

SURGICAL SURPRISE- GALLBLADDER UNDER LEFT LOBE

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Case Report

A 34 years old female patient presented to our OPD with chief complaints of

- Right upper abdominal pain since 3 months
 - Post prandial nausea and regurgitation of food on and off since 3 months.
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- ▶ No history of vomiting, fever, jaundice, similar episodes of pain in the past
 - ▶ No known medical co-morbidities.
 - ▶ No past surgical history.
 - ▶ Menstrual and Obstetric history were unremarkable.
 - ▶ No addiction.

▶ **GENERAL EXAMINATION:** Within normal limits

▶ **P/A EXAMINATION:**

- Soft
- Mild tenderness in the epigastrium.
- No palpable lump or organomegaly
- Normal bowel sounds

▶ **P/R EXAMINATION:**

- Sphincter tone normal
- Faecal staining present.

▶ **SYSTEMIC EXAMINATION:** Within normal limits

▶ **PROVISIONAL DIAGNOSIS:**

Pain in abdomen under evaluation

▶ INVESTIGATIONS:

- Routine Blood Investigations - within normal limits.
- Chest X-Ray- within normal limits.
- USG Abdo-pelvis suggestive of :
 - Distended gallbladder
 - Multiple echoreflective calculi within the lumen of the gallbladder, the largest calculus was 16mm in size, lodged in the neck of the gallbladder.
 - IHBR, cystic duct, CBD normal
 - The liver was normal in size and echotexture
- Upper GI Endoscopy: within normal limits

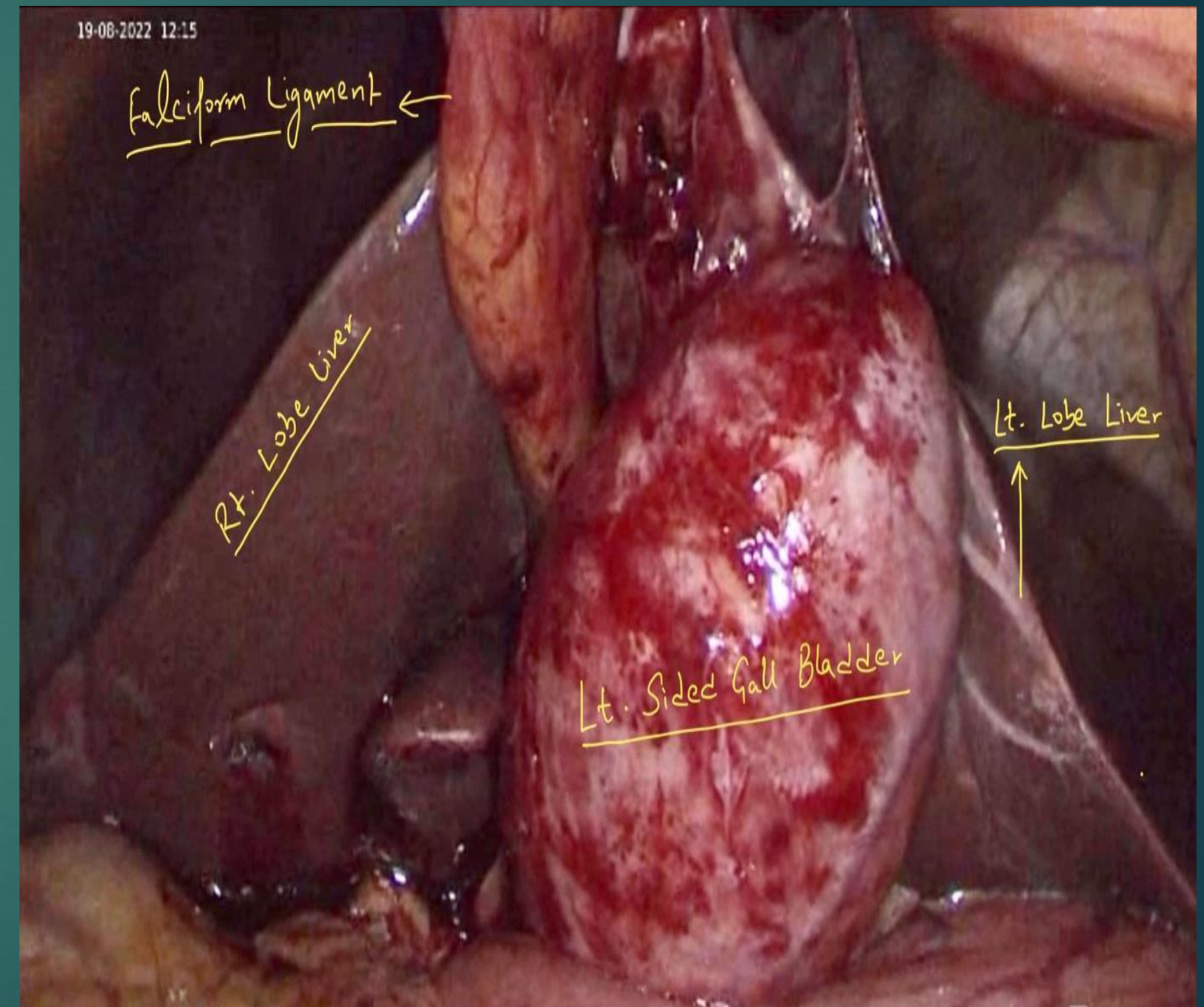
❖ After getting the pre-anaesthetic fitness, patient was posted for laproscopic cholecystectomy under general anaesthesia.


