Driving through the Unexpected Road: Intraoperative Challenges in a Rare Septate Gallbladder Case

Calista Kee, BS[1,2]; Tara Ranjbar, MD[2]; Katerina Jou, MD[2]; Sourodip Mukharjee, MD[2]; Indraneil Mukherjee, MD[2]; Bruce Brenner, MD[2]

CUNY School of Medicine[1], Staten Island University Hospital Northwell Health[2]

INTRODUCTION

- A septate gallbladder, a rare congenital or acquired condition characterized by septa forming cyst-like compartments within the gallbladder, can be diagnosed via ultrasound.
- Septate gallbladder can predispose individuals to gallstone formation.
- Treatment includes cholecystectomy, laparoscopic trans-cystic common bile duct exploration, or ERCP. This case highlights intraoperative challenges in a bilobed gallbladder.

METHODS

- A 60-year-old female with hypertension, hyperlipidemia, and prior cerebrovascular incident presented with sudden severe mid-epigastric and RUQ pain. Imaging confirmed acute cholecystitis.
- Planned for elective laparoscopic cholecystectomy; intraoperative adhesions made achieving the critical view of safety difficult.
- Indocyanine green failed to clarify anatomy, prompting a top-down sub-serosal dissection with bile aspiration and stone removal.

RESULTS

- Distal gallbladder narrowing resembled the cystic duct; further imaging confirmed a septate gallbladder with an irregular dumbbell shape.
- Gallbladder-cystic duct junction identified via indocyanine green cholangiogram, secured with two 2 PDS endoloops, and cholecystectomy completed without complications.
- Patient discharged on POD-1 after JP drain removal, followed up on POD-10 with no complaints; histopathology confirmed acute-on-chronic cholecystitis.

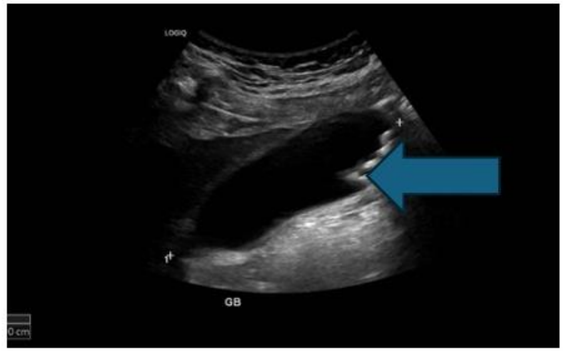


Figure 1: Distended gallbladder with gallstones

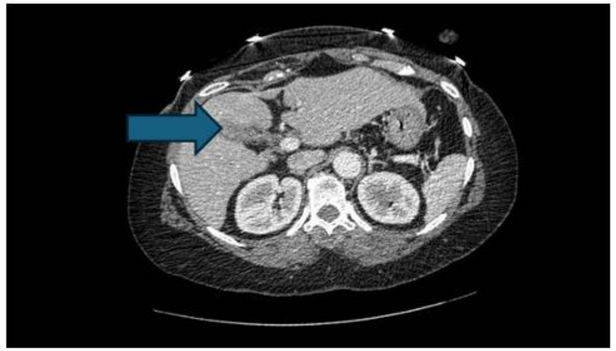


Figure 2: Contracted irregular gallbladder

CONCLUSION

- **Risk Factor for Complications:** Septate gallbladder increases the risk of complications during laparoscopic cholecystectomy, as seen in our patient.
- **Importance of Biliary Anatomy Identification:** Clear definition of biliary anatomy is crucial to prevent ductal injury.
- **High-Risk Dissection Area:** Injuries commonly occur during dissection of Calot's triangle.
- **Bailout Procedures:** Timely execution of bailout techniques is essential in cases with challenging anatomy.
- **Early Suspicion of Aberrant Anatomy:** Surgeons should maintain a low threshold for suspecting abnormal biliary anatomy.
- **Use of Indocyanine Green Cholangiogram:** Intraoperative indocyanine green cholangiogram aids in proper identification and management of complex cases.