

Choledochogastric Fistula after Recurrent Acute Cholangitis Post-Cholecystectomy

Berk M Altinoz ¹, Ajda Altinoz ^{2*}

¹Junior Instructor, RAK Medical and Health Sciences University, Ras Al Khaimah, UAE

²General Surgery Department, Tawam Hospital, Al Ain, UAE

*Corresponding author: Ajda Altinoz, General Surgery Department, Tawam Hospital, Al Ain, UAE. E-mail: ajtinoz@seha.ae

Received Date **January 25, 2020**; Accepted Date: **February 03, 2020**; published Date: **February 14, 2020**.

Citation: Berk M Altinoz, Ajda A. (2020) Choledochogastric Fistula after Recurrent Acute Cholangitis Post-Cholecystectomy. Journal of Surgical Case Reports and Images, 3(2): Doi: [10.31579/2690-1897/019](https://doi.org/10.31579/2690-1897/019)

Copyright: © 2020. Ajda Altinoz. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

this is a case of a 46 years old male presented with acute cholangitis 2 years after laparoscopic cholecystectomy for cholelithiasis. He underwent biliary drainage and common bile duct (CBD) exploration for multiple stones at 2017. A year later, he presented with a recurrent acute cholangitis associated with choledocholithiasis and dilatation of left hepatic bile duct. Cholangiogram revealed that there is contract flowing to the stomach from the CBD, showing a choledochogastric fistula. Exploratory laparotomy was performed with CBD exploration with extraction of multiple stones, choledochoscopy and hepatojejunostomy. Insertion of PTC drain over a guidewire passed through a fistulous opening into the stomach. We decided on conservative management for fistula tract to heal.

Introduction

Internal biliary fistulas are rare pathological communications between extrahepatic biliary ducts and abdominal organs. Internal biliary fistulas are usually the result of longstanding, untreated choledocholithiasis, cholelithiasis, peptic ulcers or rarely neoplasia [1]. The preoperative diagnosis is difficult because their symptoms are usually nonspecific. Pneumobilia on plain film of the abdomen is a clue. Reflux of contrast media into the biliary tree during a barium study or an endoscopic retrograde cholangiopancreatography is most suggestive finding [2]. The first description of a spontaneous gastrobiliary fistula was published in 1965 and only a few cases have since been described. [3].

Case Presentation

46 years old male, known case of Epilepsy on medication, presented to the hospital with upper abdominal pain and fever since 2 days that was progressing. He has loss of appetite and nausea with vomiting. Significant past surgical history underwent laparoscopic cholecystectomy for cholelithiasis in India on 2013.

On physical examination patient looks toxic. Vital signs was tachycardia of 110 bpm, respiratory rate of 22 bpm, fever of 38.9 C, and blood pressure remained normal. Abdomen was scaphoid, Kocher incision scar noted on right subcostal region. On palpation, there was tenderness on right upper quadrant. Laboratory work up showed leukocytosis of 25 and CRP of 290. Ultrasound of hepatobiliary system showed a dilated CBD of 9.3mm. Patient is diagnosed as acute cholangitis. A magnetic retrograde cholangiopancreatography (MRCP) (fig.1)

