Cholelithiasis Causing Asymptomatic Cholecystoenteric Fistula

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Introduction

- Biliary fistulas are a rare complication of gallstones
- Fistula formation can occur in a number of sites adjacent to the gallbladder.
- Cholecystocolonic fistula (CCF) is a relatively rare site of fistula with around 10-20% of fistulas occurring there.[1]
- This case presented a rare instance of asymptomatic CCF formation identified via sudden onset transaminitis and identification of bacteremia.

Case Presentation

- Patient is a 74 year old man who initially presented to the hospital with complaints related to inflammatory demyelinating polyneuropathy and COVID-19 pneumonia.
- Patient did require ICU admission with subsequent intubation and PEG-tube placement for continued enteral feeding.
- After discharge to an inpatient rehab facility patient developed a transaminitis with ALT of 252, AST of 140, and ALP of 401. There was no associated hyperbilirubinemia.
- Further investigation revealed E. Coli bacteremia on blood cultures.
- MRCP performed showed a lack of plane between the gallbladder and hepatic flexure of the colon suggesting a CCF (figure 1). Further review also revealed pneumobilia.
- ERCP with sphincterotomy showed extravasation of contrast from the gallbladder into the hepatic flexure of the colon. (figure 2)
- Patient underwent cholecystectomy and fistula repair by general surgery.
- Remainder of patient's course was unremarkable with gradual improvement of his liver enzyme levels while completing course of antibiotics for bacteremia.

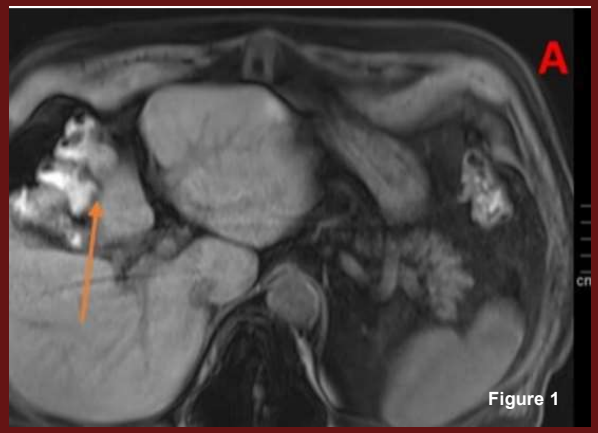

Figure 1

Figure 2

Discussion

- Gallstone complications include common bile duct obstruction, but also include the rare occurrences of acute cholangitis, malignancy, and fistula formation.
- Cholecystoenteric fistula (CEF) is a rare complication of gallstones that can occur in the stomach, duodenum, or colon and present with variable symptoms.
- Most common site of cholecystoenteric fistula is cholecystoduodenal followed by cholecystocolonic and then cholecystogastric being the most rare.[1]
- Common symptomatology of CEF includes: diarrhea, abdominal pain, jaundice, fever, nausea, vomiting, steatorrhea, and weight loss [2]
- In patients at high risk for stone formation, it is important to maintain some clinical suspicion for CCF in patient without abdominal symptoms, but have lab findings suggestive of gallbladder disease.
- While not present in this case, a triad of pneumobilia, diarrhea, and vitamin K malabsorption is considered pathogmnemonic for CCF [3]
- We hypothesize that stone formation resulting in the development of the fistula may be secondary to the underlying history of IDP and subsequent immobility. Additional subclinical cholecystitis while intubated may have created the inflammatory adhesions known to be a common risk factor for fistula creation.

Conclusion

- Identification of bacteremia source is an essential component of patient care.
- CCF should be considered in patients with unexplained transaminitis and bacteremeia with risk factors for gallstone formation
- Timely diagnosis should be made to proceed with immediate treatment to prevent fatal complications.
- Management of CCF involves surgery with cholecystectomy and colon fistula repair.

References

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