Left-sided gallbladder associated with congenital liver cyst

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Abstract

Background. 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, i.e. to the left of the interlobar fissure and round ligament. Case outlines. In two women aged 42 and 70 years a left-sided gallbladder was associated with a congenital cyst of the liver. In the first patient, the ectopic gallbladder was an incidental finding at operation for a symptomatic liver cyst; as the gallbladder was normal it was not removed. The second patient underwent operation for chronic calculous cholecystitis, when the left-sided gallbladder and congenital liver cyst were found. An operative cholangiogram was normal, the cystic duct joining the common bile duct from the right side. The gallbladder was removed, and the cyst was de-roofed. Both patients had an uneventful recovery and remain symptom-free at 12 and 9 years respectively. Discussion. To the best of our knowledge, the association of these two congenital anomalies has not been described previously.

Key Words: Left-sided gallbladder, congenital liver cyst

Introduction

In the anomaly of left-sided gallbladder the organ is attached to the lateral segment of the liver, to the left of the interlobar fissure and round ligament. The cystic duct may join the common bile duct from the right side, from the left side or it may even join the left hepatic duct. The cystic artery always crosses in front of the common bile duct [1].

Case reports

Case no. 1

A 42-year-old woman presented with an 8-year history of intermittent epigastric pain. On examination a tender epigastric mass was palpable, and an abdominal ultrasound scan showed a liver cyst measuring 12 × 11 × 8 cm. Laboratory data were within normal limits except for moderately elevated alkaline phosphatase and gamma-glutamyl transferase. Serological tests for hydatid disease were negative. Due to unremitting symptoms she underwent operation. At open operation the cyst was found on the upper surface of the left liver. The gallbladder was attached to the lower surface of the left lateral segment of the liver, to the left of the round ligament (Figure 1). The common bile duct was of normal size, and no other abnormalities were identified within the abdomen. The front wall of the cyst was excised, revealing an internal surface with a trabecular appearance. A total of 950 ml of clear straw-coloured fluid was drained and the cavity was filled with an omental flap. The gallbladder contained no stones and was therefore not removed. Histology confirmed the typical appearance of a congenital liver cyst. Her postoperative recovery was uneventful, the symptoms of epigastric pain disappeared completely, and she remains symptom-free 12 years later.

Case no. 2

A 70-year-old woman presented with a 15-year history of recurrent biliary colic. Ultrasound scan revealed a gallbladder stone and a liver cyst. At open operation we identified an inflamed left-sided gallbladder containing a solitary stone together with a cyst in the left lateral segment of the liver (Figure 2). An operative cholangiogram performed through the cystic duct showed normal biliary anatomy with the cystic duct joining the common bile duct from the right side. The gallbladder was removed using “fundus first technique”, and the cyst was de-roofed. Histology confirmed cholecystitis and a congenital liver cyst. The postoperative recovery was uneventful, but a late incisional hernia required reoperation. She has remained symptom-free for the last 9 years.

Discussion

The left-sided gallbladder is a rare congenital anomaly. It may occur either as a single anomaly or in...
association with one or more congenital abnormalities. It has been associated with complete or partial situs inversus [2], with a duplicated gallbladder (one on the left, the other on the right side) [3], with hypoplastic bile duct [4], with an anomalous pancreateo-biliary ductal junction [5], with an absence of the quadrate lobe [3], with an accessory liver [6], with anomalous intrahepatic branching of the portal vein [5]. It has also been associated with complex congenital abnormalities such as the main bile duct lying in front of the first part of the duodenum and malrotation of the intestine [7], an antedudodenal portal vein, an anular pancreas, agenesis of the dorsal pancreas, polysplenia and highly mobile right colon [8], and with intrapelvic ectopic testis with ectopic vesica and an umbilical hernia [9].

In recent years several cases have been described where calculous left-sided gallbladders have been removed laparoscopically. In this situation it has been advised to modify port sites and to use falciform lift to facilitate the procedure [1], and to perform the cholecystectomy using an anterograde approach in order to visualise the anatomic structures to avoid injury of the hepatic pedicle [10].

To the best of our knowledge these are the first reported cases where left-sided gallbladder has been associated with a congenital liver cyst.

References