# Case Report and Management Review of a Hepatic Subcapsular Biloma after Laparoscopic Cholecystectomy

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## Introduction

Bile leaks are known complications of laparoscopic cholecystectomy (LC) affecting roughly 1% of patients.

Bile leaks, gallbladder fossa bilomas, and biliary peritonitis are well-studied complications and managed according to established practices and guidelines.

However, the postoperative formation of hepatic subcapsular bilomas (HSBs) is a rare complication without specific recommendations on management.

## Case

67-year-old female with a PMHx of CAD s/p PCI, HTN, HLD presented with epigastric abdominal pain. The diagnosis of gallstone pancreatitis was made. After resolution of the pancreatitis and normalization of LFTs, she underwent an uncomplicated Laparoscopic Cholecystectomy and was subsequently discharged.

She represented on postoperative day 17 with right upper quadrant (RUQ) pain and a palpable RUQ mass. CT revealed a 13 cm x 17cm x 24cm subcapsular hepatic fluid collection, with mass effect causing IVC compression.

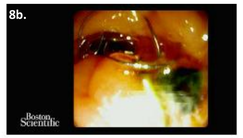
Percutaneous drain placement immediately yielded 3L of bile, consistent with a diagnosis of a Hepatic Subcapsular Biloma (HSB).

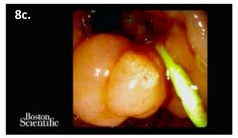
After an initial unsuccessful endoscopic retrograde cholangiopancreatography (ERCP), repeat ERCP retrieved a retained stone in the common bile duct (CBD) not seen on MRCP. A sphincterotomy was performed and a biliary stent was endoscopically placed.

She was discharged with the percutaneous drain when clinically stable.

Biliary stent was endoscopically retrieved approximately 1 month post placement.




## CT Imaging

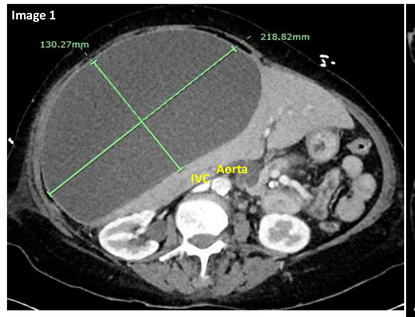
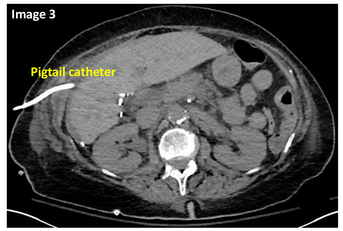
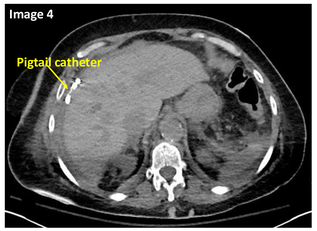






**Image 1.** CT Abd/Pel Axial view demonstrating HSB with mass effect and IVC compression. **Image 2.** Coronal view of HSB. **Image 3 and Image 4.** Axial view of post-percutaneous catheter drainage with resolution of HSB and mass effect.




## ERCP










**Image 5.** ERCP Fluoroscopy of biliary tree prior to balloon sweep. **Image 6.** Biliary tree post-sweep. **Image 7.** Post-CBD stenting. **Image 8a.** Endoscopic sphincterotomy. **8b.** CBD stent placement with retained stone. **8c.** CBD and pancreatic stents deployed.

## Results

Seven (7) additional reports of similar post-laparoscopic cholecystectomy HSBs were identified on literature review.

Most common indication for LC was acute cholecystitis (62.5%).

Median presentation of HSBs was 13.5 ± 2.4 days postoperatively. 7 of 8 cases developed HSBs affecting the right hepatic lobe.

All underwent percutaneous drainage. 50% of cases went on to receive subsequent ERCP.

Percutaneous drains were removed in 6 ± 2.7 days post-placement.

| Patient | Preoperative Diagnosis | Postoperative Presentation (Days) | Drain Removal (Days) | Intrahepatic Laterality | HSB Managment |
|---|---|---|---|---|---|
| 51M | Biliary Colic | 14 | 7 | R | Drain+ERCP |
| 72F | Acute Chole | 4 | 21 | L | Drain |
| 59M | Acute Chole | 13 | *x* | R | Drain |
| 74F | Acute Chole | 12 | 5 | R | Drain+ERCP |
| 70F | Acute Chole | 11 | 3 | R | Drain |
| 65M | Biliary Colic | 16 | 10 | R | Drain |
| 30F | Acute Chole | 28 | 5 | R | Drain+ERCP |
| 67F* | Gallstone Panc. | 17 | 23 | R | Drain+ERCP |

**Table 1.** Summary of postoperative Hepatic Subcapsular Bilomas identified after laparoscopic cholecystectomy. **Data pertaining to our patient aforementioned in case report. [x]Data not available.*

## Conclusions

Hepatic Subcapsular Bilomas are infrequent complications after laparoscopic cholecystectomy.

Clinically, drainage +/- ERCP has proven to be an effective HSB management.

Further research will help elucidate comprehensive management guidelines including possible risk factors, anatomical predispositions, clinical decision making, or follow-up imaging.

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