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"EMPYEMA GB IN CASE OF ECTOPIC GALL BLADDER SECONDARY TO TORSION OF CYSTIC PEDICLE MASQUERADING AS LIVER ABSCESS: A CASE REPORT AND LITERATURE REVIEW"

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Abstract:

Wandering or free-floating gallbladder is a rare anomaly of position of gallbladder, characterised by an unusually long or absent mesentery. This condition, resulting from abnormal embryological migration, poses significant diagnostic and surgical challenges. Most ectopic gallbladders remain asymptomatic, but they can mimic common biliary diseases when symptomatic, often leading to misdiagnosis. Complications such as empyema gallbladder, a life-threatening condition, can further complicate clinical management. Imaging modalities, including ultrasound and computed tomography, play a crucial role in identifying ectopic gallbladders and associated pathologies.

This case report describes an 82-year-old female initially misdiagnosed with liver abscess and managed with CT guided pigtail catheter drainage. Persistent symptoms led to further imaging, which revealed an ectopic gallbladder with empyema and jejuno-jejunal intussusception caused by a jejunal lipoma. Diagnostic laparoscopy was planned but converted to an open approach due to intraoperative findings of gallbladder adhesion to the anterior abdominal wall and diaphragmatic eventration. The gallbladder, located sub-diaphragmatically with a thickened wall and empyema, was successfully excised using retrograde dissection. The intussuscepted jejunal segment was also resected, and jejuno-jejunal anastomosis was performed.

This case highlights the importance of recognizing ectopic gallbladder as a differential diagnosis for atypical presentations of abdominal pain and emphasizes the value of preoperative imaging and intraoperative adaptability in ensuring patient safety. Conversion to open surgery in anatomically challenging cases should be viewed as a prudent surgical decision rather than a failure of technique.

Key words: Ectopic gallbladder; laparoscopic cholecystectomy; Intercostal drain (ICD); Intussusception; Liver abscess; Jejuno-jejunal anastomosis.

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INTRODUCTION:

Ectopic gallbladder is a rare anatomical variation in which the gallbladder is located in an abnormal position within the abdominal cavity. This condition occurs due to a failure of the embryonic gallbladder to migrate to its normal position under the liver during fetal development.[1] Anomalous position of gallbladder is relatively uncommon finding. Reports of gallbladder ectopia and wandering GB are infrequent in the surgical and radiologic literature. Ectopic gallbladder can be found in various locations, including the right upper abdomen, the left upper abdomen, the retro-hepatic space, the retroperitoneal space, and even in the pelvis.[2] The incidence of ectopic gallbladder is estimated to be around 0.1-0.7% in the general population. [2]

Ectopic gallbladder, is a relatively uncommon anatomical variation that can present significant challenges in both diagnosis and management. Nearly 80 percent of patient present as asymptomatic and gallbladder pathologies are ordinarily identified by ultrasound, during the evaluation of irrelative medical states.[6] However, ectopic gallbladder can also present with similar symptoms to a normally positioned gallbladder, such as right upper quadrant pain, nausea, and vomiting.[3]

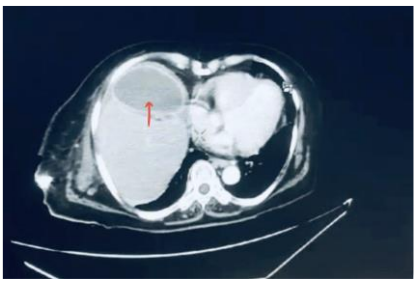
One of the rare complications associated with ectopic gallbladder is the development of empyema, a severe and potentially life-threatening condition characterized by the accumulation of purulent fluid within the gallbladder, may occur if cholecystitis is not treated as ectopic cholecystitis clinical features varies from typical.[4]

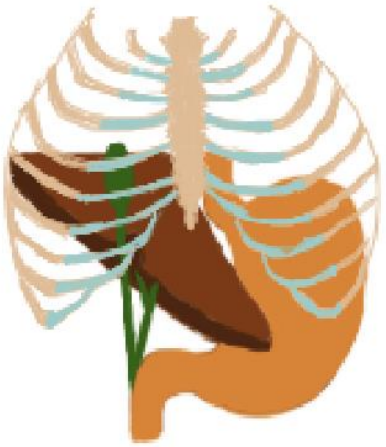
In cases of ectopic gallbladder, the initial diagnosis can be challenging, as the atypical location of the organ may lead to misdiagnosis of other acute abdominal conditions, such as acute pancreatitis, due to the proximity of the ectopic gallbladder to the pancreas.[3] The diagnosis of empyema in an ectopic gallbladder often requires a high index of suspicion, as the condition can mimic other more common abdominal emergencies. Imaging modalities, such as ultrasonography and computed tomography, can be helpful in identifying the location and status of the ectopic gallbladder, as well as any associated complications like empyema.[5]

