

Infected Biloma Secondary to Laparoscopic Cholecystectomy

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INTRODUCTION

Biloma is extrahepatic bile collection secondary to iatrogenic or traumatic biliary tree disruption. It is a rare complication of laparoscopy cholecystectomy with an incidence rate of approximately 2.5% [1]. Without proper management, biloma can become infected and cause life-threatening complications such as peritonitis, biliary fistula, bilhemia and hemobilia [2]. Here we described a case of complicated biloma after laparoscopic cholecystectomy.

CASE PRESENTATION

The patient was a 24-year-old female with a past medical history of hypertension, obesity, and recent laparoscopic cholecystectomy complicated by hepatic subcapsular biloma. It was managed by biliary stent placement via ERCP and percutaneous drainage during the previous hospitalization. However, six days later, she presented with fever, chills, nausea, and RUQ pain. Vital signs were fever 102.3 F and tachycardia 110 to 120 per min. Abdominal CT revealed decreased size in perihepatic fluid collection with air bubbles (14 x 11 x 18 cm). It also showed a CBD stent in place and a percutaneous drainage catheter tip in the inferior aspect of the collection. Lab results showed leukocytosis, normal AST/ALT, total/direct bilirubin 2.1/12 mg/dL, and GGT 152 U/L. Broad-spectrum antibiotics were given in ED. The surgery team performed a laparoscopic lavage and discovered that drain was not connected with biloma. Two new drains were placed during the operation. She was discharged with PO antibiotics, and an outpatient follow-up was scheduled for drain removal.

