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Letter to the Editor

Simultaneous laparoscopic management of acute appendicitis and an incidental gallbladder cystic lesion: A case report

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Introduction

Abdominal pain is one of the most common complaints among patients presenting to the emergency department and encompasses a wide range of potential etiologies. Acute appendicitis is a leading cause of right lower quadrant pain and is considered a common surgical emergency requiring prompt intervention.[1] Despite its prevalence, coexisting pathologies identified during the diagnostic workup of acute appendicitis are rare and may complicate both diagnosis and treatment.[2]

Gallbladder cystic lesions, on the other hand, are typically incidental findings discovered during imaging for unrelated conditions. These lesions are often asymptomatic, with a wide spectrum of potential etiologies ranging from benign conditions, such as biliary cysts, to malignant transformations like cystadenocarcinoma.[3,4] Although these lesions are generally considered indolent, their management may pose a challenge when encountered in emergent surgical settings.

The simultaneous occurrence of acute appendicitis and gallbladder cystic lesions is exceedingly rare, and the decision to address both pathologies in a single surgical session requires careful consideration of patient factors, including clinical stability and access to follow-up care.[5] In emergent cases, such as when patients may not return for further evaluation or treatment, a combined surgical approach could be warranted to prevent potential complications.

Here, we present a case of a 17-year-old female who presented to the emergency department with right lower quadrant pain. She was diagnosed with acute appendicitis and, incidentally, a 15-mm cystic lesion in the gallbladder Hartmann's pouch. The management of this rare clinical scenario, including the decision for simultaneous laparoscopic appendectomy and cholecystectomy, is discussed in the context of available literature.

Case Report

A 17-year-old female presented to the emergency department with a complaint of right lower quadrant abdominal pain. Laboratory investigations revealed leukocytosis with a white blood cell count of 15,000/μL, while other hematologic parameters were within normal limits. Liver function tests, including ALT, AST, ALP, GGT, total bilirubin, and direct bilirubin, were also within normal ranges.

Abdominal ultrasound and CT demonstrated findings consistent with acute appendicitis. Additionally, a 15-mm cystic lesion was identified in the gallbladder Hartmann's pouch (Fig. 1). A subsequent computed tomography scan

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confirmed the presence of acute appendicitis and a 15-mm cystic lesion in the gallbladder without evidence of additional pathologies (Figs. 2, 3, 4).

The patient was taken to the operating room for laparoscopic appendectomy. (Fig. 5) Given the patient's reluctance for future follow-up and her limited access to healthcare services, informed consent was obtained for concurrent laparoscopic cholecystectomy during the same session. The surgical procedures were uneventful, and the patient was discharged with appropriate postoperative care and follow-up recommendations.

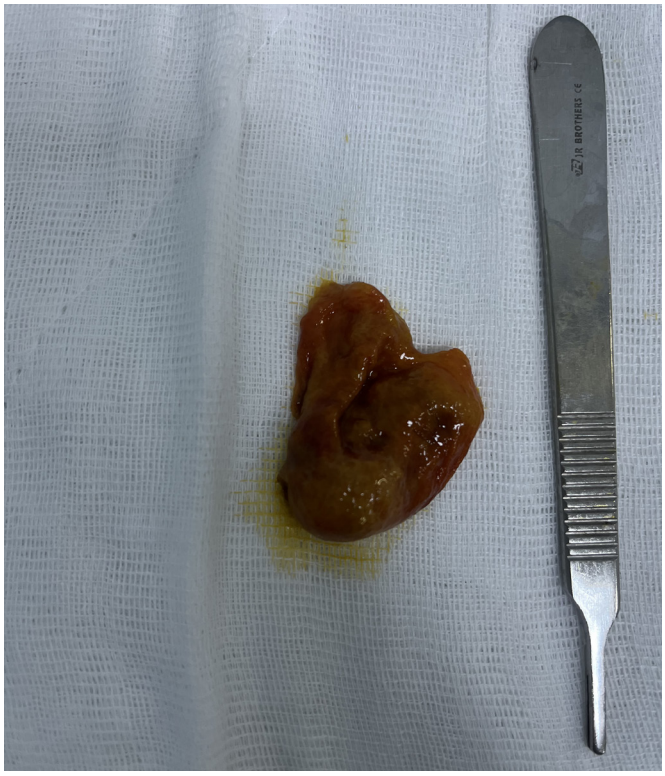

Figure 1. Gallbladder Specimen After Surgery.

