

An Unusual Presentation of Gallstone Ileus

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Introduction

Gallstone ileus is a rare and difficult to identify diagnosis that is associated with high rates of morbidity and mortality. It is caused by an obstruction of the small intestine, most commonly in the ileum, by a gallstone that has passed through a biliary-enteric fistula. An unusual complication of cholelithiasis, it accounts for less than 0.5 percent of patients who present with small bowel obstruction (1,2). This case discussion evaluates the unusual presentation, diagnosis, and management of a gallstone ileus

Case Report

A 77-year-old female presented to the emergency department via ambulance with worsening abdominal pain for two days. Her past medical history is significant for diabetes, prior cerebrovascular stroke, meningioma status post resection with significant residual weakness and verbal delay. The patient had experienced decreased appetite, progressively worsening abdominal pain, and diarrhea for two days.

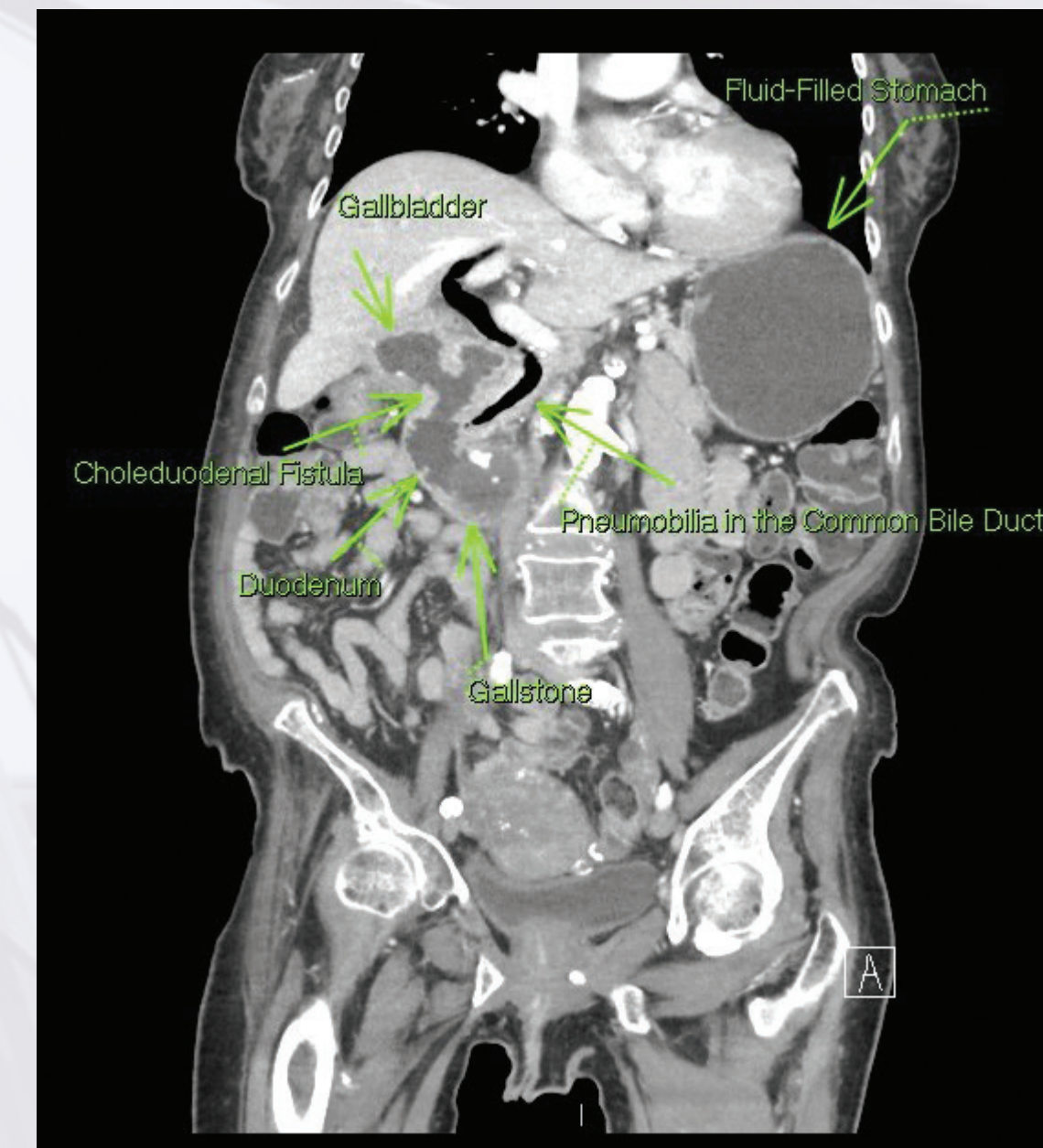
There had been no episodes of emesis. Physical exam was significant only for moderate abdominal pain in the left lower quadrant. Given the patient's age and comorbidities, a full laboratory examination and CT of the abdomen and pelvis with IV contrast were performed. Labs were significant for a mild leukocytosis. CT demonstrated a 5cm gallstone within the proximal duodenum, with associated fistulous connection to the gallbladder, pneumobilia and dilatation of the stomach consistent with gallstone ileus. The patient was referred to general surgery who resuscitated the patient and performed a laparotomy and enterolithotomy, but the choleduodenal fistula was left intact.