FIGURE

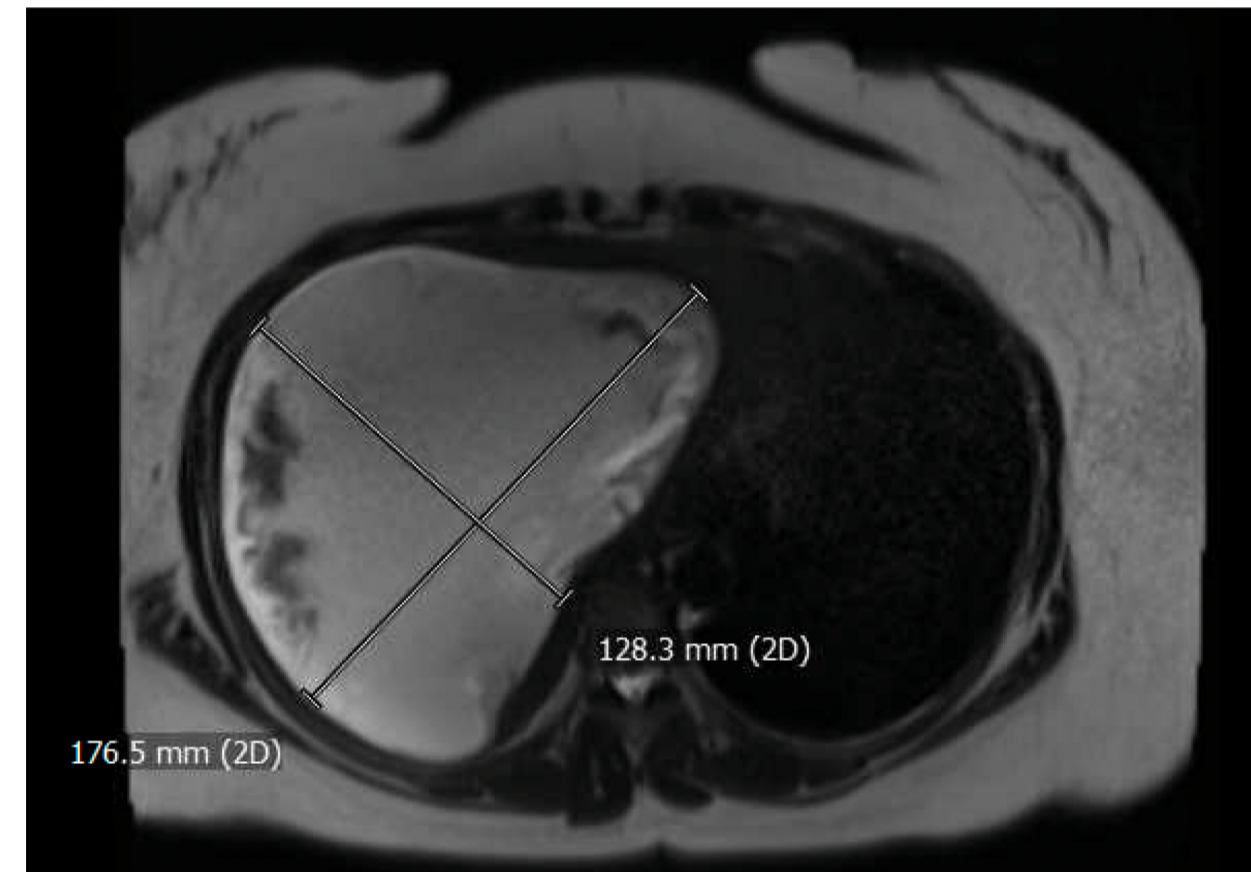


Fig 1. Thick-walled collection extend anteriorly and inferiorly into the left groin region, involving skin surface.