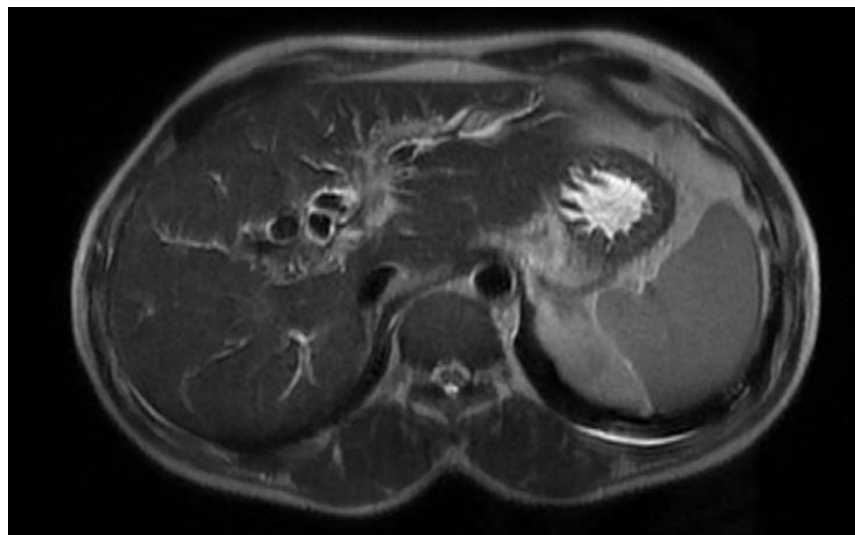


Fig. 1 MRCP showing dilated intrahepatic bile ducts with stones

Revealed stones in the CBD and hepatic ducts. A percutaneous transhepatic cholangiogram (PTC) catheter for biliary drainage and an external biliary drain was performed. The preoperative cholangiogram (Fig.2)

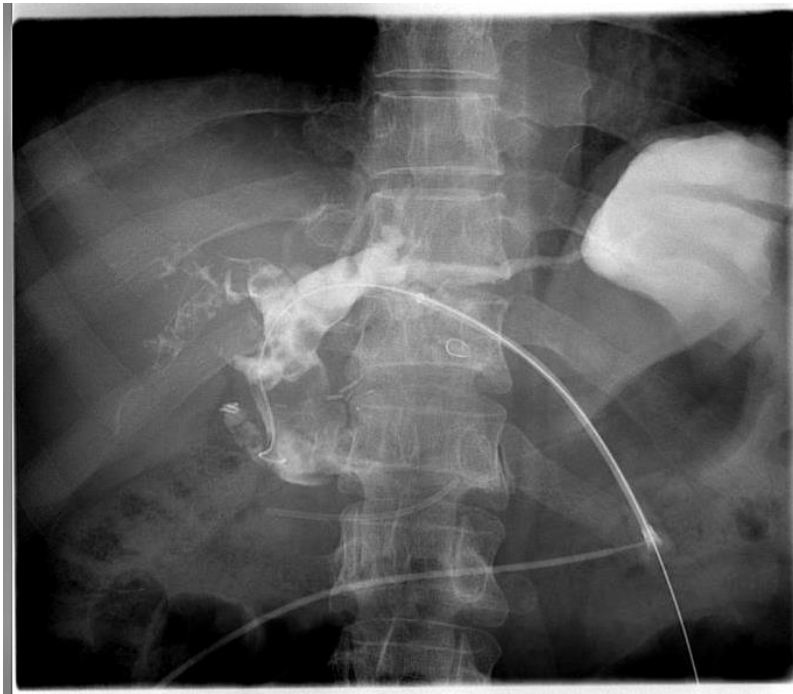


Fig.2 Preoperative Cholangiogram showing a choledochogastric fistula with contrast flow into the stomach.

Showed multiple stones within the intra hepatic biliary ducts and the CBD causing stricture within the mid portion of CBD. Small streak of contrast seen along the lateral wall of CBD reaching the stomach. Fistulous tract from CBD to the stomach was appreciated. Upper GI endoscopy revealed bile coming out the stomach near the pylorus, no signs of gastritis or peptic ulcer disease.

During 2015, he had similar symptoms and presented as a case of acute cholangitis. Patient got investigated and CT abdomen revealed multiple stones contained within a dilated common bile duct (CBD) measuring 19mm, a dilated left hepatic duct and central biliary radicals which were also mildly dilated. Emergent endoscopic retrograde cholangiopancreatography (ERCP) attempted multiple times with difficulties due to abnormal ampullary position and anatomy. CBD cannulated and insertion of pancreatic stent was successful. Interventional radiology performed bilateral percutaneous biliary drainage, thereafter. Patient underwent open common bile duct exploration, with right

subcoastal incision. CBD identified and a longitudinal choledochotomy performed with subsequent removal of multiple stones using crushing forceps, dormia basket, saline irrigation, and choledochoscopy for visualization. Postoperatively patient developed a surgical site infection, which was managed with wound care and antibiotics. Patient discharged after a week and percutaneous biliary drains were removed under image-guided procedure.

