

An Incisional Hernia Containing a Gangrenous Gallbladder: A Case Report

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Background

- Acute cholecystitis is a common medical diagnosis, with an estimated 120,000 Americans receiving treatment annually (1).
- Ventral incisional hernias are a relatively common complication of abdominal surgery with an estimated incidence of 2-20% (2).
- While these two diagnosis are prevalent, only very rarely have reports of gallbladder herniation been known to occur (3).
- The presence of a gallbladder containing hernia is important because it impacts not only a surgeon's approach to the procedure but also adds additional considerations necessary to minimize the risk of future visceral hernias.

Case Report

- A 76-year-old male with a past medical history of COPD, hypertension, hyperlipidemia and esophageal cancer status post gastric conduit 25 years prior, presented to the Emergency Department with a chief complaint of sudden onset epigastric pain for 24 hours.
- He was febrile, with a leukocytosis, and had laboratory evidence of gallstone pancreatitis.
- A CT abdomen/pelvis demonstrated acute cholecystitis and acute pancreatitis. Anatomic abnormalities were also noted, including the gallbladder herniated through a ventral defect to the point of being flush with the skin of the anterior abdomen (Figures 1 and 2).
- Hospital day two, the patient's pancreatitis improved, and he was taken to the operating room for an open cholecystectomy.
- The hernia sac was encountered immediately deep to subcutaneous tissue. It was dissected and an extensively necrotic gallbladder with microperforations into the hepatic plate was found. A top-down open cholecystectomy was completed.
- The peritoneum and skin were reapproximated in a multi-layer closure.
- The patient tolerated the procedure well and was able to discharge home on hospital day five, post-operative day three.
- Final pathology showed acute calculous gangrenous cholecystitis. The patient was seen for follow up one month post operatively and was doing well with no complaints or recurrence of symptoms.

Figures



Figure 1.



Figure 2.

Discussion

- A literature review of gallbladder hernias by To, et al., found that of the ten cases reported, three were within incisional hernias, with the remaining cases involving epigastric, parastomal and spontaneous ventral hernias (4).
- 9 of the 10 case reports reviewed addressed gallbladder herniation with laparotomy approach (5). Our open approach was critical to allow for adequate exposure with reduced risk of intraperitoneal contamination in the setting of tissue necrosis.
- Herniation likely occurred due to a combination of our patient's anatomic disruption during mobilization during prior gastric conduit as well as severe fascial retraction and resultant ventral hernia.
- Permanent mesh placement is associated with the lowest rates of hernia recurrence; however, the risk of mesh infection leading to increased postoperative morbidity and subsequent operations when placed in a contaminated field is significant (6).
- Complications including hernia recurrence and the need for mesh explantation are both increased when permanent mesh is used for hernia repair during the same operation as a concomitant procedure at the same site (7).
- With the goal of minimizing future risk of organ herniation, physical deformity and potential for impending hernia accident, we recommended our patient follow up with general surgery for an elective repair of his chronic incisional ventral hernia.

Conclusion

- Gallbladder herniation is rare but should be considered in cases of complicated acute cholecystitis.
- Ventral and incisional hernias should be repaired on a case-by-case basis, balancing the risks of operating in an infected field with the risks of hernia recurrence in the absence of repair.

References

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