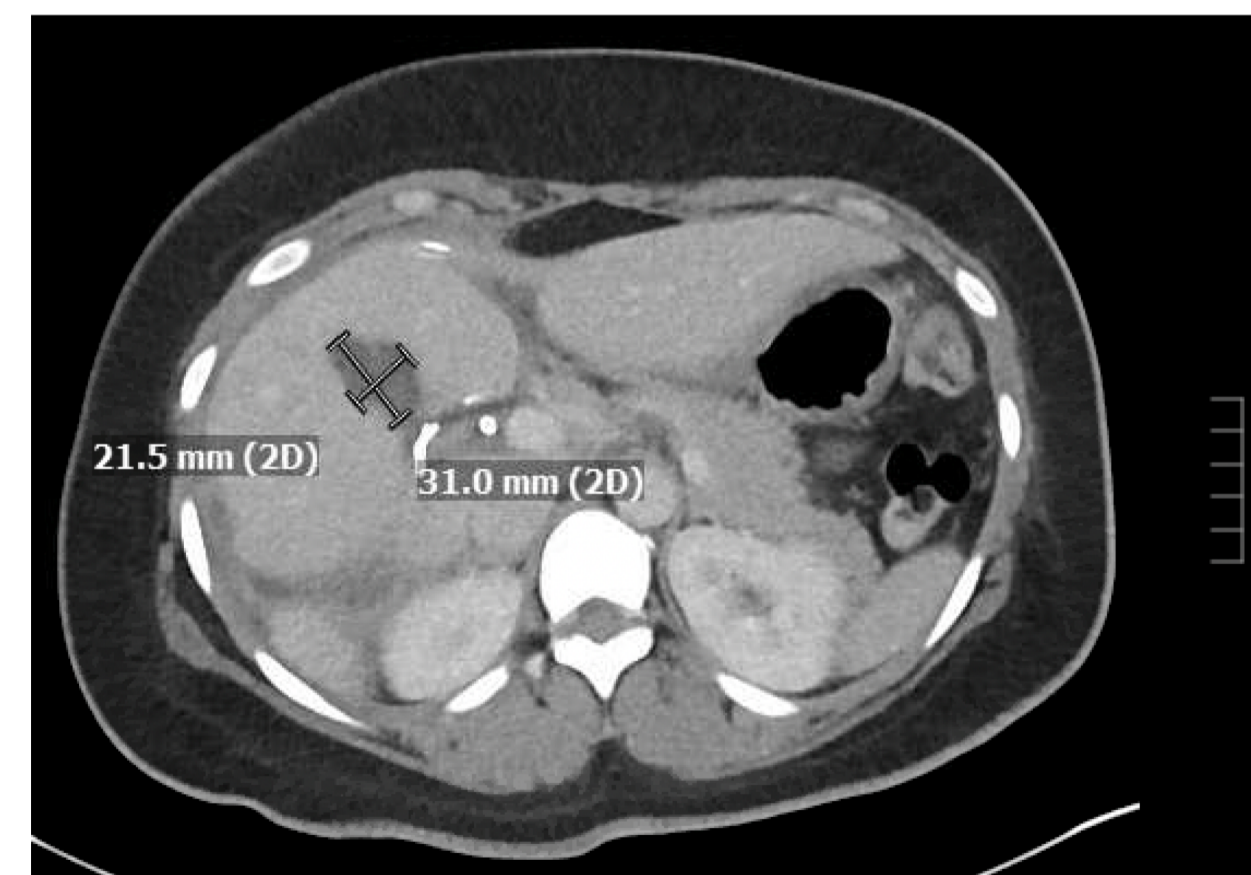


Fig 2. Bile collection in the gallbladder fossa

FIGURE



Fig 3. Coronal view of biloma

CONCLUSION

Iatrogenic biloma can be detected by post-operational physical exams and image studies. It can be managed by biliary stent placement via ERCP and percutaneous drainage. Close monitoring after interventions is crucial, given that unresolved biloma can become infected and lead to severe complications.

DISCUSSION

The management of biloma depends on the severity of the disease. Endoscopic therapy has an 85% to 100% successful rate for post-cholecystectomy biliary leak [3]. It can decrease the transpapillary pressure gradient, thus allowing preferential transpapillary bile flow rather than accumulation at the leaking site. Bile leaks mostly improve rapidly after the placement of a transpapillary stent. However, given that stent placement does not reabsorb formed collection, patients failing ERCP should undergo percutaneous drainage or bile duct repair [4]. EUS-guided drainage has been recently reported as an alternative intervention to the uncomplicated biloma [5]. Laparoscopic lavage with drainage should be considered in unresolved or infected biloma due to the high risk of peritonitis.

REFERENCES

- [1] Tiwari, C., Makhija, O. P., Makhija, D., Jayaswal, S., & Shah, H. (2016). Post Laparoscopic Cholecystectomy Biloma in a Child Managed by Endoscopic Retrograde Cholangio-Pancreatography and Stenting: A Case Report. *Pediatric gastroenterology, hepatology & nutrition*, 19(4), 281–285. <https://doi.org/10.5223/pghn.2016.19.4.281>
- [2] FaisalUddin M, Bansal R, Iftikhar PM, Khan J, Arastu AH. A Rare Case Report of Biloma After Cholecystectomy. *Cureus*. 2019 Aug 22;11(8):e5459. doi: 10.7759/cureus.5459. PMID: 31656709; PMCID: PMC6812693.
- [3] Giri S, Sundaram S, Darak H, Kumar S, Bhatia S. Outcomes of Endoscopic Management among Patients with Bile Leak of Various Etiologies at a Tertiary Care Center. *Clin Endosc*. 2020 Nov;53(6):727-734. doi: 10.5946/ce.2020.017. Epub 2020 Aug 21. PMID: 32819052; PMCID: PMC7719417.
- [4] Desai A, Twohig P, Trujillo S, Dalal S, Kochhar GS, Sandhu DS. Clinical efficacy, timing, and outcomes of ERCP for management of bile duct leaks: a nationwide cohort study. *Endosc Int Open*. 2021 Feb;9(2):E247-E252. doi: 10.1055/a-1322-2425. Epub 2021 Feb 3. Erratum in: *Endosc Int Open*. 2021 Feb;9(2):C2. PMID: 33553588; PMCID: PMC7857965.
- [5] Shami, V. M., Talreja, J. P., Mahajan, A., Phillips, M. S., Yeaton, P., & Kahaleh, (2008). EUS-guided drainage of bilomas: a new alternative? *Gastrointest Endosc*, 67(1), 136-140. doi:10.1016/j.gie.2007.07.040