Late Complications of Spilled Gallstones During Laparoscopic Cholecystectomy

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Introduction

Laparoscopic cholecystectomy (LC) has become the preferred treatment for patients with symptomatic gallstones. During laparoscopic cholecystectomy, perforation of the gallbladder can occur in approximately 20% of cases, while gallstone spillage occurs in approximately 6% of cases. Finding and removing all of the spilled gallstones can be time consuming and is often difficult. In most cases, there are no consequences of spilled gallstones. These unretrieved gallstones can lead to the formation of an abscess, abdominal wall mass, or a persistent sinus. Herein we report a case of intraperitoneal abscess and persistent sinus of the abdominal wall after an emergent laparoscopic cholecystectomy in a 63-year-old man with an acute cholecystitis and perforation of the friable wall while retrieving gallbladder specimen through the port. This case report highlights the possible rare long-term complications of spilled gallstones following laparoscopic cholecystectomy and various measures to prevent it.

Case report

A 63yr old male patient presented with two months history of increasing right flank pain, low grade fever, weight loss following an uneventful Laparoscopic Cholecystectomy (LC) three months back. There was a history of spillage of the gallstones into the peritoneal cavity while retrieving the edematous gallbladder during LC. Initial work up with USG revealed sub-hepatic abscess (5 cm x 8 cm). CT abdomen showed a loculated hypodense collection with thick enhancing walls and multiple thin enhancing septations within right subhepatic space.[ Figure-1].

Under the cover of antibiotics, exploratory laparotomy with drainage of pus was done and the spilled gallstones were retrieved from the abscess cavity. Post op period was uneventful. Patient presented after 4 months with a discharging sinus in the right lumbar region. Patient was investigated and sinogram revealed a blind tract ending in the peritoneal cavity. Patient underwent a sinus exploration and the track was dissected out completely[Figure-2], the blind end being in the gallbladder fossa with impacted gallstone fragments. Histology of sinus revealed tract lined by granulation tissue. Patient recovered and follow up period of one year was uneventful.

Discussion

The case highlights the myriad presentations of unretrieved spilled gallstones. Laparoscopic cholecystectomy (LC) has been the gold standard treatment for symptomatic gallstones (1). Gallbladder perforation (20%) and stone spillage (9%) were the two most common complications of LC which occurred during the dissection (75%) and removal (25%) of the gallbladder (2)(3)(4). Late complications of spilled gallstones during LC were not well addressed (5). Common late complications due to spilled gallstones are intra-abdominal abscess (4), inflammatory masses, granuloma formation, fistulas and cutaneous sinuses (6). So to prevent such complications care should be taken to avoid gallbladder perforations (GBP) during dissection and retrieval. If it occurs, utmost efforts should be made to retrieve the spilled gallstones. Simple measures to avoid spillage and easy retrieval can be done, like while negotiating the gallbladder out through the dissecting ports majority of gallbladder perforations occur due to large stones being in-situ. This can be prevented by either increasing the size of the incision of the delivering port or by the use of endobags and suction or by crushing the large stones by ring forceps within the endobag. Spreading the greater omentum over the bowel loops in the operative field will prevent the widespread spillage of the stones and also creates a better platform for picking up the spilled stones. A thorough peritoneal wash should always be given at the end of the procedure to prevent abscess formation due to bile and gallstone spillage. So while operating late complications due to spilled gallstones should always be kept in mind to prevent unnecessary morbidity of a relatively safe procedure.

References

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of the American Medical Association 1994; 271: 500-1
Illustrations

Illustration 1

CT abdomen showed a loculated hypodense collection with thick enhancing walls and multiple thin enhancing septations and a stone within right subhepatic space.

Illustration 2

Excised sinus tract
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