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CASE REPORT

Biloma At The Lesser Sac Post Laparoscopic Cholecystectomy

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Abstract: Biloma after a laparoscopic cholecystectomy is a result of injury to the biliary tree. Most commonly the injury is due to an inadequately secured cystic duct stump, an accessory bile duct which seen in 2% of patients or duct of Luschka. In this case we describe biloma at the lesser sac after laparoscopic cholecystectomy.

Keywords: bile ducts injury, biloma, laparoscopic cholecystectomy

Introduction

A laparoscopic cholecystectomy is one of the most commonly-performed surgical procedures, as it considered the gold standard for the surgical treatment of gall stone disease.[1]

In spite of the many advantages of laparoscopic cholecystectomy compared to open cholecystectomy regarding post-operative pain, betteraesthetic, shorter hospital stay and absence from work, the overall bile duct injuries rate in laparoscopic cholecystectomies remain higher than that of the open procedure.[2]

Incidences of iatrogenic biliary injury in laparoscopic cholecystectomies is 0.6% while in the open procedure it is 0.1%.[3] Iatrogenic bile duct injury can lead to leakage or stricture (as a late complication).[4]

Bile leakage after a cholecystectomy can cause intra abdominal collection, fistula or life-threatening bile peritonitis in a large leak, but in case of a small leak it will usually form biloma.[4]

Biloma is described as a collection of bile within the abdomen, usually secondary to bile duct disruption.[5]

The majority of bilomas are iatrogenic and follow transhepatic cholangiography, liver biopsy, ERCP, cholecystectomy, external trauma or spontaneous biloma.[5] This is most commonly found at the gall bladder fossa or around the liver.

The literature review shows few cases with biloma at the lesser sac as a result of laparoscopic cholecystectomy.[6,7]

Case Report

A 28-year-old female presented to our clinic having had symptomatic gall stones for 2 years. All her laboratory investigations were within the normal range, however an ultrasound revealed multiple gall bladder stones.

During the laparoscopic cholecystectomy there was a stone impacted at the neck of the gall bladder surrounded by thick tissue.

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During the dissection of Calot's triangle there was bile coming into the area (Figures 1 and 2) so careful dissection continued until we could clarify all anatomy.

There was a small injury to the right accessory hepatic duct.

After completing the cholecystectomy and extracting the gall bladder, flashing of the common bile duct was carried out through the cystic duct stump, after which a drain was inserted at the subhepatic area and the surgery was complete. The patient was reviewed post-operatively.

On day 1 post-operation the patient had no abdominal pain. The total bilirubin was 18.3(5.1–17.1), direct bilirubin was 6(0–3) and the drain was 30 mL serosangeous.

MRCP show minimal collection at the lesser sac and no obstruction in the common bile duct or dilatation in the biliary tree.

Follow-up laboratory investigations show normal liver function and normal WBC.

On day 5 post-operation the patient was asymptomatic and the drain was 10 mL serous.

An ultrasound was carried out and showed a collection of fluid at the epigastric area (Figure 3)

A CT scan showed a 15 × 15 cm collection of fluid at the lesser sac with the drain tube in the gall bladder bed and no collection of fluid at the perihepatic area (Figure 4)

Ultrasound-guided drainage was carried out, and revealed bile.

The drain was kept in place for 12 days until there was no more bile and an ultrasound showed no collection of fluid.

After the removal of the drain the patient was discharged.

The patient was followed up weekly in an outpatients' clinic for 2 months. There was no further abdominal pain, a liver function test came back normal and a follow-up ultrasound showed no collection of fluid.

Figure 1 Site of injury to the ARHD after extraction of the gall bladder.

Figure 2 Site of injury to the ARHD after extraction of the gall bladder.

