surgery

CHOLECYSTOCUTANEOUS FISTULA – A CASE REPORT

KEY WORDS:

Cholecystocutaneous fistula (CCF), cholecystitis, gall bladder (GB)

Dr. Bharat Kalambe

Professor in KEM Hospital, Pune.

Dr. Rachana Kasture

Senior Resident in KEM Hospital, Pune.

ABSTRACT

Cholecystocutaneous fistula (CCF) is a rare clinical entity in the surgical practice, nowadays. Reports of spontaneous cholecysto-cutaneous fistulae occurring as early as the 17th century were registered. This condition develop due to neglected calculous cholecystitis. Fortunately, spontaneous cholecystocutaneous fistulae are a rare complication of cholelithiasis nowadays as prompt medical and surgical treatments address the underlying pathology when symptomatic. We present a case report of 82 year female with pain in right upper quadrant abdomen since many years with on and off in nature which as associated with nausea. Diagnosis was made on CECT abdomen and pelvis and posted for surgery.

INTRODUCTION

A cholecystocutaneous fistula is an abnormal epithelial tract that allows communication between the gallbladder and the skin. This communication can be either spontaneous (often a complication of neglected gallstone disease) or deliberate (as in the case of a therapeutic percutaneous cholecystostomy used to treat cholecystitis or empyema of the gallbladder, which is generally reserved for patients unfit for surgical intervention).⁽¹⁾

Spontaneous cholecystocutaneous fistula was first described by Thilesus in 1670. Courvoisier reported 169 cases in the nineteenth century.⁽²⁾

Cholecysto-cutaneous fistulas present as an uncommon complication of neglected calculous cholecystitis. This condition has also been associated with acalculous cholecystitis or carcinoma of the gall bladder.⁽³⁾

One of the potential sites of leaking is the abdominal wall and eventually the covering skin resulting in a cholecystocutaneous fistula.

Patients are usually elderly females in 7th decade or 8th decade presenting with very nonspecific symptoms.

The declining incidence has been attributed to prompt diagnosis, availability of antibiotics, and early surgical intervention for cholecystitis and empyema.⁽³⁾

Case Report

A 82 year female presented with pain in abdomen and nausea on and off in nature since many years. Routine lab work up done suggestive of leucocytosis, liver function tests were within normal parameter.

On examination – abdomen was soft, mild tenderness present in right hypochondrium . (discharge from skin) persistent sinus was present

Cect Abdomen Pelvis s/o

GB shows presence of a well deined radio-opaque calculus measuring approximately 13*14mm impacted in region of GB neck. Homogenously enhancing linear tract is seen extending from the fundus of the gall bladder through the right rectum abdominis muscle and the subcutaneous fat along the anterior abdominal wall of the overlying skin iin right paramedian location in epigastric quadrant. Imaging findings are likely a CHOLECYSTOCUTANEOUS FISTULA.

Plan of laparoscopic cholecystectomy with tract excision

decided. Complete tract excised with adhesiolysis done around gall bladder and later gall bladder removed and sent for histopathology. Histopathology report suggestive of acute on chronic cholecystitis without tuberculosis and malignancy.



Fig. CECT Abdomen Pelvis Showing Cholecystocutaneous Fistula.



Fig. Cholecystocutaneous Fistula



Fig A. Dissection Of Gall Bladder Wall From Anterior AbdominalWall



Fig B . Separating Gall Bladder From Anterior Abdominal Wall

3. 1987;41:980-2.
<https://www.ncbi.nlm.nih.gov/books/NBK448112/>
4. Malik AH, Nadeem M, Ockrim J. Complete laparoscopic management of cholecystocutaneous fistula. *Ulster Med J.* 2007;76(3):166-7.
5. Pol MM, Vyas S, Singh P, Rathore YS. Spontaneous cholecystocutaneous fistula: empirically treated for a missed diagnosis, managed by laparoscopy. *BMJ Case Rep.* 2019;12(2):e228138. <https://doi.org/10.1136/bcr-2018-228138>.
6. Pripotnev S, Petrakos A. Cholecystocutaneous fistula after percutaneous gallbladder drainage. *Case Rep Gastroenterol.* 2014;8(1):119-22. <https://doi.org/10.1159/000362360>.

DISCUSSION

CCF has been associated with neglected calculous cholecystitis as well as acalculous cholecystitis or carcinoma of the gall bladder.⁽³⁾

Spontaneous cholecystocutaneous fistula was first described by Thilesus in 1670. Before 1900, three large series were published in quick succession by Courvoisier in 1890 (169 of 499 cases of gallbladder perforation), Naunyn in 1896 (184 cases), and Bonnet in 1897 (122 cases).⁽¹⁾

Obstruction of the biliary outflow by a gallstone is thought to play a significant role in the pathophysiology of CCF. Biliary outflow obstruction increases intramural pressure, restricts gallbladder perfusion and precipitates necrosis and perforation of the gallbladder. Once perforated, it may drain into the peritoneal cavity, adjacent viscera or less commonly adhere to the abdominal wall to form an external fistula.⁽²⁾ However, in this case we didn't find any biliary outflow obstruction as per CECT scan report.

Conditions such as polyarteritis nodosa, typhoid, trauma, or drug treatments such as steroids, may be predisposing factors. Carcinoma of the gallbladder is known to present with an external fistula. Cutaneous gallbladder fistula is usually a late sequela of chronic biliary tract disease. It has also been reported after inadequate treatment with acute cholecystitis.⁽³⁾

The clinical presentation may be variable depending on the associated pathology, the age of the patient, and the presence or absence of an associated abdominal wall abscess. The typical clinical presentation is that of a patient's sinus persistently discharging bile.

The commonest site of the outer opening is the right upper quadrant of the abdominal wall. However, the opening of the fistula tract may be present in the left costal margin, right iliac fossa, right groin, or right gluteal region.⁽³⁾

Treatment should include broad-spectrum antibiotics, drainage of the abscess and elective cholecystectomy with excision of the fistula. Malik et al describe an approach that involves the laparoscopic removal of the gallbladder and dissection but not excision of the fistula from the abdominal wall⁽⁴⁾. This approach may provide an alternative option to open excision of the fistula for co-morbid elderly patients.

In addition, two more similar studies reported laparoscopic treatment for this condition.^(5,6)

Cholecystectomy is the definitive treatment for this condition. More conservative approaches such as percutaneous cholecystotomy have been used in high-risk patients, leading to spontaneous closure of the fistula.

REFERENCES

1. <https://emedicine.medscape.com/article/197206-overview>
2. Gibson TC, Howat JMT. Cholecystocutaneous fistula. *Br J Clin Pract*