

Cholecystocutaneous fistula: elective Vs emergency surgery

Abstract

Spontaneous cholecystocutaneous fistula (CF) is a highly rare complication of acute suppurative cholecystitis. These fistulas are usually secondary to the complicated gallstone diseases, or more rarely can be caused from malignancies such as cholangiocarcinoma and traumatic causes. In most of the patients, elective surgery is recommended after medical treatment due to the comorbid diseases of the patients. In this study, we report a patient who has been treated with an early surgical procedure. We state that emergency surgery can be an alternative to elective surgery in suitable patients.

Volume 7 Issue 3 - 2017

Emre Bozkurt, Sinan Ömeroğlu, Özgür Bostancı, Mehmet Mihmanlı

Department of General Surgery, University of Health Sciences, Turkey

Correspondence: Emre Bozkurt, Sisli Hamidiye Etfal Training and Research Hospital, Halaskargazi cad, Etfal sokak, 34371, Istanbul, Turkey, Tel 0(532) 461 9339, Email dr.emrebozkurt@gmail.com

Received: June 30, 2017 | **Published:** July 27, 2017

Introduction

Spontaneous cholecystocutaneous fistula (CF) is a highly rare complication of acute suppurative cholecystitis that has been known since 17th century. Although it is known for a long time, in the last fifty years, 20 cases have been reported in the literature.¹ The decrease incidence of this complication is probably due to the technologic developments in imaging techniques, efficient use of broad-spectrum antibiotics and impetuous and rational surgical management of the biliary tract diseases.² External fistulas of the biliary tract are extremely rare. These fistulas are usually secondary to the complicated gallstone diseases, or more rarely can be caused from malignancies such as cholangiocarcinoma and traumatic causes. In this study, we report a case of the cholecystocutaneous fistula which is due to a delayed surgical treatment of acute calculus cholecystitis.

Case report

A 61-year-old man, with a known medical history of insulin dependent diabetes mellitus, admitted to the emergency department with the complaints of nausea, vomiting and intermittent abdominal pain in the right upper quadrant for ten days. In the inspection of abdomen an 8 cm hyperemic mass and tenderness on the right hypochondrium was detected (Figure 1). There was no history of trauma and surgical procedure. The patient's overall health condition was not gravely affected, showing a temperature of 38,4 °C, heart rate of 110 bpm and arterial blood pressure of 125/75 mmHg. Physical examination of patient reveals bowel sounds were normoactive and right upper abdominal quadrant appeared tender at palpation with rebound tenderness. Laboratory results showed only an elevated white blood cell count $15 \times 10^6/l$ (normal range: $3.8-10,0 \times 10^6/l$). C-reactive protein was 354 mg/l (normal range: 0-5 mg/l). Liver function tests were within normal limits. The abdominal ultrasonography revealed a thickened gallbladder containing multiple calculi and a 70X69 mm of abdominal abscess that is originating from the gallbladder and showing extension to the subcutaneous tissue of the abdominal wall (Figure 2). Also, sonographic Murphy sign was found to be positive. Abdominal computed tomography confirmed the ultrasonographic findings and also showed communication between the gallbladder and the subcutaneous collection (Figure 3). The patient underwent

right subcostal laparotomy; the fistula track was found and excised. The gallbladder was freed from the adhesions to the abdominal wall, and the open cholecystectomy procedure was performed. After the subcutaneous abscess was drained, a Jackson-Pratt drain tube is inserted into the sub-hepatic region. The patient was discharged on the fifth postoperative day without any complications.



Figure 1 The view of the subcutaneous abscess originating from the gallbladder.



Figure 2 The transabdominal ultrasonography scan of the abdomen: Calculi in the gallbladder and abdominal abscess in the subcutaneous tissue.

Discussion

Cholecystocutaneous fistulas are mostly seen due to delayed acute or chronic cholecystitis. CF's are the rarest complication of acute cholecystitis and usually seen as a complication of acute suppurative cholecystitis.³ Chronic systemic diseases such as diabetes mellitus, congestive heart failure, polyarteritis nodosa, typhoid, bacterial dissemination, and trauma may be the predisposing factors. Also, senility, intensive steroid usage, malignancies and immune suppression associated diseases may predispose this condition.³

Perforation of the gallbladder often make fistulas to the adjacent visceral organs, peritoneal cavity or rarely to the abdominal wall.⁴ Transabdominal ultrasonography and abdominal CT scans are the best diagnostic tools for this complication. Advised therapy is early diagnose, broad spectrum antibiotherapy and elective cholecystectomy. Although a laparoscopic technique has been described by Kumar, an open approach is usually favored.⁵ In most of the patients, elective surgery is planned after medical treatment due to the comorbidities of the patients.



Figure 3 Abdominal Computed Tomography (CT) scan: Calculi in the gallbladder and fistulisation of the gallbladder through the subcutaneous tissue.

We state that emergent surgery can be an alternative to elective surgery in selected patients who are in good health condition. Shorter duration of hospitalization and rapid recovery process are the other advantages of the emergent surgical treatment.

Acknowledgments

None.

Conflicts of interests

None of the authors have a conflict of interests with any institution or organization.

Funding

None.

References

1. Cruz RJ, Nahas J, de Figueiredo LF. Spontaneous cholecystocutaneous fistula: a rare complication of gallbladder disease. *Sao Paulo Medical Journal*. 2006;124(4):234–236.
2. Vasanth A, Siddiqui A, O'Donnell K. Spontaneous cholecystocutaneous fistula. *South Med J*. 2004;97(2):183–185.
3. Yüceyar S, Ertürk S, Karabiçak I, et al. Spontaneous cholecystocutaneous fistula presenting with an abscess containing multiple gallstones: a case report. *Mt Sinai J Me*. 2005;72(6):402–404.
4. Birch BR, Cox SJ. Spontaneous biliary fistula uncomplicated by gallstones. *Postgrad Med J*. 1991;67(786):391–392.
5. Kumar SS. Laparoscopic management of cholecystocutaneous abscess. *Am Surg*. 1998;64(12):1192–1194.