Mini Review

World Journal of Clinical Surgery (ISSN 2766-6182)

Gallbladder Duplication: A Case Study and Literature Review

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Received Date: Dec 28 2023
Accepted Date: Dec 29 2023
Published Date: Jan 28 2024

ABSTRACT

A uncommon aberration of the gallbladder number, gallbladder duplication affects about 1 in 4000 births. A 22-year-old guy with significant splenomegaly who was admitted to our department for examination of Extrahepatic Portal Venous Obstruction had twin gallbladders. In order to prevent bile duct damage and vascular problems, preoperative diagnosis of such uncommon malformations is crucial.

Keywords : Dupication of gallbladder; MRCP

INTRODUCTION

A uncommon aberration of the gallbladder number, gallbladder duplication affects about 1 in 4000 births. A 22-year-old guy with significant splenomegaly who was admitted to our department for examination of Extrahepatic Portal Venous Obstruction had twin gallbladders. It is crucial to discover these unusual defects before surgery in order to prevent vascular and bile duct damage.

OVERVIEW OF THE CASE REPORT

A young boy, aged 22, who did not drink alcohol, was admitted to the Surgical Gastroenterology ward due to significant splenomegaly and extrahepatic portal venous obstruction. During examination, it was discovered that he had two separate gallbladders, as shown by magnetic resonance cholangiopancreatography (MRCP) and abdominal ultrasonography.The patient had no notable prior medical history, including hospital stays, and was asymptomatic. Upon examination, his gallbladder was not palpable and his belly was enlarged with significant splenomegaly.

The results from the lab were not noteworthy. Following a thorough assessment, the patient had a splenectomy and proximal splenorenal shunt (PSRS) to treat persistent pancytopenia and recurrent upper gastrointestinal bleeding (recurrent bleeding from esophageal varices despite endoscopic variceal band ligation). DG was identified during the postoperative phase during a follow-up abdominal Doppler ultrasound to ensure patency. of switch. His MRCP reveals duplication of the gallbladder with distinct necks and cystic ducts during retrospective assessment. The patient had no symptoms despite having a gallbladder duplication. He had a normal liver function test.

The common bile duct is where the two cystic ducts split off (Figure 1). There were no abnormalities on contrast-enhanced CT (Figure 2), magnetic resonance imaging, or ultrasound that would point to a benign biliary illness or cancer. The patient was instructed to undergo annual ultrasound follow-up.
The earliest recorded case in human history involved a sacrificed victim of Emperor Augustus in 31 BC [1]. With a reported incidence of 1 in 4000, duplication of the gallbladder is a rare extrahepatic biliary system developmental abnormality. It develops into an exuberant blossoming biliary tree during weeks five and six of embryogenesis. Eight triple and 207 duplicate gallbladders are reported by Harlaftis et al [2]. Boyden's and Harlaftis's classification systems, respectively, provide two types of information about this congenital anomaly [2, 3]. However, the Harlaftis classification (Figure 3) is the categorization of surgical relevance. The gallbladder's duplication in respect to the cystic duct serves as the classification's foundation. A duplicated gallbladder with a single cystic duct is referred to as a "split primordium group" or "vesica fellea divisa" in type one cases.

Type 2 duplication gallbladders, sometimes referred to as "accessory group" or "vesica fellea duplex," have a distinct cystic duct that drains into the common bile duct. We have a type 2 duplication gallbladder in our situation. During cholecystectomy or autopsy, there is no gender preference, which is typically diagnosed as an incidental discovery in adults [4]. Recent technological advancements, including magnetic resonance cholangiopancreatography, have made it possible to diagnose this abnormalities without invasive procedures or radiation exposure [5, 6]. As in our case, a duplicate gallbladder

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may develop accidentally, or it may develop in response to cholelithiasis and cholecystitis symptoms.
This particular clinical disease needs to be distinguished from other conditions such as type 2 choledochal cyst, aberrant gallbladder fold or diverticulum, Phrygian cap, focal adenomyomatosis, localized pericholecystic fluid collection, and intraperitoneal vascular bands across the gallbladder.

Acute or chronic cholecystitis, as well as biliary colic, might present as symptoms. Less prevalent illnesses in Adenocarcinoma, adenomyomatosis, and perforation are examples of duplicated gallbladders [3]. Similar to other gallbladder diseases, duplicate gallbladder disease is managed similarly. Surgery is not recommended for double gallbladders that are incidentally found to be disease-free because there is no indication of an increased risk. Patients may have symptoms or no symptoms at all related to this condition. Surgery to remove the gallbladders is recommended if symptoms occur. Even though they are uncommon, duplex gallbladders should be recognized prior to surgery. Similar to our situation, it was overlooked both before and during surgery. By diagnosing the patient before surgery, it is possible to prevent intraoperatively undetected duplicated gallbladders in individuals who later reappear with biliary symptoms. Nonetheless, a cholecystectomy should be performed on both gallbladders if symptoms are present in one or both of them.
Cholecystectomy via laparoscopy can be carried out as directed as a matter of standard care. Congenital abnormalities of the extrahepatic biliary system are relevant because they may result in damage to the bile ducts during open or laparoscopic cystecystectomy procedures. To prevent such calamity, preoperative diagnosis is crucial. In ambiguous situations, intraoperative cholengiography may be considered.

CONCLUSION

One rare abnormality of gallbladder number is duplication of gallbladder. In order to provide the right care, a preoperative diagnosis is necessary if it exhibits symptoms. A case without symptoms is observable.

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