

Introduction

- Cholecystocutaneous fistulae are aberrant communications of the gallbladder with the skin
- This arises as complication of neglected gallbladder disease
- In the era of modern medicine cholecystocutaneous fistulae remain uncommon

Case Details

An 83 year-old female with a history of anxiety, depression, and a self-inflicted abdominal gunshot wound presented to our institution 2 years ago with acute calculous cholecystitis and choledocholithiasis. She declined surgery and endoscopic management and was treated with percutaneous cholecystostomy drainage and antibiotics. Subsequent clinical course included multiple tube changes with complaints of recurrent drain dislodgement, leakage, and weight loss. Her cholecystostomy was changed to a percutaneous transhepatic biliary drain.

She ultimately presented to the gastroenterology clinic for internalization of her biliary drain. On examination, a large palpable mass was seen in the right upper quadrant with serosanguinous and bloody drainage, consistent with chronic gallbladder extrusion from the abdominal wall. ERCP with removal of percutaneous drain, sphincterotomy, stone extraction, and stent placement was performed.

CT abdomen showed a gallbladder mass extending into hepatic segment V as well as through the right abdominal musculature to the skin surface. Enlarged retroperitoneal adenopathy was concerning for metastatic involvement. The patient was deemed a poor surgical candidate, and she opted for hospice care.



Figure 1 A patient found to have cholecystocutaneous fistula with (A) gallbladder extruding from the abdominal wall, (B) occlusion cholangiogram post- removal of multiple common bile duct stones showing dilated CBD and cholelithiasis in an irregular, contracted gallbladder, and (C) CT scan showing a mass (star) with extrusion of gallbladder through the liver and skin (arrow).

Discussion Points

- Cholecystocutaneous fistulae may arise from unresolved gallbladder inflammation
- Causes include persistent biliary outflow obstruction, trauma, gallbladder perforation, or carcinomas
- Fistulae may also develop along the track of percutaneous drains
- Surgical management with fistula resection has been described with good success
- Cholecystocutaneous fistulae in the setting of gallbladder malignancy have poor outcomes due to the spread to adjacent structures
- Cholecystocutaneous fistulae are rarely seen in current day due to improved imaging diagnosis of gallstone and gallbladder disease, antibiotic therapies, early surgical intervention for gallbladder disease, and endoscopic alleviation of biliary outflow obstructions

References

1. Brimo Alcaman MZ, Mazkethy M, Zadeh M, et al. Cholecystocutaneous fistula incidence, Etiology, Clinical Manifestations, Diagnosis and treatment: A literature review. *Annals of Medicine and Surgery*. 2020. 58: p. 180-185.
2. Inage of the Month—Diagnosis. *Archives of Surgery*. 2011. 146(4): p. 488-489.
3. Wahed A, Mathew G, Turm F. Cholecystocutaneous Fistula. [Updated 2021 Jul 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan.
4. Rinavillo NMA, Danna R, Leanza V, et al. Case Report: Spontaneous cholecystocutaneous fistula, a rare cholelithiasis complication. *F2000Res*. 2017;6:1768. Published 2017 Sep 27.
5. Faria M, Bhattacharya S. Spontaneous cholecystocutaneous fistula. *HBP (Oxford)*. 2001;3(4):279-280.
6. Jayasinghe G, Adam J, Abdul-Aal Y. Unusual presentation of gallbladder perforation. *Int J Surg Case Rep*. 2016;18:40-44.
7. Malik AH, Nadeem M, Ockrim J. Complete laparoscopic management of cholecystocutaneous fistula. *Uster Med J*. 2007;7(3):166-167.
8. Maynard W, McClone ER, Deguara J. Unusual etiology of abdominal wall abscess: cholecystocutaneous fistula presenting 20 years after open subtotal cholecystectomy. *BMJ Case Rep*. 2016;2016:bcr2015213326. Published 2016 Mar 31.