Figure 1



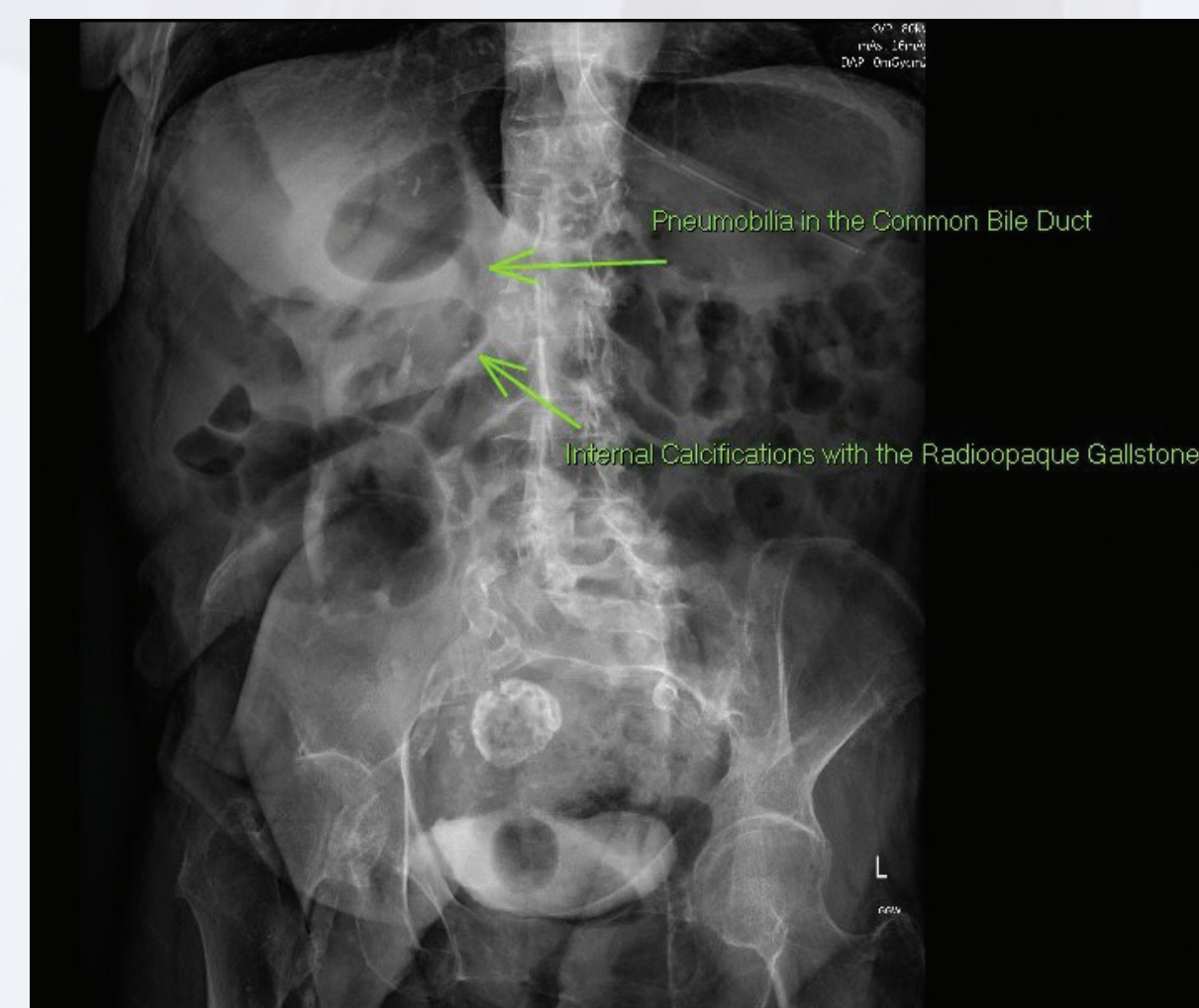
Computed tomography coronal plane of the abdomen identifying the etiology of a mechanical bowel obstruction, a 5 cm gallstone located in the second portion of the duodenum.

