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Original Research Paper

General Surgery

POST CHOLECYSTECTOMY BILOMA – A RARE CASE REPORT

Dr. Sandesh T R JR 2 Department of General Surgery, Burdwan Medical college

Meghasriti* UG final year MBBS, Burdwan medical college. *Corresponding Athor

ABSTRACT

INTRODUCTION: Biloma is an encapsulated collection of bile outside or inside the biliary system within the abdominal cavity,with an incidence of 0.3%-2%. The most common cause of spontaneous biloma is choledocholithiasis.

CASE PRESENTATION: A 27-year-old male post op open cholecystectomy patient complaint of pain in the right upper quadrant and bilious content in abdominal drain on post op day 2 after open cholecystectomy for chronic calculus cholecystitis. He was diagnosed as biloma in a case of post open cholecystectomy by using USG W/Aand MRCP to rule out obstructive pathology and he was treated with pigtail catheter percutaneous drainage under USG guidance.

CONCLUSION: Biloma is a rare post operative complication. Early diagnosis and prompt treatment can prevent life-threatening complications. Surgeons should include bilomaas a differential diagnosis while excluding other causes for right upper quadrant pain. USG-guided percutaneous drainage is an affordable treatment for biloma with best results.

KEYWORDS : Biloma, Open cholecystectomy, Ultrasound, Complication, Percutaneous drainage.

INTRODUCTION

Post cholecystectomy syndrome (PCS) is defined as a complex heterogeneoussymptoms, consisting of upper abdominal pain, dyspepsiawhich recur/persist after cholecystectomy.It includes firstly **biliary disorders** which manifests usually because of incomplete surgery which takes into account retained calculi in cystic duct remnant or in the common bile duct or operative complications like bile duct injury/bile leakage,and secondly **non biliary disorders** possibly unrelated to cholecystectomy.

Post operative biliary leakage is subdivided intobiloma,bilary fistulaandbilhemia. A bilomais defined as an intra abdominal collection of bile which is diagnosed by ultrasound,computed tomography ,magnetic resonancecholangiopancreatography,nuclear medicine cholescintigraphystudies,and percutaneous transhepaticcholangiograms (PTC).

Biliary leaksmay occur within 1-week postoperatively, but delayed clinical presentation my occur up to 1 month postoperatively.[1,2]

The clinical presentation of a patient with a postoperative biliary leak may include right upper quadrant pain, nausea, vomiting, anorexia, and fever. Laboratory findings may include leukocytosis and abnormal liver function tests. Leakage of bile can lead to the formation of a biloma, a discrete collection of bile outside the biliary tree. Postcholecystectomyleaks can occur from injury to the common bile duct, cystic duct stump, or small ducts that drain from the gallbladder fossa directly into the biliary system, known as accessory ducts of Luschka.

CASE PRESENTATION

A 27 year old male Patient was diagnosed as chronic calculus cholecystitiswho hadundergone open cholecystectomy on 30/08/2019 in Burdwan Medical College after thorough investigation which included pre op USG W/A indicating gall bladder that contained multiple calculi the largest among them being 1.2 cm.Intraoperatively hugely distended gallbladder and hypertrophied hartsman pouch was found, later abdomen was closed after placing an abdominal drain in thehepatorenal pouch of morrison. On post op day 2 ie01/09/19- 500ml bilious fluid was found in the abdominal drain bag after which 200ml perday was the output till 1 week. Till this time the patient laboratory findings as well as vitals were within normal limits. The patient presented with no clinical icterus and was afebrile. Abdomen soft, patient was passing stools normally. On the 8th day i.e. 7/09/2019 the liver function test came out to be normal.

