

Case Report

Left-sided gall bladder found incidentally during emergency laparoscopic appendectomy due to acute appendicitis

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ABSTRACT

The gallbladder is affected by a large number of congenital anomalies, which may affect its location, number, size, or form. Some of these malformations are very rare and may lead to misdiagnosis. Knowledge of the location of the gallbladder is of great importance for the surgeon, particularly when cholecystectomy or other biliary surgery is to be performed. There are many variants not only of the position of the gallbladder but also in the way the cystic duct joins the biliary tree. The left-sided gallbladder remains a scarce anomaly with prevalence of 0.3%. This report presents a case of a young male patient, who was operated due to acute appendicitis. Laparoscopic appendectomy was performed and at laparoscopy a left-sided gallbladder was found, located on the III liver segment, on the left side of the round ligament.

Keywords: Anatomic variant, Incidental finding, Left-sided gallbladder, Laparoscopy

INTRODUCTION

The gallbladder is an organ which can be adequately examined with ultrasonography and whose various congenital anomalies have been described. These anomalies may affect the gallbladder's location, number, size or form. All these variations should be kept in mind during ultrasonographic examination with no visualization of the gallbladder so that misdiagnosis of agenesis is prevented.¹ A left-sided gallbladder is a rare congenital anomaly defined as a gallbladder attached to the lower surface of the left lateral segment of the liver. The gallbladder is located under the left lobe of the liver between segments III and IV or on segment III to the left of the round ligament.²

This report presents a case of a young male patient, who was admitted to the emergency department because of lower abdominal pain. Abdominal ultrasound revealed

signs of acute appendicitis. Laparoscopic appendectomy was performed and at laparoscopy we incidentally found left-sided gallbladder, located on the III liver segment, on the left side of the round ligament.

CASE REPORT

A 33-year old male patient was admitted to the emergency department (ED) because of lower abdominal pain, nausea and vomiting lasting for one day. On examination at the ED he was cardiopulmonary compensated, his body temperature was 37.2°C. Abdomen was painful on palpation in the right lower quadrant, but without signs of peritoneal irritation. In laboratory tests, there was leukocytosis ($16 \times 10^9/L$) and slightly elevated C-reactive protein (CRP - 37 mg/L). Abdominal x-ray showed slightly dilated small bowel loops in the left upper quadrant (Figure 1). Abdominal ultrasound (US) showed signs of acute appendicitis, the

gallbladder was described as normal. We decided to perform laparoscopy.



Figure 1: Abdominal x-ray showing slightly dilated small bowel loops in the left upper quadrant.

Patient was transferred to the operating theatre. He was operated in a supine position under general anesthesia. Perioperative antibiotic therapy with gentamicin and metronidazole was applied. Sterile operative field was prepared in a standard manner. Supraumbilical skin incision was performed and pneumoperitoneum was created with Veress needle. At laparoscopy, we found inflamed appendix vermiformis, laparoscopic appendectomy was performed and abdominal drain inserted. Abnormal anatomic position of the gallbladder was an incidental finding during laparoscopy. The gallbladder was located on the lower surface of III liver segment, on the left side of the round ligament. Patient's postoperative course was uneventful and he was discharged from hospital on the fourth postoperative day.

DISCUSSION

A left-sided gallbladder is a gallbladder located on the left side of the round ligament and not on the right side, which is its common location. It constitutes an uncommon abnormality first described from Hochstetler in 1856. The reported incidence of this anomaly is estimated to be between 0.1% and 1.2%.³ Knowledge of the location of the gallbladder is of great importance for the surgeon, particularly when cholecystectomy or other biliary surgery is to be performed.

Recent studies suggest, that routine abdominal US often fails to make the diagnosis of left-sided gall bladder, if there is no clinical suspicion of possible biliary tract anomaly.⁴ There are recent cases where neither the pre-operative abdominal computed tomography (CT) detect the left-sided gall bladder.⁵ The left-sided gall bladder is

commonly discovered at surgery, since pre-operative examination may not detect the anomaly, as it happened in study case.⁵ In study case, on abdominal US gall bladder was described as normal, without any anatomic variant. This was probably because the indication for an abdominal US was suspected acute appendicitis and the radiologist was paying no specific attention to the gallbladder. We performed a laparoscopic appendectomy due to inflamed appendix vermiformis and gallbladder anatomic position anomaly was found incidentally during laparoscopy and did not present any clinical significance for us at the time of surgery.

However, in the management of acute cholecystitis, surgeon must be aware of possible gallbladder and biliary tree anomaly to avoid biliary tract injury.^{6,7} Although the presence of the left-sided gallbladder with its usual anatomical anomalies might lead to intra-operative injuries, laparoscopic cholecystectomy is the treatment of choice for gall stones or acute cholecystitis.⁵ The feasibility of laparoscopic cholecystectomy with minor modifications in patients with left-sided gallbladder has been confirmed in various case reports.⁸

CONCLUSION

In conclusion I can say, that left-sided gallbladder is a rare abnormality in the position of the gallbladder that consists of several sub variations referred to as the cystic duct course. The recognition of them is important especially when performing cholecystectomy to avoid injury to the biliary tree.

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