

Septate Gall bladder - A case review with a review of literature

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Abstract

The relationship between the Gall Bladder, hepatic artery, and extra hepatic biliary tree may be complex, and pose a challenge to the surgeon during laparoscopic cholecystectomy. We report a case of a septate gallbladder, a rare congenital anomaly. This condition is seldom recognized preoperative. Knowledge of this entity decreases the number of postoperative complications, and may lower the risk of trauma to the biliary tract. In our case, lap. chole. was uneventful despite the findings of a septate gall bladder intra operatively.

Keywords: Gallbladder, Septate Gallbladder, laparoscopic cholecystectomy, congenital anomalies of Gallbladder, Calot’s triangle, Septa, Hepatic Artery.

Introduction

Only a limited number of cases of septate gallbladder have been reported in literature, because it is either asymptomatic, or an incidental finding with pain abdomen. Septa in rare cases lead to stone formation. We report a case of septate Gall bladder which underwent successful lap chole. The need for complete removal of GB is illustrated, which may otherwise cause recurrence. Calot’s triangle and vascular anatomy needs to be recognized clearly to avoid any injuries or GB remnants.



Fig 1:

Case report

A 14-year-old female patient visited our surgery OPD with a right upper quadrant pain since 10 days. The patient also experienced indigestion and gastritis. There was no associated fever, nausea, emesis, or belching. The patient had no past history of any congenital anomalies. USG abdomen revealed a solitary calculus, approx.

1 mm in size in the GB lumen, showing no pericholecystic fluid and normal wall thickness. The plan was a laparoscopic cholecystectomy.

During laparoscopy, the GB was found to lie transversely, the fundus of GB found to have dense adhesions. Similar adhesions were observed at the body of GB after retracting the fundus towards ipsilateral shoulder. Hydro dissection and blunt dissection were used to complete adhesiolysis. The cystic duct was thick, and the CBD long. Suction drain was placed in situ. Lap. Chole was uneventful.

On taking the GB out, 2 cavities of GB were observed, one large and the other small, with a septum in between them. Oral intake was started and the patient was discharged on the 1st post op day, after removing the suction drain.

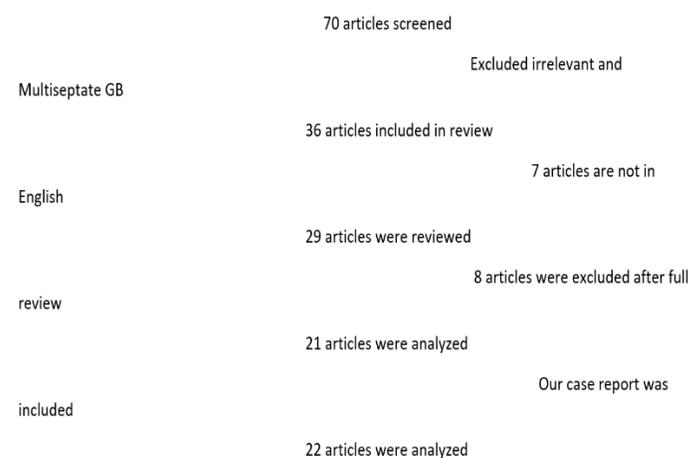
On follow up on postop day 8 and day 30, the patient was alright with resolution of the abdominal pain and associated complains of gastritis and indigestion.

Methods and materials

A search was done in PubMed, and reviewed publications up to 9th Nov, 2022, for “Septate Gall Bladder”. Only relevant results were considered, filtered by titles. Multiseptated GB cases were excluded.

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Table 1:



Analysis aimed to delineate age at diagnosis, symptoms, any associated congenital anomaly and management.

Results of the literature review.

Table 2:

Age at Diagnosis	<6	6 – 10	10-18	>18
Number of Patients	2	4	9	5

Symptoms

Table 3:

Pain Abdomen	14
Gastritis	5
Post Prandial Fullness	6
Indigestion	3
Belching	5

Nausea	2
Vomiting	1

Management – 16 – symptomatic – Laparoscopic Cholecystectomy. 6 - Asymptomatic



Fig 2:

Associated Anomalies

- 1) Type-1 Choledochal Cyst with Ectopic Pancreas
- 2) Intramural Diverticulosis (Rokitansky Asch off Sinuses) in Septate GB
- 3) Flattened Fundus sign

Discussion

GB Anomalies may or may not produce any symptoms. There may or may not produce any symptoms. There may be malformations of size, number, shape, etc. Associated anatomical variations of Cystic Duct, Cystic and Hepatic artery make its knowledge essential for surgeons. The parts of GB may communicate through small pores. Septate GB is thought to be a result of failure of resolution of a single septations in later stage of fetal life, by failure of wrinkling of endothelial epithelial bud.

Another theory suggests “Phrygian Cap” in which a part of GB shows accelerated growth than its surrounding peritoneum, forming a kink. Yet another school of thought considers in pouching of lumen into surrounding

mucosa, around 12 weeks of gestation to be responsible for a septate GB. A longitudinal lying septum is termed bilobed GB, and transverse septum is called hour glass GB.

According to us, our patient’s septa was congenital. Cholelithiasis was probably caused Ny infection and bile stasis due to septa.

Duct formation was used as the basis to classify congenital anomalies of Gall Bladder by Boyden, into bifid (bilobed), V-shaped, or H-shaped. The GB in this case was a bilobed one.

The importance of identifying biliary anatomy in preventing any injury to biliary tree is paramount, especially during dissection of Calot’s triangle, when CBD injuries are common.



Fig 3:

Conclusion

Septate Gall Bladder is a rare condition, due to either out pouching of Gall Bladder wall to its cavity, or failure of resolution of septa in late fetal life. Other congenital anomalies, such as choledochal cyst, ectopic Pancreas, flattened fundus, Rokitansky Asch off sinuses in GB, have been found in septate GB patient, either associated or incidental. The median age of presentation is 16

years; however, all age groups are involved. There is no disparity between males and females.

Abdominal Pain is the most common symptom, with a normal physical examination. It is seldom diagnosed preoperatively as it is difficult to pick up on USG. Blood Tests are normal in most patients. Cholecystectomy which ensures no GB remnant is effective in resolution of symptoms.

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