❖ Intraoperative findings:

▪ Liver - Enlarged and smooth

▪ Gallbladder -

- Found to the left of the falciform ligament between segments III and IV of liver.
- The cystic duct crossed the falciform ligament from left to right side to join the common hepatic duct.
- The cystic artery was found anterior to the CBD.



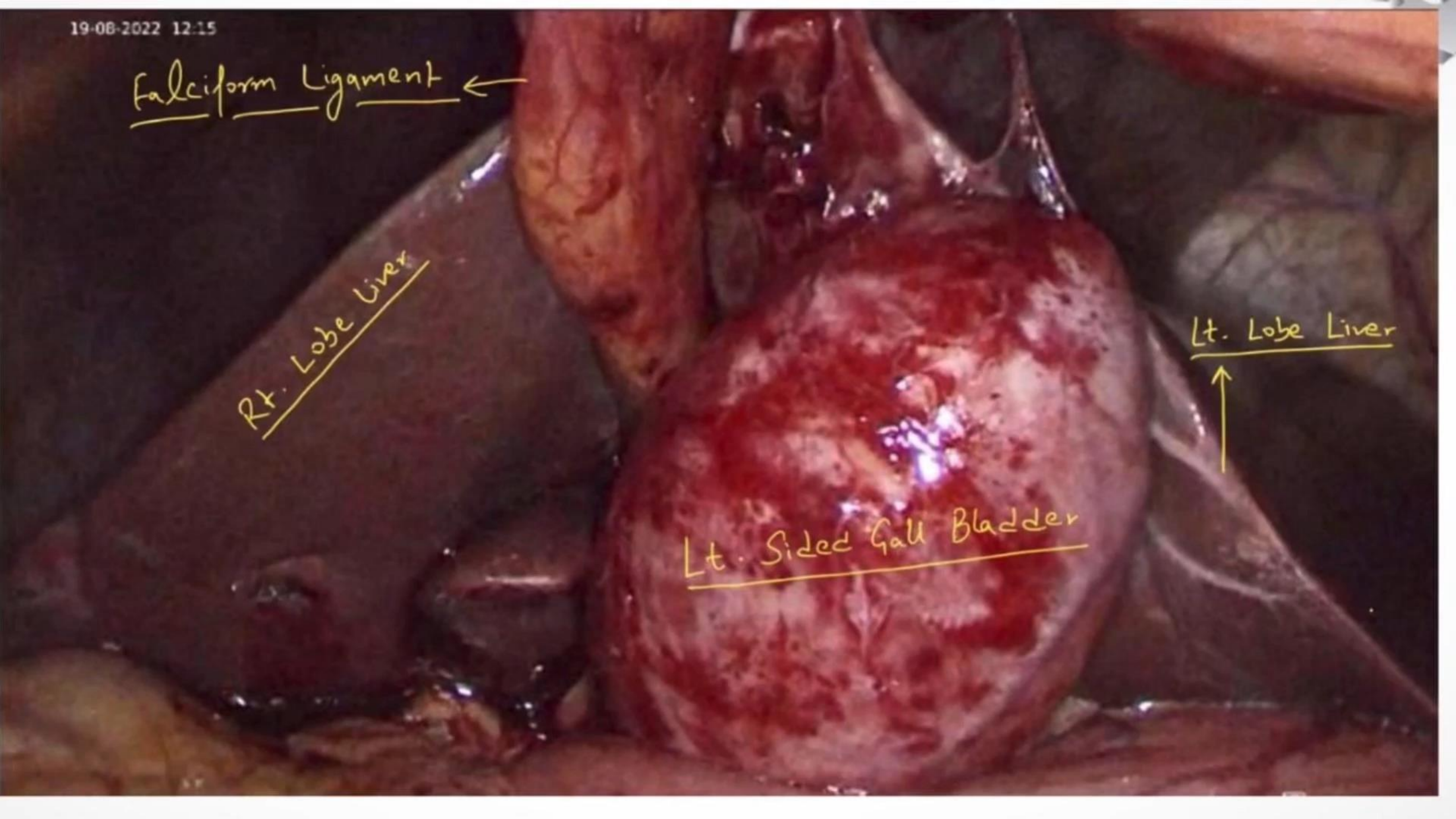
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- ▶ It was difficult to use the epigastric port to access the gallbladder due to abnormal position.
 - ▶ Thus, an additional port was placed in the left upper quadrant at Palmer's point for ease of access and dissection.
 - ▶ The gallbladder was retracted towards the left shoulder underneath the falciform instead of the right shoulder tip to expose the Calot's triangle and to avoid tears to the liver.
 - ▶ No other anatomical abnormalities were noted intraoperatively
 - ▶ The remainder of the operative procedure was performed as routine, devoid of any complication.
 - ▶ The patient's postoperative recovery was uneventful and she was successfully discharged home.