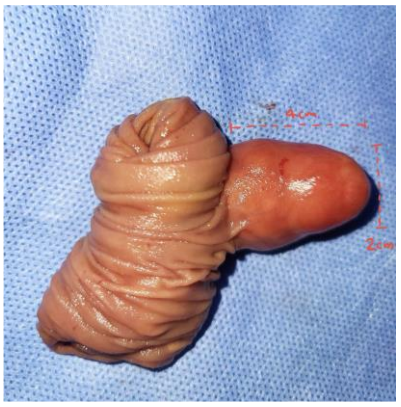
In 1867, John Stough Boobs executed the first cholecystectomy and after near the century later in 1985, Eric Muhe accomplished first laparoscopic cholecystectomy, which had led to the contemporary advancement in gall bladder pathology management. The traditional open approach has been reinstated by laparoscopic cholecystectomy. However open cholecystectomy is largely reserved to cases in which laparoscopy couldn't have proceeded. Till date more than 3 decades later, laparoscopic cholecystectomy has been established as the gold standard procedure for benign gallbladder diseases. In certain cases, the procedure needs to be converted to open to safely execute the operation. Conversion shouldn't be considered technical incompetence however, in cases where it is indicated it should be accepted by the surgeon and the patient as a better surgical practice than laparoscopy.[7]

However, in present case element of conversion was adhesion between omentum and right lobe of liver and adhesions between anterior abdominal wall and liver. Haemorrhage, gallbladder perforation, bile leakage, bile-duct injury, peri hepatic collection and visceral injury are being observed as a true complication of laparoscopic conversion.

CASE REPORT







A lady aged 82years, reviewed in surgical OPD with complaints of pain in the right hypochondria and was diagnosed as a case of liver abscess for which pig tail catheter was put, Patient had then come for further management. There were no complaints of nausea, vomiting, fever, burning micturition, loose stools or constipation. She had undergone CT guided pigtail catheterisation for liver abscess at peripheral hospital with Right ICD insertion for pleural effusion done on same day. Patient underwent USG Abdomen and Pelvis as abdomen pain didn't subside. USG showed possibility of wandering gall bladder with empyema gall bladder.

CECT Abdomen and Pelvis was suggestive of Ectopic gall bladder with features of empyema gall bladder. Mild right sub-phrenic collection with tip of pigtail catheter adjacent to the collection was noted. Also, features of jejuna-jejunal intussusception with jejunal lipoma as leading point was visualised. Right high diaphragmatic eventration of liver was present with sub-segmental passive atelectasis of posterior basal segments of right lower lobe. There was twisting of gallbladder pedicle.

With due informed consent, she was posted for Diagnostic Laparoscopy, but, an open approach was carried out due to non visualisation of gallbladder and inability to inflate the thoracic cage as the liver had eventrated into the thorax.

On opening the Abdomen, a cystic mass was felt in the anterior abdominal wall. A blunt dissection was carried out to separate the structure only to encounter the gallbladder. It was found to be over anterior surface of liver with lengthy cystic duct in Sub-diaphragmatic position. The cystic duct was traced and found to be ending in gall bladder. The gallbladder wall was thickened with pig tail catheter noted adjacent to gall bladder. Pig tail catheter was noted entering the abdominal cavity from the pleural cavity causing rent in the right dome of diaphragm. Retrograde dissection was carried out at Calot's triangle and cystic duct and cystic artery were skeletonised. They were doubly ligated and cut. Also, Jejuna-jejunal intussusception with submucosal lipoma as a leading point was found at about 20 cm from DJ flexure. Resection of jejunal segment with lipoma was done after clamping the bowel on either sides. End to end jejuna-jejunal anastomosis done in 2 layers. Right sided ICD insertion was also carried out.

DISCUSSION:

Ectopic gallbladders are a rare entity.[8] Awareness of the possibility of such rare finding has to be ruled out preoperatively. Such cases of ectopic and deviant gallbladder have been associated with increased intra and postoperative complications.[8] As in our case where it was

misdiagnosed to be liver abscess and managed for the same.

CONCLUSION:

In cases of Variant anatomy of hepato-biliary system. Conversion shouldn't be considered a technical failure.[7] Although MRCP is a better modality to look for anatomical structures like gallbladder & biliary tree, CT also helps in these cases. In addition to that, in case of anatomically variant presentation, it is always preferable and wise to start from the normal anatomy. This is how, the gallbladder was traced from the cystic duct in the case.

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