Synchronous Acute Cholecystitis and Acute Appendicitis

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Introduction

Synchronous cholecystitis and appendicitis is a rare entity.[1] Laparoscopy is the main stay of the treatment of these disease processes separately, but it is important to consider and prepare for an applicable laparoscopic approach that allows for both procedures should the patient require simultaneous cholecystectomy and appendectomy.

Case Report

41-year-old female with no past medical history and surgical history including cesarean section presented with 2 days of sharp right lower quadrant (RLQ) pain radiating to the flank and groin, associated with nausea and diarrhea. Laboratory values upon arrival notable for leukocytosis of 12 and normal liver function tests. Cross sectional imaging demonstrated gallbladder wall thickening, cholelithiasis, and an enlarged retrocecal appendix with associated fat stranding and small amount of free fluid (Figure 1). Hepatobiliary Iminodiacetic Acid (HIDA) Scan was obtained without visualization of the gallbladder at 2 hours (Figure 2). Right upper quadrant (RUQ) ultrasound (US) was obtained compatible with gallbladder wall thickening, stones and positive sonographic Murphy's sign (Figure 3). Decision was made to take patient to the operating room for laparoscopic cholecystectomy and appendectomy.

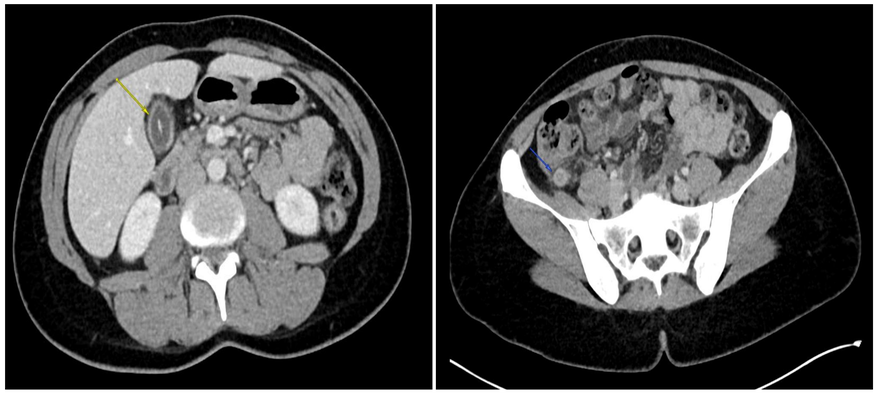


Figure 1. (Left) Computed tomography of abdomen and pelvis (CTAP) Yellow: Thickened gallbladder wall and cholelithiasis. (Right) CTAP upon presentation. Blue arrow: Retrocecal appendix with associated fat stranding

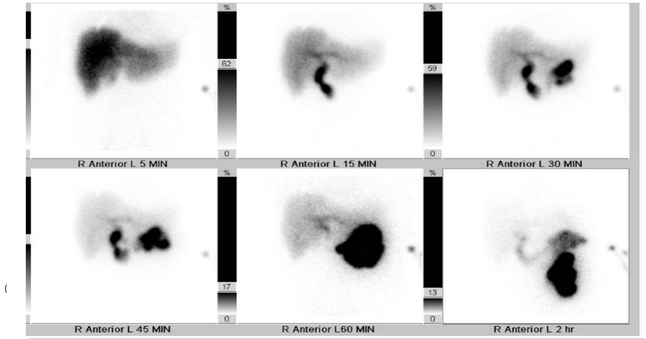


Figure 2. HIDA Scan with no visualization of the gallbladder.

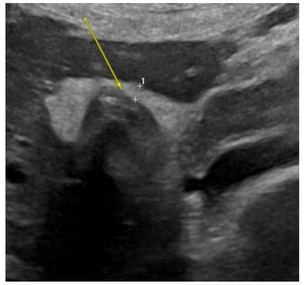


Figure 3. Gallbladder US. Arrow: wall thickening and cholelithiasis.

Operative Technique

- Abdominal access obtained with 5mm OptiView port at the umbilicus. Patient was placed in reverse Trendelenburg with right side up. 12mm port placed in the epigastrium and 2 additional 5mm ports placed in RUQ. Critical view of safety was obtained prior to clipping and ligation of the cystic duct and artery before dissection of the gallbladder from the liver bed.
- Attention was directed to the cecum,5mm port placed in LUQ, and the retrocecal appendix was mobilized. Maryland grasper was used to dissect a mesoappendix window at the base of the appendix. Mesoappendix was ligated with LigaSure device and a 45mm blue load stapler was used to come across the base of the appendix.
- Both the gallbladder and the appendix were placed into an EndoCatch bag and removed at the 12mm epigastric port. Fascia and skin closed in a standard fashion (Figure 4).

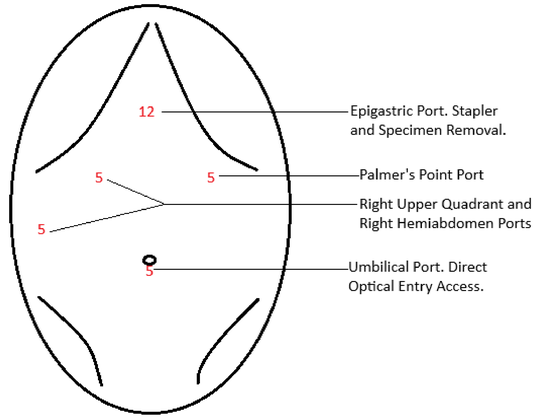


Figure 4. Port placement for combined cholecystectomy and appendectomy. "5" mm ports at umbilicus (Direct Optical Entry abdominal access), RUQ x 2 (for cholecystectomy) and Palmer's point (for appendectomy). "12" mm port at epigastrium to right of falciform (for specimen removal and stapler access).

Discussion

Patient tolerated the procedure without issue and discharged on post operative day one. Pathology consistent with acute appendicitis and acute cholecystitis (Figure 5).

Final Diagnosis

A. Appendix, appendectomy:
Acute appendicitis with necrosis and subserosal abscess.
Periappendicitis.

B. Gallbladder, cholecystectomy:
Acute exacerbation of chronic cholecystitis.
Cholelithiasis.

Figure 5. Final pathology.

Conclusion

This case describes a successful laparoscopic approach utilized in a case of synchronous acute cholecystitis and acute appendicitis.

References

1. Flores LF, Morillo Cox Á, Fernandez Trokhimtchouk T, Otañez ES, Ayala AV. Synchronous Acute Appendicitis and Acute Cholecystitis. Cureus. 2023 Apr 7;15(4):e37248. doi: 10.7759/cureus.37248. PMID: 37168170; PMCID: PMC10166365.