Falciform Ligament ←

Rt. Lobe Liver

Lt. Lobe Liver

Lt. Sided Gall Bladder



DISCUSSION

- ▶ Hochstetter first described this rare anomaly in 1886.
- ▶ Left sided gallbladder is defined as a gallbladder located to the left of falciform ligament under the left lobe of the liver.
- ▶ Incidence: 0.2% to 1.1%
- ▶ Preoperative diagnosis on USG is difficult.
- ▶ Surgery for the left sided gallbladder is associated with high risk of CBD injury [4.4%]
- ▶ Therefore, the surgery requires a technical modification so as to minimize the risk of CBD injury.

THEORIES OF LEFT SIDE GB


- ▶ According to the first theory, a gallbladder forms on either side of the liver lobes, with the gallbladder on the right side becoming atrophic and eventually going away which could be linked to failure or abnormal development of the right liver's structural elements.
- ▶ The second theory proposes that the gallbladder moved from the right lobe to the left, lying to the side of the ligamentum teres.
- ▶ The findings of the left-sided gallbladder and other anomalies connected to it.

Anatomical Consideration Of Left Side GB

- ▶ The gallbladder is located at the base of segment III to the left of the falciform ligament.
- ▶ The cystic artery always crosses in front of the Common Bile Duct from right to left.
- ▶ The cystic duct can connect to the left hepatic duct directly or to either side of the common hepatic duct.
- ▶ The discovery of abnormal intrahepatic portal venous branching and/or the radiological absence of segment IV should raise the possibility of other anatomical abnormalities as well as the suspicion of a gallbladder on the left side.


TECHNIQUE OF LAPAROSCOPIC CHOLECYSTECTOMY IN LEFT GB

- ▶ The anatomy of the bile duct can vary, which can make cholecystectomy more difficult to perform and increase the risk of complications.
- ▶ The technical modification required for Laparoscopic Cholecystectomy in Left Sided GB are:
 - Port is changed to a working port for the right hand below the left costal margin.
 - A potential second left subcostal port can be inserted.
 - Retracting the falciform ligament (with or without dividing it) and separating the left liver.

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- ▶ The cystic duct and cystic artery are separated from the gallbladder wall in the lower third of calot's triangle to obtain the critical view of safety.
 - ▶ This ensures that the common hepatic duct is correctly identified since the gallbladder's neck crosses it.
 - ▶ A "fundus first" laparoscopic dissection method for left sided gallbladders is associated with a high incidence of bilio-vascular injuries at laparoscopic cholecystectomy.
 - ▶ Failure to stay on the gallbladder and dissecting down the liver can lead us to the left side of the hilum, therefore fundus-first dissection technique has a high risk of common bile duct injury in the left sided gallbladder.
 - ▶ The decision of open conversion is frequently contested.
 - ▶ The right dissection technique is thus essential to prevent the common bile duct injury in the context of left sided gallbladder.

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THANK YOU