Case Report

A case report on multiseptate gallbladder clinical manifestation and treatment

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ABSTRACT

Multiseptate gallbladder is a rare congenital abnormality, only a few cases have been reported in the literature. These gallbladders have transversely oriented septa, with or without gallstones. Most patients present with recurrent biliary pain. The patients who are symptomatic with colic pain benefit from laparoscopic cholecystectomy. We discuss a case of an 18-year-old female who has been complaining of the right upper quadrant pain for the past 12 months with normal liver functions and diagnosed with multiseptated gallbladder on ultrasound abdomen. She undergone laparoscopic cholecystectomy and intraoperative cholangiogram cannulation failed due to a small fibrotic cystic duct. Postoperatively, she had complete resolution of symptoms.

Key words: Cholecystectomy, Multiseptate gallbladder, Ultrasound abdomen

Multiseptate gallbladder is an uncommon biliary anomaly. The first description of the multiseptate gallbladder was reported in 1963 by Simon and Tandon. Since then, <50 cases have been published in the literature of which, only 13 cases were reported in pediatrics patients [1]. The patient generally complaints of the right upper quadrant pain with nausea or vomiting. In most cases, ultrasound (USG) abdomen is quite compatible in picking up the anomaly pattern of multiple septations which gives the gallbladder its classic wrinkled or honeycomb appearance [2].

CASE REPORT

An 18-year-old female was referred by a general practitioner to the surgical outpatients with a complaint of on and off right upper quadrant pain from the past 12 months. The pain is described as dull colicky, radiating to the upper back, associated with nausea, and precipitated after having a fatty meal, or sometimes have random presentations. Nonsteroidal anti-inflammatory drugs/paracetamol did provide some relief. The attacks had become frequent in the past few months, although intermittent in nature, it had started to affect her quality of life. The medical history was non-relevant and the menstrual periods were regular. There was a surgical history of tonsillectomy.

On physical examination, there was no pallor/jaundice and the vitals were stable. On palpation, the abdomen was soft and non-tender. Blood investigations including full blood count (white cells, hemoglobin, and platelets), lipase, and liver functions were all unremarkable. An abdominal USG was obtained with the suspect of gallstones. A differential diagnosis of biliary colic, gastritis, gastroesophageal reflux disease, and musculoskeletal pain was suspected. USG showed multiple linear echoes within the gallbladder dividing the lumen into compartments mimicking a honeycomb pattern with a normal common bile duct and no cholelithiasis (Fig. 1), which confirmed out the diagnosis of an unusual and rare pathology.

Laparoscopic cholecystectomy was performed a few months later as the patient initially refused surgery. Surgical finding was thin wall gallbladder (Fig. 2). Intraoperative cholangiogram cannulation failed due to a small fibrotic cystic duct. Histological examination revealed extensive fibrous tissue, atrophied epithelium, loss of mucosal folds, and paucity of smooth muscles (fundus and neck). The Gallbladder showed no cholelithiasis, dysplasia, or malignancy. The patient was followed-up in the clinic a few weeks after the surgery and reported to have complete regression of her symptoms.

DISCUSSION

Multiseptate gallbladder is a rare congenital malformation; it has been reported to occur at an embryological level [3]. The multiple septae give the honeycomb/wrinkling appearance and can involve the entire gallbladder or just a portion [4]. Literature review revealed female predominance and mean age of diagnosis 28.6 years (range 8–70 years). Most patients are symptomatic [3].

The exact mechanism responsible for the genesis of multiseptation is not clear. However, it is speculated that septations in the gallbladder form due to the incomplete vacuolization or

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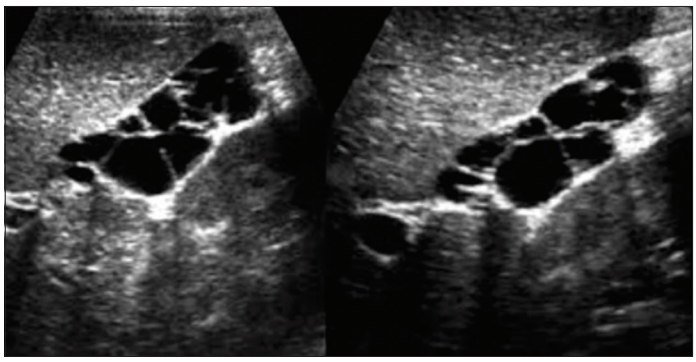

Figure 1: Ultrasound abdomen showing multiple septation

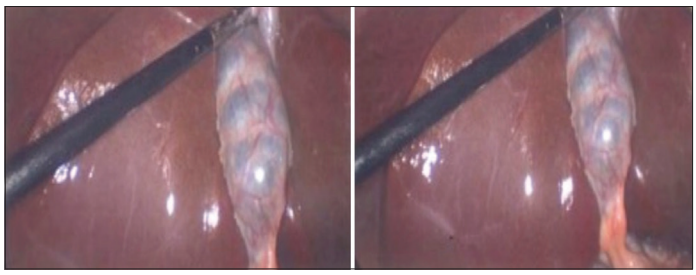

Figure 2: Laparoscopic view of the multiseptated gallbladder

resolution of the solid cystic bud during development. The literature has shown most multiseptate gallbladder to be acalculous [5]. Accompanying cholelithiasis is very uncommon in patients with the multiseptate gallbladder, so far; only four cases were reported to have gallbladder stones [6]. It has been postulated that pain in patients with the multiseptate gallbladder is due to mechanical problems. Transient inability of the viscid bile to pass through small openings in the septa may result in stasis. The three reported cases were found to have associated choledochal cysts in children (23% of pediatric cases). These children presented with jaundice and a combination of fever, nausea, and abdominal discomfort [7].

There is no reported association between uncomplicated multiseptate gallbladder and malignancy; however, there is a known link between biliary tract anomalies and cholangiocarcinoma. The incidence of malignancy in the choledochal cyst is reported between 10% and 30% [8]. Cholecystectomy should also be considered in elderly, asymptomatic patients in whom multiseptate gallbladder is incidentally discovered, due to the possibility of undetected adenocarcinoma of the gallbladder [9].

Radiologically, they are identified on the USG abdomen or magnetic resonance cholangiopancreatography (MRCP). These septae cause impaired motility of the gallbladder resulting in a stasis of the bile flow which is responsible for recurrent abdominal pain. USG evaluation of the gallbladder is usually sufficient to diagnose multiseptate gallbladder, although other modalities such as computed tomography, MRCP, and endoscopic retrograde cholangiography have been described to establish the diagnosis [2].

The patients who are symptomatic have had complete resolution of symptoms after cholecystectomy [10]. Some authors have commented on the possibility of carcinoma of the gallbladder in elderly asymptomatic patients diagnosed incidentally and consideration of laparoscopic cholecystectomy [9].

CONCLUSION

The multiseptate gallbladder is a rare congenital anomaly and a rare cause of recurrent abdominal pain. Cholecystectomy is the choice of treatment in symptomatic patients such in our case. MRCP should be done to rule out any biliary pathology before any concerns on the USG scan or elderly patient.

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