



Retroperitoneal Abscess due to Lost Gallstones Mimicking Sarcoma Case Report and Literature Review

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Abstract

Laparoscopic Cholecystectomy (LC) has become a standard treatment for symptomatic gallstone disease. Lost gallstones following LC are normally considered harmless but can, in rare cases, result in abscess formation. We report a case of a 73-year old female presenting with a “12x6 cm, 12x7 cm retroperitoneal mass involving the right peri renal space, right abdominal wall and with extrinsic compression of the hepatic capsule” on CT, presumed to be retroperitoneal sarcoma. After wide excision of the mass with identification of gallstones within it, the histopathology revealed an inflammatory mass of biliary origin. Although rare, abscesses from lost gallstones can mimic retroperitoneal sarcomas, and so it is important to be aware of this challenging diagnosis. Retrieval of lost gallstones during LC is recommended to avoid this rare yet troublesome complication.

Keywords: Abscess; Sarcoma; Cholecystectomy; Gallstones; Surgery

Introduction

Laparoscopic cholecystectomy (LC) is the gold standard treatment for symptomatic cholelithiasis and although it is a safe procedure, two complications are more common with LC in comparison to open cholecystectomy: Bile duct injury and complication relating to lost gallstones [1-6]. The estimated incidence of gallstone spillage during LC is 13% - 40% [7]. Contrary to bile duct injury, which has decreased with the increasing experience of laparoscopic surgeons, the incidence of complications related to lost gallstones has remained stable. Despite the relatively high rate of gallstone spillage, the complications relating to such spillage are extremely rare, with the estimated abscess formation due to gallstones post-LC being approximately 0%, 3% [3]. We report a case of a fistula ting abscess due to spilled gallstones mimicking a retroperitoneal sarcoma.

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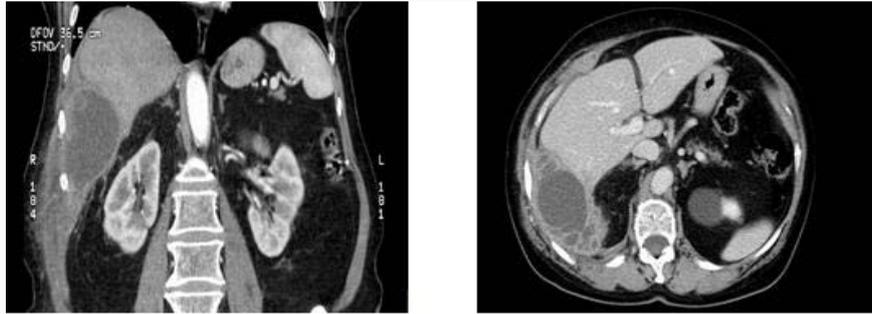
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Case Presentation

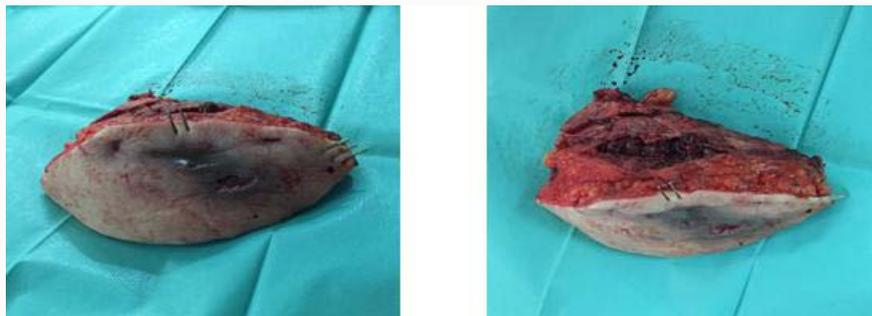
A 73-year-old female, with a previous surgical history of laparoscopic cholecystectomy for symptomatic cholelithiasis, 2 years before, was referred to our unit after presenting with a 2 month history of right thoraco-abdominal pain, associated to a hard, adherent 6 cm mass, with inflammatory signs. The patient's blood work was unremarkable. Thoraco-abdomino-pelvic Computer Tomography Scan (CT) showed a 12x6 cm, 12x7 cm retroperitoneal mass involving the right peri-renal space, right abdominal wall and with extrinsic compression of the hepatic capsule”. A core-needle biopsy was taken, with the histopathology revealing only inflammatory and necrotic tissue. The case was discussed at our multidisciplinary team meeting and, in view of the tumor (Figure 1,2) growth; the patient was proposed to undergo surgical excision of the mass. While on the waiting list the patient presented with spontaneous purulent discharge from the tumoral mass, with increased Celsius signs. Was admitted for 7-day intravenous antibiotics followed by surgical excision of the tumoral mass. A wide excision with partial resection of the 12th right rib *en-bloc* was performed, with immediate wound closure; during surgery gallstones were identified within the mass. Histopathology showed “inflammatory process extending from the epidermis to the striated muscle tissue, and the presence of cholesterol gallstones, compatible with inflammatory process of biliary origin.” The patient was discharged from the ward on post-operative day 4, is currently on year 2 of follow-up, and remains asymptomatic. Later investigation showed that gallstone spillage was reported during the LC (Figure 3-5).

