Subvesicular Bile Duct Leak After Cholecystectomy of a Sinistropositioned Gallbladder

Juyeon Park, MD, Matthew Madion, MD, Matthew Mancini, MD
University of Tennessee, Knoxville, TN

THE UNIVERSITY OF TENNESSEE KNOXVILLE

Introduction

- A sinistropositioned gallbladder (SPG), or a left-sided gallbladder, is a congenital anomaly that is rare and most frequently discovered intraoperatively.
- Three major variations with SPG
  1. Secondary to situs inversus
  2. Right-sided gallbladder with abnormally located ligamentum teres
  3. True left-sided gallbladder with the gallbladder on the left lobe of the liver

Case Description

- 38-year-old female with history of laparoscopic Roux-en-Y gastric bypass evaluated for mid-abdominal pain with radiation to the left upper quadrant.
- US revealed cholelithiasis with a mildly hydropic gallbladder, trace pericholecystic fluid and a CBD of 7 mm.
- No preoperative indications of SPG.
- Planned for a robotic-assisted cholecystectomy with cholangiogram.

Intraoperative description

- Three robotic trocar ports and a single assistant
- Gallbladder appeared to be located on the left lobe of the liver
- There was inadequate retraction of the gallbladder in that left-sided position
- Clearing of the cystic plate was difficult due to visualization, so a top-down dissection was done.
- The cystic duct was eventually identified and isolated.
- Cholangiogram revealed no evidence of leak
- Patient was discharged the same day.

Figure 1. Bile Leak from Subvesicular Duct

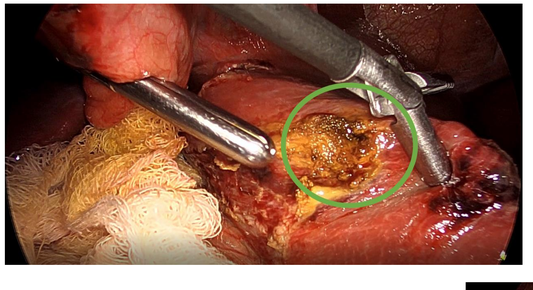
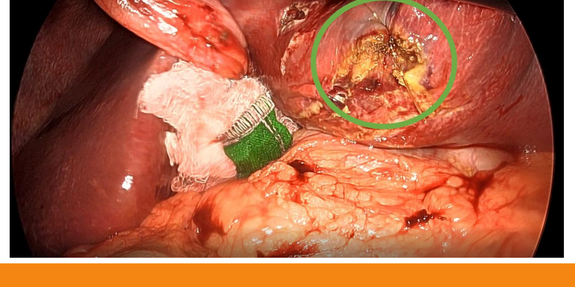


Figure 2. Closed with absorbable suture



Complication

- Returned to ED on POD 3 with right upper pain
- Labs with slight leukocytosis and hyperbilirubinemia.
- CT scan with fluid in the right upper quadrant and HIDA showed concern for persistent bile leak.
- Diagnostic laparoscopy showed a bile leak in the superior aspect of the liver bed, likely a subvesicular duct (figure 1)
- Closed with absorbable suture in a figure of eight fashion (figure 2)
- A drain was placed in the dissection bed
- Discharged on post-operative day two with drain and was removed in clinic follow-up.

Discussion

- In cases of SPG, a high degree of suspicion for other anatomic abnormalities including portal vein, cystic artery, and biliary tract variations should proceed
- Additional adjuncts including altered port position, top-down dissection, cholangiography, and fluorescence imaging should be considered when a sinistropositioned gallbladder is encountered.