

An Uncommon Cause of Acute Encephalopathy in Liver Cirrhosis

Monique Dieuvil M.D., John Malaty, M.D.

Introduction

- Bilomas, extrabiliary collections of bile, are reported to occur as a result of biliary surgery, endoscopic retrograde cholangiopancreatography (ERCP), laparoscopic cholecystectomy, and trauma.^{1,2}
- We describe here an uncommon cause of acute encephalopathy, an infected biloma status post transjugular intrahepatic portosystemic shunt (TIPS).

Case Presentation

- A 49 year old woman with a past medical history of alcoholic cirrhosis status post TIPS in 2012 with ongoing alcohol abuse, initially presented to the hospital with hematuria. She was adequately treated for hematuria with bladder irrigation.
- Patient was also noted to have jaundice, right upper quadrant abdominal pain, and elevated total bilirubin of 8.1 mg/dL with direct bilirubin of 3.0 mg/dL. CT IVP was normal except for a "large intrahepatic cystic mass adjacent to the TIPS, causing intrahepatic biliary duct dilation".
- Patient developed worsening confusion and agitation thought to be secondary to alcohol withdrawal and was placed on an Ativan infusion. Patient remained severely encephalopathic despite adequate treatment for alcohol withdrawal and hepatic encephalopathy (on lactulose and rifaximin with normal ammonia level of 35 mcmmol/L).
- Evaluation for infectious causes only demonstrated Enterococcus UTI on urine culture, but encephalopathy persisted despite appropriate treatment with amoxicillin (according to culture sensitivities).
- Ultrasound to evaluate TIPS flow raised concern for partial biliary obstruction; MRI confirmed presence of an obstructing biloma.

Case Presentation, cont.

- ERCP was unsuccessful to decompress the biloma. The biloma was subsequently drained by placement of CT-guided percutaneous drains.
- Biloma fluid culture/analysis demonstrated infection (E.coli and Klebsiella ESBL) with WBC of 34 cumm. When patient was treated for biloma infection and acute cholangitis with cefepime, her encephalopathy completely resolved. With adequate drainage, her hyperbilirubinemia also improved back to her baseline level after her TIPS (total bilirubin of 3.7 mg/dL and direct bilirubin of 3.3 mg/dL).

Figure

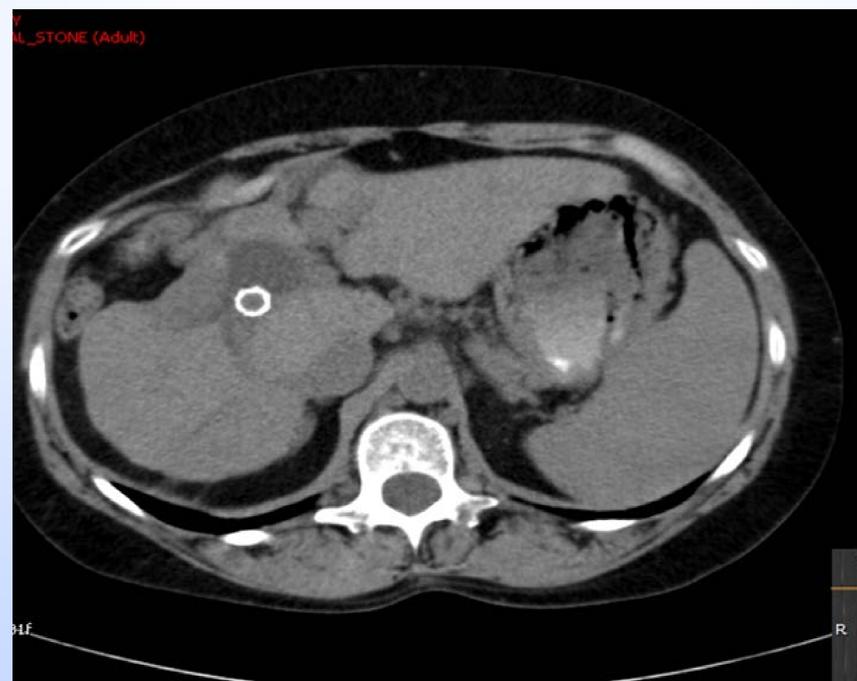


Figure 1: CT abdomen/pelvis after TIPS procedure with biloma present

Discussion

- A biloma is a rare abnormal accumulation of intrahepatic or extrahepatic bile caused by traumatic or spontaneous rupture of the biliary tree.
- It is most commonly caused by surgery, percutaneous transhepatic cholangiography (PTC), percutaneous transhepatic biliary drainage (PTBD), and abdominal trauma
- The clinical symptoms of a biloma are nonspecific, and they can range from no symptoms to abdominal pain and distention, jaundice and fever; leukocytosis can also be present
- Term coined by Dr. Gould in 1979
- Given rarity, only case reports of bilomas are present in the literature
- Even rarer are cases of infected bilomas causing acute encephalopathy (no cases in PubMed)

Conclusion

- A common cause of encephalopathy in patients with liver cirrhosis is hepatic encephalopathy from hyperammonaemia.
- However, this patient had encephalopathy secondary to an infected biloma, causing ascending cholangitis. Infected bilomas are very rare. Her encephalopathy entirely resolved with treatment of her infection.
- This cause of encephalopathy, although rare, is an important etiology that one must consider.

References

- Gould L, Patel A. Ultrasound detection of extrahepatic encapsulated bile: "biloma". AJR Am J Roentgenol. 1979;132:1014–1015.[PubMed]
- A Case of Infected Biloma due to Spontaneous Intrahepatic Biliary Rupture. Joong Hyun Lee, M.D. and Jeong III Suh, M.D. Korean J Intern Med. 2007 Sep; 22(3): 220–224.
- Up to date