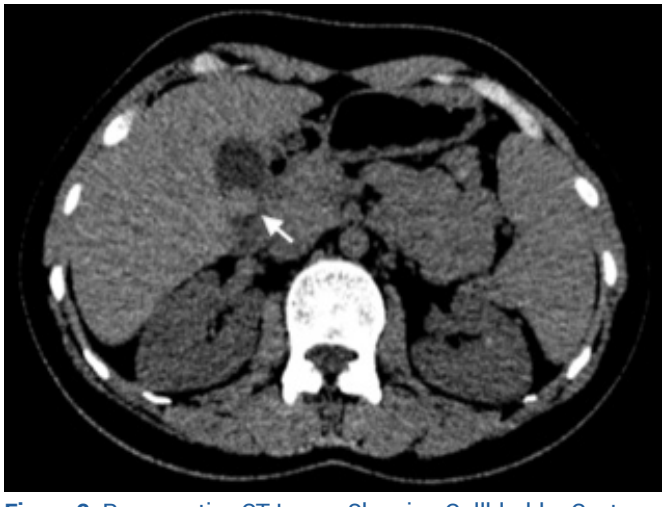

Figure 2. Preoperative CT Image Showing Gallbladder Cyst.

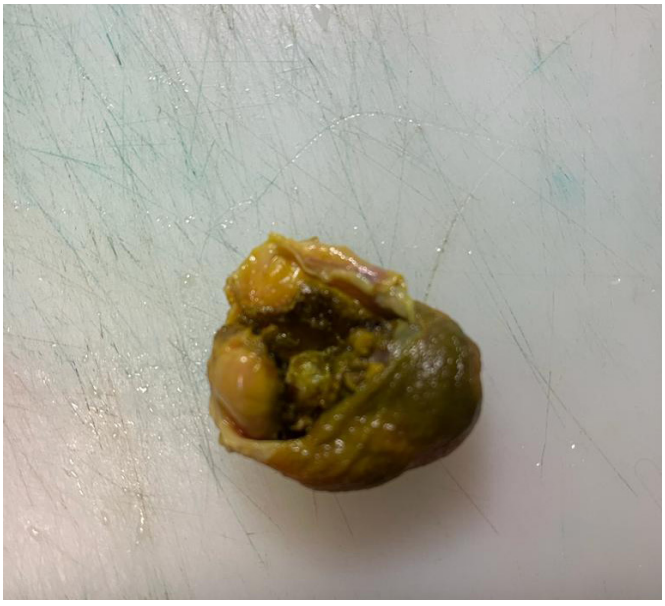

Figure 3. Macroscopic Pathology of the Resected Gallbladder.

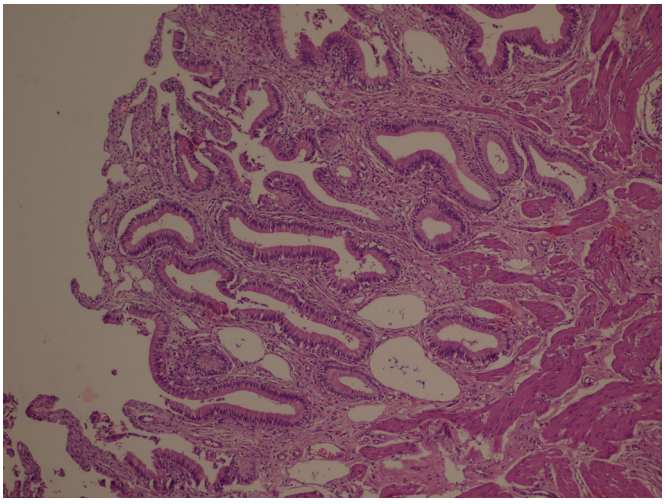

Figure 4. Histopathological Examination of the Gallbladder Cyst.

Discussion

The simultaneous occurrence of acute appendicitis and a cystic lesion in the gallbladder, as seen in this case, is an uncommon clinical scenario that poses unique diagnostic and therapeutic challenges. Acute appendicitis is one of the most common surgical emergencies, while gallbladder cystic lesions are generally incidental findings during imaging for unrelated conditions.[1,2] The rarity of these conditions presenting together necessitates a tailored approach to diagnosis and management.

