

Delayed and Recurrent Bile Leak from Isolated Right Posterior Sectoral Duct (RPSD) after Laparoscopic Cholecystectomy (LC)

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Introduction: Injuries to a right posterior sectoral duct (RPSD) during laparoscopic cholecystectomy (LC) are often unrecognized because the affected liver segment areas (VI/VII) may atrophy. The diagnosis of bile leak from isolated RPSD injury may be difficult secondary to small duct size and normal appearing ERCP.

Methods and Results: A 62-year old female underwent LC 7-years ago. Two years postcholecystectomy, she developed a perihepatic fluid collection, consistent with a bile leak. She underwent percutaneous drainage with ERCP and biliary stent placement. Percutaneous transhepatic biliary drainage (PTBD) was needed due to persistence of bile leak. Bile leak eventually resolved after several weeks. Five years later, she presented with a recurrent bile leak that was percutaneous drained. An ERCP confirmed bile leak possibly from a right posterior sectoral duct (Figure 1A). An internal biliary stent was placed. While a repeat ERCP, two months later was “normal”, she continued to have bilious drain output. Exploratory laparotomy was performed, abscess cavity de-roofed and a 3-mm diameter area of bile leak was identified in the gallbladder fossa. The duct edges were freshened and oversewn using 5-0 polydioxane sutures. Surgical drain and the internal biliary stent were removed on day-10 and 6-weeks later, respectively (Figure 1B). She continues to be asymptomatic 6-months after surgery.

Conclusions: Isolated RPSD injuries after LC may rarely present as delayed, recurrent bile leak, posing a therapeutic challenge.

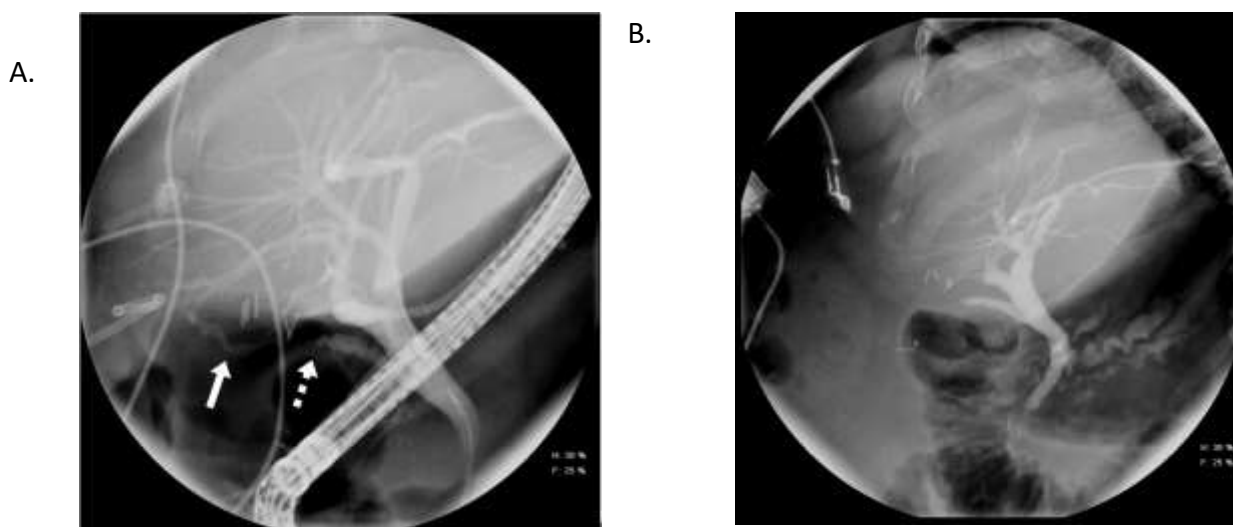


Figure 1: (A) Pre-operative ERCP showing bile leak from RPSD (solid white arrow). Cystic duct remnant (dashed arrow) (B) Post-operative ERCP showing no bile leak.