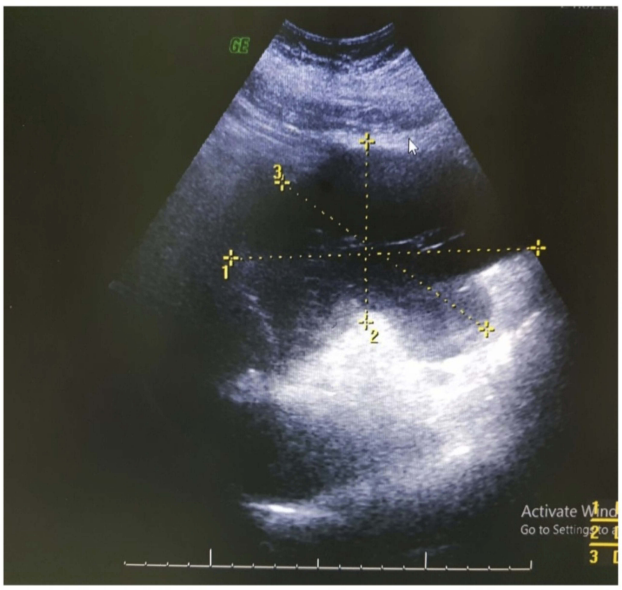

Figure 3 Collection of fluid at the epigastric area.

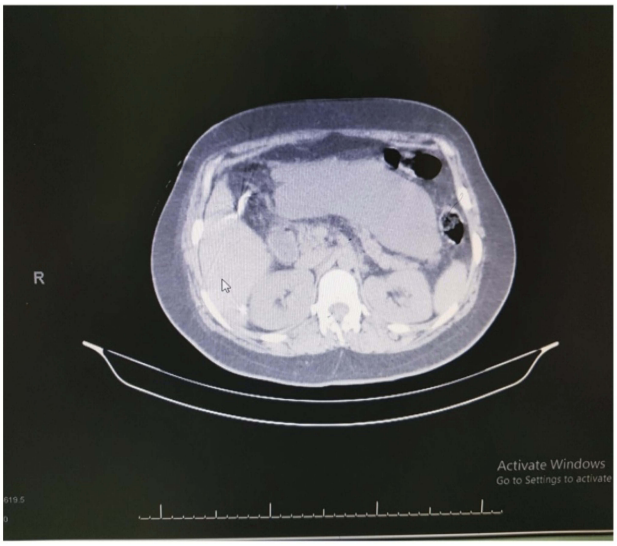

Figure 4 A collection of fluid at the lesser sac.

Discussion

Biloma was first reported by Gould and Patel in 1979.[8]

Biloma after a laparoscopic cholecystectomy can be the result of an accessory right hepatic duct, cystic duct, duct of Luschka or injury to the main biliary ducts.[6]

They usually present with right upper quadrant or epigastric pain, abdominal distention, fever and leucocytosis. Sometimes, extrinsic compression to the bile duct or duodenum could cause obstructive jaundice or gastric outlet obstruction.[4] These are diagnosed by ultrasound, MRCP, CT, HIDA scan or ERCP.[3]

The presence of a drain post-operation is not very sensitive for bile leak and in highly susceptible patients an imaging study can show biloma in unusual sites, such as the lesser sac.

Treatment depends on the severity of the condition and range from an ERCP and sphincterotomy or stent placement drainage to hepatico jujenostomy.[3,9]

The drainage of a biloma because of partial injury of the accessory duct was acceptable as a first step in management, as further steps depend on the patient's progress.[10]

Lesser sac biloma management depends on presentation, but guided drainage by ultrasound can provide excellent results.

Conclusion

A post-laparoscopic cholecystectomy drain is not sensitive enough to rule out bile leak. In highly susceptible patients an imaging study is the best diagnostic tool for early diagnosis.

Ethics Statement

Written informed consent was obtained from the patient for publication of the case details and accompanying images.

Institutional approval is not required to publish the case details.

Acknowledgments

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Disclosure

The author reports no conflict of interest in this work.

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