Gallbladder cystic lesions encompass a wide spectrum of pathologies, including congenital cysts, pseudocysts, and neoplastic conditions such as biliary cystadenomas and cystadenocarcinomas.[3] Although asymptomatic in most cases, these lesions carry potential risks such as in-

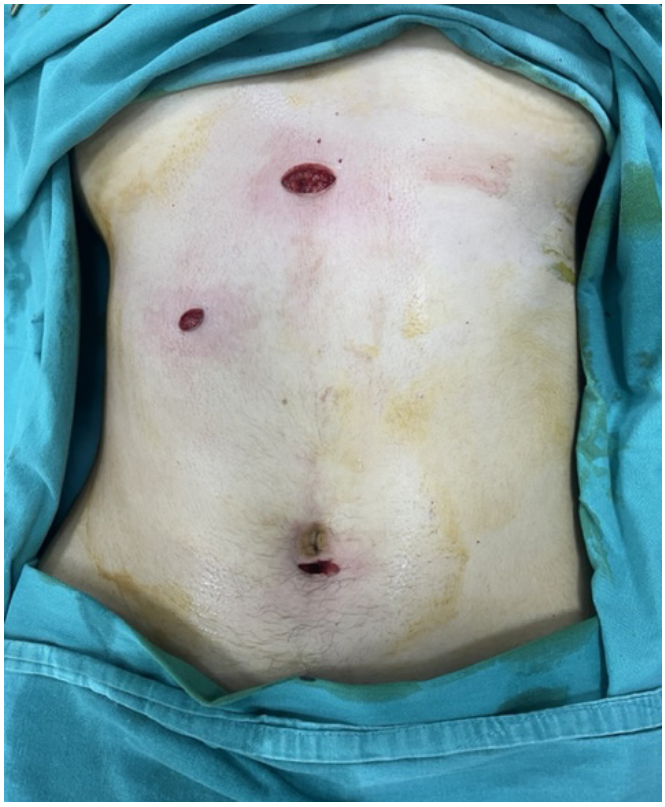

Figure 5. Port Placement for Laparoscopic Surgery.

fection, rupture, or malignant transformation, which necessitate vigilant assessment.[4,5] The decision to proceed with cholecystectomy during an acute surgical event must consider the lesion's characteristics, the patient's clinical context, and access to follow-up care.

In the present case, the patient exhibited leukocytosis and right lower quadrant pain typical of acute appendicitis. The incidental finding of a 15-mm gallbladder cystic lesion during imaging raised important questions regarding its clinical significance and the optimal timing for surgical intervention. Given the lesion's size and location in Hartmann's pouch, its management was integrated into the operative plan due to the patient's limited healthcare access and reluctance to return for follow-up.[6]

Simultaneous laparoscopic appendectomy and cholecystectomy is increasingly recognized as a safe and effective approach in select cases where concurrent pathologies are identified. This combined approach minimizes the risks associated with a second anesthesia and surgical procedure while addressing both conditions during the same session.[7] Previous studies have demonstrated the feasibility of this strategy, particularly in young, otherwise healthy patients with no significant comorbidities.[8]

However, the decision for simultaneous surgery must also account for potential intraoperative complications. Laparoscopic cholecystectomy, while considered the gold standard for gallbladder surgery, carries inherent risks such as bile duct injury or hemorrhage.[9] The surgeon's expertise and intraoperative assessment of the patient's stability are critical in ensuring favorable outcomes.

In our case, the absence of signs of infection or malignancy in the gallbladder cystic lesion, along with the patient's stable clinical condition, supported the decision for concurrent surgery. Histopathological examination of the resected specimens confirmed the diagnosis of acute appendicitis and a benign gallbladder cyst, further validating the surgical approach.

This case underscores the importance of individualized patient management in emergency settings. Factors such as the availability of imaging modalities, patient preferences, and healthcare access must all be carefully weighed in the decision-making process. Additionally, the case highlights the value of multidisciplinary collaboration in addressing complex presentations involving coexisting pathologies.

Future studies are needed to establish clear guidelines for the management of incidental gallbladder lesions identified during acute surgical interventions. While simultaneous surgery offers significant benefits, further research is required to refine patient selection criteria and optimize surgical outcomes.

Conclusion

In conclusion, this case demonstrates the successful management of acute appendicitis and an incidental gallbladder cystic lesion through a simultaneous laparoscopic approach. The decision to perform concurrent procedures should be guided by clinical judgment, patient-specific factors, and the expertise of the surgical team. Early recognition and management of such rare clinical scenarios are essential for ensuring favorable patient outcomes.

Disclosures

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