Discussion

Laparoscopic Cholecystectomy has become the treatment of choice for patients with



Figures 1, 2: CT scan showing retroperitoneal mass.



Figures 3, 4: Surgical specimen.



Figure 5: Post-surgical excision aspect.

symptomatic cholelithiasis [4]. With morbidity rates ranging from 2% to 11%, it minimizes mortality rates in the perioperative period, reduces the length of hospital stay and allows for a faster return to work [5]. Although surgical expertise plays an important role in reducing gallbladder perforation, several predisposing factors have been related to an increased risk for gallbladder perforation such as: acute cholecystitis, male sex, advanced age, obesity and the presence of adhesions [6]. In our case, besides the advanced age, that patient had no other predisposing factors for gallbladder perforation.

Removal of spilled stones can be a difficult process and is often incomplete or avoided altogether [6]. The incidence of lost gallstones in LC is approximately 2%, from which an estimated 8%, 5% will lead to a complication [1]. Predisposing factor for developing complications due to lost gallstones are: older age, male sex, acute cholecystitis, spillage of pigmented stones, number of stones (> 15) or stone size (> 1 cm, 5 cm), and peri-hepatic localization of gallstones [6]. In our case, there was no information available regarding the type of gallstones, its number or size.

If gallstones are spilled in the abdominal cavity during LC,

careful removal of as many stones as possible should be performed immediately. Irrigation and suction posterior to visible stone collection should be performed, taking care not to displace stones into difficult access sites. Most authors do not advise conversion to open surgery for gallstone spillage. Clear documentation of gallstone spillage is recommended for alerting clinicians in the future to the possibility of stone related complications [1]. The most frequent complication of UN retrieved gallstones is the formation of abscesses in different location such as abdominal wall, intra-abdominal or retroperitoneal areas. Fistula formations, hernia sacs, ovary and fallopian tubes containing lost gallstones are among some of the rare complications described for lost gallstones [3]. Abscess formation from dropped stones after laparoscopic cholecystectomy has been reported to have an average presentation time of 4 months to 10 years [5]. The diagnosis of gallstone abscess is usually not easy to make, and it can easily mimic a retroperitoneal sarcoma if characteristic gallstone findings are detected on imaging studies. Retroperitoneal abscess due to gallstone spillage mimicking a sarcoma is rare. In our case, no stones were described in the CT scan, and although there was no pathological evidence of a sarcoma, the growth rate and posterior fistulation prompted a surgical approach. The management of late abscess formation due to lost gallstones depends on its location, but retrieval of gallstones and drainage are advised. This can be done interventionally, laparoscopically, thoracoscopically or by open approach. The drainage of abscess without stone removal is not advised since it often results in ongoing problems, such as abscess recurrence [1].

Conclusion

Complications due to gallstone spillage during LC are rare, nonetheless they can be serious and difficult to diagnose. Every effort should be made to remove spilled stones to prevent future complications, but conversion to open is not routinely advised.

Removal of gallstones is recommended and drainage of any collections is recommended. We presented a rare case of a retroperitoneal abscess due to gallstones mimicking a retroperitoneal sarcoma to highlight the difficulty in the diagnosis and management of such complications following laparoscopic cholecystectomy.

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