For this admission, patient underwent exploratory laparotomy, extensive adhesiolysis, and CBD exploration with extraction of multiple stones and choledochoscopy, side-to-side hepatojejunostomy with roux-en-y anastomosis. Distal end of CBD, the choledochoscope showed patent opening into the duodenum as well we could enter to the stomach thorough the fistula opening, which was between CBD and stomach. Upon replacement of the PTC drain over the guidewire, the tip found to pass via the fistulous opening into the stomach. Postoperative period was uneventful and patient underwent another cholangiogram (Fig.3)



Fig.3 Postoperative Cholangiogram, showing flow through fistula into the stomach

Which showed drain in place within the choledochogastric fistula tract, sludge still present within the CBD and hepatojejunostomy tract identified contrast passing through bowel. No intrahepatic dilatation. On October 2018 patients was clinically doing well and drains removed under image visualization. We decided on conservative management to let the fistulous tract heal over time. On follow up visit after 1 year patient is doing well clinically.

Discussion

Spontaneous internal biliary fistulas are rare findings. In our case, the choledochogastric fistula originated from longstanding choledocholithiasis with recurrent episode of acute cholangitis. It is assumed that 75% to 90% of all extrahepatic bile duct fistulas are spontaneous and develop as a result of cholecystolithiasis or choledocholithiasis. These fistulas develop as a complication of peptic ulcer in approximately 6% of cases, from neoplasia of the involved organs in about 4% of cases, and from iatrogenic causes in 9% to 23% of cases [4]. Most studies report that the fistulas are detected incidentally during ERCP or other radiologic examinations performed for investigation of hepatobiliary-pancreatic diseases. For our patient an incidental finding during cholangiogram through PTC catheter revealed this finding initially. The patients with gastrobiliary fistulas usually complain of postprandial right hypogastric pain, epigastric pain and burning, elevated body temperature, nausea and postprandial vomiting. The presence of pneumobilia revealed on imaging is crucial for the final diagnosis in patients with a negative history of instrumental treatment (endoscopy or surgery of the biliary tree) [5]. Fistulas usually appear in the first week after surgery, with its highest peak around the fifth to the seventh days, which requires a strict postoperative evaluation, especially in patients with increased risk of developing such complications.[6] Uncomplicated gastrobiliary fistulas can be left untreated. Usually, these

fistulas may heal spontaneously. Complicated gastrobiliary fistulas should be treated endoscopically or surgically [1,4].

In conclusion, internal biliary fistulas are rare pathological communications between extrahepatic biliary ducts and abdominal organs. They usually result from longstanding, untreated choledocholithiasis, cholecystolithiasis, peptic ulcers or rarely neoplasia. In this case the patient had recurrent acute cholangitis with intra and extrahepatic biliary stones, we decided on conservative management.

References

1. Duzgun AP, Ozmen MM, Ozer MV, and Coskun F. (2007). Internal biliary fistula due to cholelithiasis: A single-centre experience. *World J Gastroenterol*, 13(34): 4606–4609.
2. Kim BU, Jeon WJ, Seo JC, Chae HB, Park SM, Youn SJ, Yun HY. (2005). A case of choledochogastric fistula accompanying epigastric pain. *Korean J Med*, 69(3):318-322.
3. Williams GD, Hara M. (1966). Spontaneous choledochogastric fistula. Report of the first successful surgical repair. *Am J Surg*, 112(1):102–105.
4. Chwiesko A, Jurkowska G, Kedra B, Okulczyk B, Kamocki Z, and Dabrowski A. (2014). A Rare Spontaneous Gastrobiliary Fistula. *Euroasian J Hepatogastroenterol*, 4(2): 101–103.
5. H'Ng MW, Yim HB. (2003). Spontaneous choledochoduodenal fistula secondary to long-standing ulcer disease. *Singapore Med J*, 44(4):205–207.
6. Pepe G, Magalini S, Callari C, Persiani R, Lodoli C, Gui D. (2014). Vacuum assisted closure (VAC) therapy™ as a swiss knife multi-tool for enteric fistula closure: tips and tricks: a pilot study. *Eur Rev Med Pharmacol Sci*, 18(17):2527-32.