Figure 2



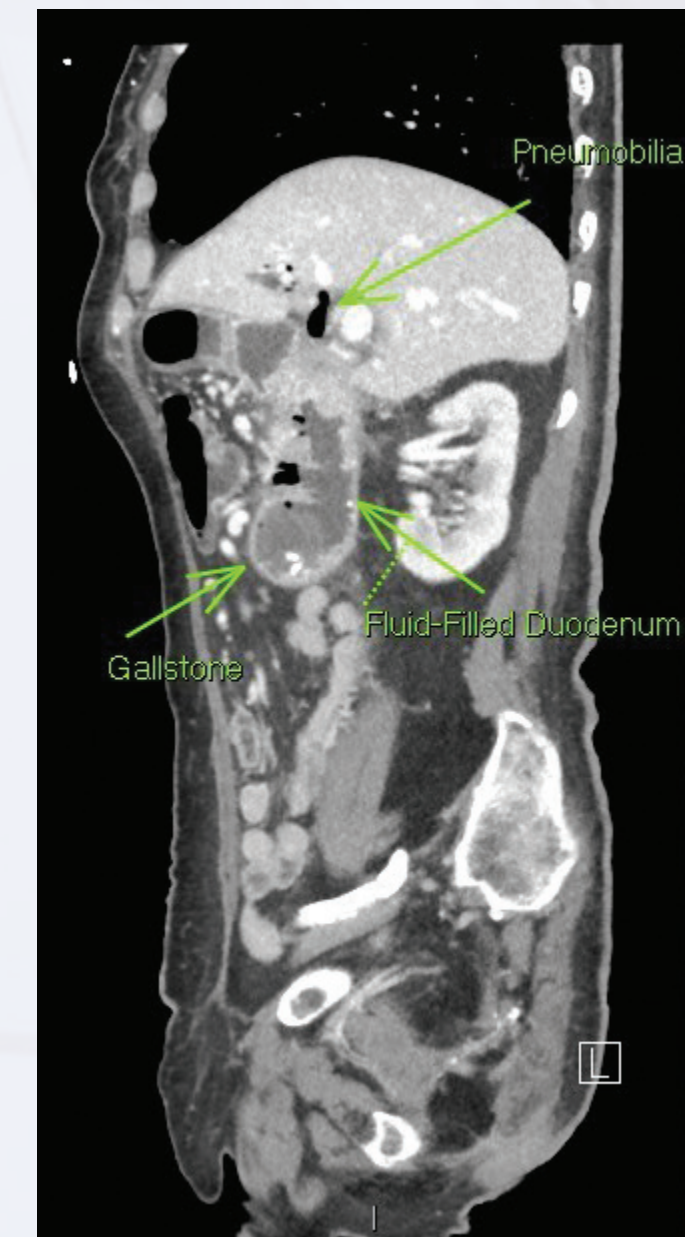
Computed tomography coronal plane depicting the diagnostic findings of a gallstone ileus including gastric distention, pneumobilia in the common bile duct, a choleduodenal fistula, and a 5 cm gallstone residing in the second portion of the duodenum.

Figure 3



KUB plain film imaging depicting pneumobilia identified in the common bile duct due to a gallstone identified as the radio opaque structure with calcifications.

Figure 4



Computed tomography sagittal plane depicting an obstructive gallstone in a fluid filled duodenum and the resultant pneumobilia due to the communicating choleduodenal fistula.

Discussion

This is a rare presentation of a gallstone ileus, that was luckily identified on the first presentation. This patient was not exhibiting the typical signs of a small bowel obstruction (i.e. vomiting, diffuse abdominal pain), yet the epidemiologic factors pertaining to the patient created a low threshold for obtaining a CT, which incidentally secured the diagnosis. It is noted that many affected patients with gallstone ileus tend to be elderly, female and have chronic medical illnesses, including coronary disease, pulmonary disease, and diabetes mellitus(1,2). The age, gender and diabetic status all put our patient at increased risk. What makes this presentation even more rare, is that the offending gallstone was situated in the duodenum rather than the ileum. Management depends on the surgical risk of the patient, and includes laparotomy vs laparoscopy with enterolithotomy and subsequent cholecystectomy in low risk patients or expectant management in high risk patients(2,3). CT scan images are included in Figures 1-4 that demonstrate the anatomy and the pathology (4).

Conclusion

In conclusion, this patient had a unique presentation of a mechanical small bowel obstruction due to a gallstone obstructing the duodenum. It is important to remember that while most gallstone ileus present with signs of a subacute small bowel obstruction including colicky abdominal pain and vomiting, every patient is unique. One must keep a wide differential and low threshold for obtaining a CT abdomen for patients with increased age, multiple comorbidities and vague abdominal complaints.

References

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DISCLOSURE: The views expressed in this work are those of the author and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the United States Government.

