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Case Report

Acute Appendicitis with Unexpected Atypical Findings – A Case Report

Afrah Malik, Asif Niaz, Ejaz Ahmad, Muhammad Tahir Younas

Department of Medicine, Pakistan Air Force Hospital, Islamabad Pakistan

ABSTRACT

An aberrant position of the appendix may present with atypical abdominal pain; however, in our case, right hypochondrial pain was associated with surprising incidental findings. We present a unique case that, to the best of our knowledge, has not been reported in previous literature. A 35-year-old female came to the Emergency Department with a four-day history of RUQ pain. Examination revealed tender right hypochondrial with the palpable liver. Ultrasound showed a solid cystic hyperechoic lesion 9.9 x 8.9 x 13.8 cm in the liver. To further investigate, a contrast-enhanced computed tomography abdomen showed a non-enhancing, well-demarcated ovoid mixed density area in the right posterior upper abdomen with the internal layering of its contents having characteristics concerning a retroperitoneal teratoma and a retrocausal appendix with significant surrounding inflammatory changes (Figure). The patient then underwent a laparotomy, appendectomy, and teratoma removal. She recovered well without any complications. Hence, clinicians should be aware of rare causes of abdominal pain that require advanced investigations to prevent delays in diagnosis.

Keywords: Abdominal pain; Imaging; Retrocecal appendix; Teratoma.

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INTRODUCTION

Appendicitis is a frequently encountered cause of abdominal pain in clinical practice. However, only 50% of patients experience classical signs and symptoms. The initial diagnosis of appendicitis may be difficult due to aberrantly placed appendix.[1,2] We present a case of pain in the abdomen, which was a predicament at first. Investigations like ultrasound and CT scan of the abdomen showed unexpected results.

CASE REPORT

A 35-year-old married female, a resident of Rawalpindi, reported to the ED with abdominal pain for four days. Being otherwise healthy, she was diagnosed with cholelithiasis one month back, for which elective laparoscopic cholecystectomy was planned. The pain was colicky, 6/10 in severity, non-radiating, localized in the RUQ, and progressively worsened. It was associated with fever and nausea. Abdominal examination revealed tenderness in the right hypochondrium with apparent hepatomegaly. There was no rebound tenderness, and Murphy's sign was not elicited. An initial diagnosis of acute cholecystitis versus liver abscess was made.

Further investigations showed WBC $8x10^3$ microlitre, Hemoglobin 11.4g/dL, Platelets $414x10^3$ microlitre, and CRP 47.1mg/litre. Liver function tests and serum lipase were normal. The urinary pregnancy test was negative. A fresh ultrasound showed a well-defined solid cystic hyperechoic lesion 9.9x8.9x13.8cm in the right lobe of the liver. To further investigate, a CECT abdomen (Figure-1) revealed a well-demarcated ovoid mixed-density non-enhancing area in the right posterior upper abdomen retroperitoneally measuring 14.2x10.2x9.6 cm. The appendix was retrocaecal, and its tip was seen abutting the postero-inferior hepatic margin and the aforementioned RUQ lesion with surrounding inflammatory changes. The diagnosis of acute retrocecal appendicitis with incidental teratoma was made.

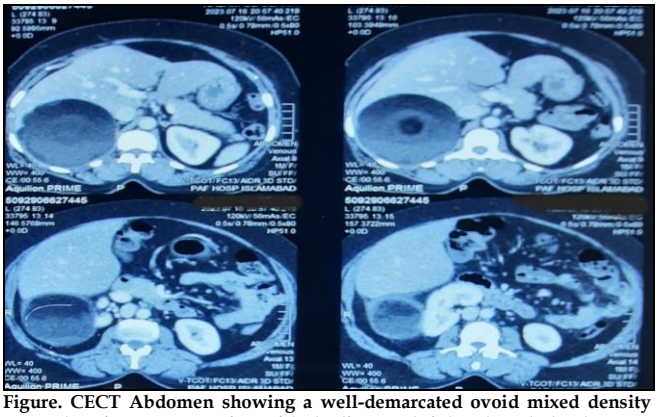

Figure. CECT Abdomen showing a well-demarcated ovoid mixed density non-enhancing mass merging with the liver and right adrenal gland. It was composed of fatty component anteriorly and centrally with relatively high-density contents posteriorly. The liver was mildly enlarged (16.9 cm)

Correspondence: Dr Afrah Malik, Department of Medicine, Pakistan Air Force Hospital, Islamabad Pakistan

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She was managed with intravenous antibiotics, hydration, and pain relief. The surgery team was taken on board. Elective exploratory laparotomy with appendectomy, cholecystectomy, and teratoma incision, drainage, and wall excision were performed. Preoperative findings showed an inflamed retrocausal appendix, edematous gallbladder wall, and a large teratoma 10 cm x 10 cm consisting of caseous material and hair. Hence confirming our clinical diagnosis. The postoperative stay was uneventful. She was discharged on the fifth postoperative day and called for follow-up after ten days.

DISCUSSION

Common anatomical variants of the appendix are retrocecal (74%) and pelvic (21%); others are subcecal, retroileal, ectopic, preileal, and post-ileal positions. Rarely, it may be subhepatic, with an incidence of 0.08%.[3] Around 50% of patients with appendicitis present with classical right iliac fossa (RIF) pain.[4] In an aberrantly located appendix, such as a subhepatic appendicitis reported by two studies, RUQ pain predominated, leading to an incorrect assessment of biliary pathology such as acute cholecystitis or liver abscess.[2,4] Interestingly, Longani *et al*., reported a subhepatic appendix with examination findings consistent with the standard RIF location of the appendix.[1] Retrocecal appendicitis may mimic conditions of the right hypochondrium, such as acute cholecystitis, diverticulitis, and acute gastroenteritis. Therefore, appendicitis must be considered in unusual situations. Ultrasonography has a 75–90% sensitivity for detecting acute appendicitis, whereas CT has been demonstrated to be 87–100% sensitive.[5]

Our patient was carrying a teratoma since her childhood, which remained undiagnosed till she developed retro cecal appendicular abdominal pain, which was erroneously diagnosed as cholelithiasis and was previously planned for cholecystectomy.

Teratomas comprise tissues from at least two of the three germ layers. They occur commonly in the gonadal tissue of newborns and young adults. Extra-gonadal teratomas can seldom develop in adults, particularly in females, usually in the midline, from the skull base, mediastinum, and retroperitoneum (less than 4%). Those comprising more undifferentiated tissues are malignant, while those with relatively differentiated tissues are benign. The investigation of choice for differentiating between various retroperitoneal masses is CECT. Laparoscopic surgical excision is the preferred management for small lesions. Laparotomy is better for larger lesions.[6-8] To conclude, pain in any part of the abdomen may be difficult to diagnose, significantly if it is associated with developmental defects and other atypical findings. The clinician may benefit from specialized investigations when they are difficult.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

AM & AN: Conception, data acquisition, drafting the manuscript, critical review, approval of the final version to be published.

EA & MTY: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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