MRCP was done on the 10/09/19 where we found well defined soft tissue lesion at gall bladder with dilated CBD and IHBR with obstructed biliary disease the obstruction being at distal CBD. On 11/09/2019 the drain output was found to be <50 ml /day, patient was clinically anicteric, afebrile, abdomen was soft. On 13/09/2019 the drain output was <20ml/day but the patient presented with icterus.On 14/09/2019 Total bilirubin was 12.5 mg/Dl, conjugated bilirubin was 9.2 mg/Dl, ALP-420, SGOT/SGPT- 299/285, TLC-7300 and USG W/Adone on 14/09/2019 showed $5\times4.8cm^2$ sub-hepatic collection (loculated) with CBD dilated(1.4cm) with cut off of distal part, also the pancreas was found to be heterogenous containing calcific foci with post acoustic shadow, Drain output was less than 20ml/day. On 16/09/2019 total bilirubin was 19.3 mg/Dl, conjugated bilirubin was 9.2mg/Dl, unconjugated bilirubin was 10.1, SGPT/SGOT- 151/164,ALP-210. USG W/A was repeated on 21/09/2019 where 130cc fluid was noted in gallbladder fossa and also a110cc collection was noted beside it. On 24/9/2019 USG guided PCD was placed in two sites of Biloma under LA under ASP. Again USG W/Awas done on 1/10/2019 where we found minimal organized collection in GB fossa and also adjacent to it another collection. Both the PCD tubes were removed. CBD was 16.4mm dilated.
Later patient was on regular follow up for once in a month with USG W/A for a duration of about 6months, now patient presented with no fresh complaints with recent USG W/A showed no collections or any abnormalities.

DISCUSSION

Loculated collection of the bile outside the biliary tract within the abdominal cavity is called biloma and most common location is subhepatic space. The most common cause of spontaneous biloma is CBD stones and other causes are abdominal trauma and surgery, bile duct tumors, percutaneous catheter drainage, transhepatic cholangiogram, and ERCP.

The term biloma was first introduced by Gould and Patel in 1979 to describe a well-differentiated collection of bile outside the biliary tree.[3]Kuligowska et al. extended the term to include also intrahepatic collection of bile.[4]

Now a days, both intrahepatic ad intra-abdominal collection of bile is called biloma.[9]Althoughbile collection in the

peritoneal cavity is a well-described complication after open or Laparoscopic Cholecystectomy.[5-8]

According to the study by Vazquez et al., bile collection is usually encapsulated when it occurs quickly in a short period and it can cause peritonitis, but if the leakage and collection occur slowly, there is only mild inflammation of biliary tract and peritoneum.[10]

In our case report, the patient had developed encapsulated biloma as a consequence of cholelithiasis. Most of the cases reported till now of biloma are not spontaneous and usually accompanied by other diseases.

If biloma is small, usually no treatment is required and only observation is enough. The treatment depends on the severity. The surgery was the only main treatment option for biloma in the past but nowadays due to availability of advanced radiological intervention other options are available. Surgery can be done only for biloma with persistent leakage or for treating underlying disease[11]. Most postoperative bilomas are managed by percutaneous drainage with the placement of stent endoscopically or nasobiliary. If the drainage and conservative treatment with broad-spectrum antibiotic therapy fail, the advanced management with stent placement for prolonged drainage, micro-coil, and ethanol intrahepatic embolization would be the treatment options[12,13,14,9].

Biloma can get infected and can cause life-threatening complications such as peritonitis,hemobilia,biliopleural fistula which can lead to empyema, bilhemia.

In our case report patient had underwent USG guided percutaneous catheter drainage under LA and both PCD were removed after 8 days when USG W/A showed minimal organized collection and patient was on regular follow up for a duration of about 6 months and no life threatening complications occurred after this procedure.

CONCLUSION

Biloma is a rare post cholecystectomy complication which comes under post cholecystectomy syndrome biliary causes. Can become colonized by bacteria and become infected whenitsundrained. Early diagnosis and prompt treatment can prevent life-threatening complications. Surgeons should include biloma as a differential diagnosis when excluding other causes for right upper quadrant pain. USG-guided percutaneous drainage is an affordable treatment for biloma with best results.

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