

Case Review: Gallstone ileus over 50 years after cholecystectomy and choledochoduodenostomy

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Introduction

- The prevalence of gallstone ileus has been estimated to be 0.3-0.5% ¹
- Accounting for 1-4% of bowel obstruction cases ¹
- The classic clinical presentation: Rigler's Triad
 - Pneumobilia, ectopic gallstone, small bowel obstruction ²
- Despite being well described in surgical texts, it is still commonly misdiagnosed
- Mortality complication ranges from 12-27% ¹
- Historically diagnosed in patients who still have an intact gallbladder
- Up until 1974, there were only three published cases in the setting of an absent gallbladder ^{3,4}

Figures




Fig. 1: CT A/P – Transition point, possible mass or ileitis in terminal ileum

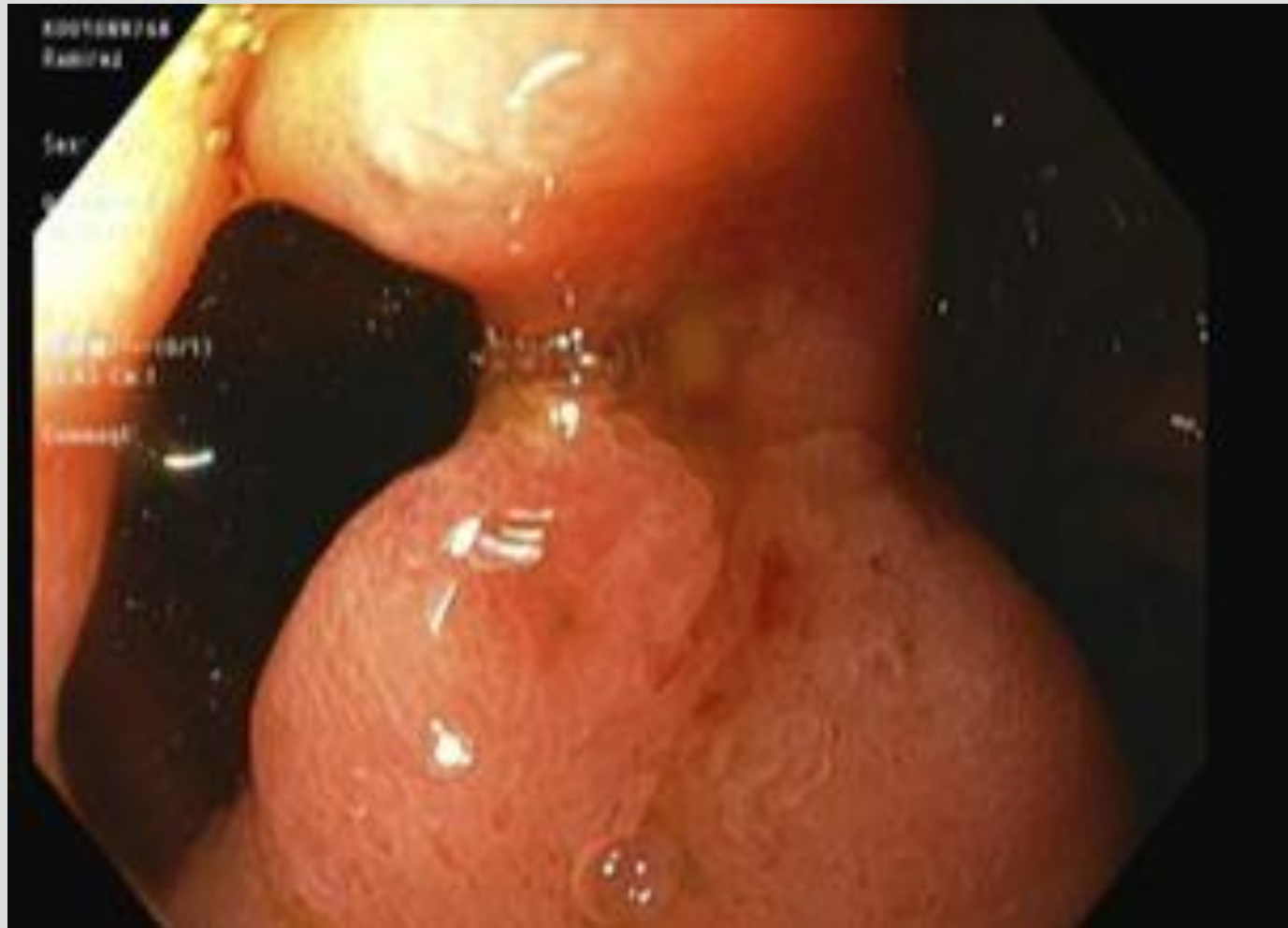


Fig. 2: EDG showing choledochoduodenostomy tract




Fig. 3: Colonoscopy – Gallstone ileus at the terminal ileum

Objective

- To discuss and educate on
 - Gallstone ileus presentation and management
 - Sump syndrome

Patient Presentation

- 82-year-old Hispanic female with history of dementia, HTN, DM, CKD, CVA, CAD s/p PCI, CHF with surgical hx of open cholecystectomy in the 1970.
- **Symptoms:** abdominal pain, distention, nausea, & vomiting for 2 days
- **Exam:** Diffuse abdominal tenderness and distention, no peritoneal signs
- **CT A/P without PO or IV contrast:** small bowel obstruction with a mass or ileitis in the terminal ileum.
- **EGD:** showed evidence of previous cholecystectomy and choledochoduodenostomy (Fig. 2) associated debris consistent with sump syndrome.
- **Colonoscopy:** showed evidence of gallstone ileus in the terminal ileum. (Fig. 3)
- **Surgery:**
 - Rocky-Davis Incision
 - As the cecum and distal small bowel were manipulated, there was immediate passage with compression of the stone into the cecum.
 - The entire length of the small bowel was then palpated and no other palpable stones were identified.
 - Intraoperative colonoscopy was for stone retrieval.
 - Gallstone fragments from the colon were then removed (Fig.4)

Patient Presentation

- **Post-op:** The patient progressed well and return of bowel function occurred on POD4.
- Patient was discharged on POD7.
- Outpatient follow up 3 weeks after discharge:
 - Patient has been doing well, is asymptomatic, and had no recurrent symptoms of small bowel obstruction.

Discussion

- Traditionally surgical management entails enterolithotomy, cholecystectomy, and fistula closure ⁵
- Considerations: Open vs. laparoscopic vs. robot assisted
 - Due to the patient's significant right heart failure, we believed she would not tolerate insufflation
- In retrospect, the patient sustained a serosal tear to her large bowel due to uninhibited bowel insufflation during intraoperative colonoscopy.
 - The large bowel had no resistance against dilation due to the open incision into the abdomen.
 - Serosal tear was repaired primarily.
- Sump Syndrome
 - Rare long-term complication in choledochoduodenostomy⁶
- Gallstone was radiolucent on CT A/P, consistent with brown pigmented gallstones that form in the biliary tree. ^{7,8}

Conclusion

- This case is unique because of the patient's presentation and the multidisciplinary approach required to understand the patient's anatomy, obtain the primary diagnosis, and execute subsequent treatment.
- Sump Syndrome is now rarely seen because ERCP more favored than choledochoduodenostomy for biliary drainage.

References

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