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A Curious Case of Retained Gallstone

ABSTRACT

Laparoscopy has become the first choice for cholecystectomy these days. Considering all the benefits of this choice such as lesser post-operative pain and post-operative morbidity, shorter hospital stay, it also brings some complications to the table like CO_2 narcosis, post-op shoulder tip pain, iatrogenic gall bladder perforation in one-third patients. Perforation may cause spillage of gall bladder contents such as sludge and stones. The latter "dropped" stones are retrieved in all but two-third of cases and complications can arise years later if not retrieved. Although the incidence of these complications is low, effort should be taken to retrieve the spilled stone as they can result in a variety of problems. These include abdominal abscess or a fistula formation. Abdominal abscesses may present with fever, abdominal pain and are most frequently located near the liver.[5] Abscesses are much more common than fistulas in these cases. We report a case of a 30-year-old female who presented with pain in the abdomen while passing urine for 3 months. The patient had an operative history of laparoscopic cholecystectomy 2 years ago. She developed similar symptoms to what she has now 1 year ago which was diagnosed and treated as a urinary tract infection at the time. With no relief of symptoms, an ultrasonography and a computed tomography (CT) were done which were suggestive of a mass thick walled soft tissue lesion with central abscess/necrosis/hemorrhage abutting the superior wall of the bladder. On excision biopsy, this mass showed a xanthogranulomatous and foreign body reaction to biliary material with small micro-abscesses. The patient was apparently alright after mass excision till 3 months ago when she again developed similar symptoms and with ascites. Two CT scans and a magnetic resonance imaging later which were all insignificant, we did a diagnostic laparoscopy to find something interesting hiding from all the radiological investigations.

Key words: Laparoscopic Cholecystectomy, Dropped stones, Imaging

INTRODUCTION

Surgeons prefer laparoscopy as the first choice for cholecystectomy in most cases. In these cases, early return to regular activities, short hospital stays, and lesser post-operative pain and morbidity are noted as compared to open cholecystectomy. Although laparoscopy does not come without any complications of its own. The incidence of iatrogenic gall bladder perforations has risen since the advent of laparoscopy. The spillage of gall bladder contents, especially stones warrants their removal to prevent future complications. Athough these complications are rare, there is always an associated risk of the retained stone acting as a nidus for infection and subsequent intra-abdominal abscess formation. There is also a recognized risk of stone eroding through the abdominal wall forming a fistula to the skin, umbilicus, and gluteolumbar region. Abscess formation is much more common than fistulas and presents with non-specific clinical symptoms such as fever and abdominal pain. Stones within abscesses are not always recognized on radiological investigations which is very crucial. Unlike other intra-abdominal abscesses which are treated with drainage and antibiotics, abscesses due to dropped gallstones need the removal of the retained stones, or else the abscess will recur.

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CASE REPORT

A 30-year-old female, with no history of any comorbidities, presented to our clinic with complaints of pain in her abdomen while passing urine for 3 months. The pain was insidious in onset and occurred whenever the patient had an urge to pass urine, while passing urine and for a few minutes after passing urine. The pain was over the infra-umbilical region, sharp, pulling in nature. There were no associated urinary complaints such as burning micturition, hematuria, and no history of fever. The patient had a previous operative history of laparoscopic cholecystectomy done in view of symptomatic

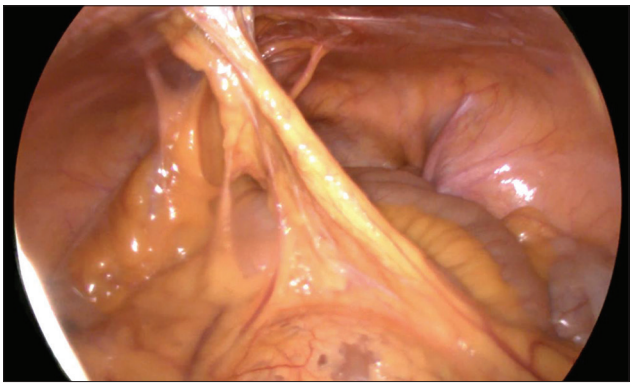

Figure 1: Adhesions of small bowel to anterior abdominal wall

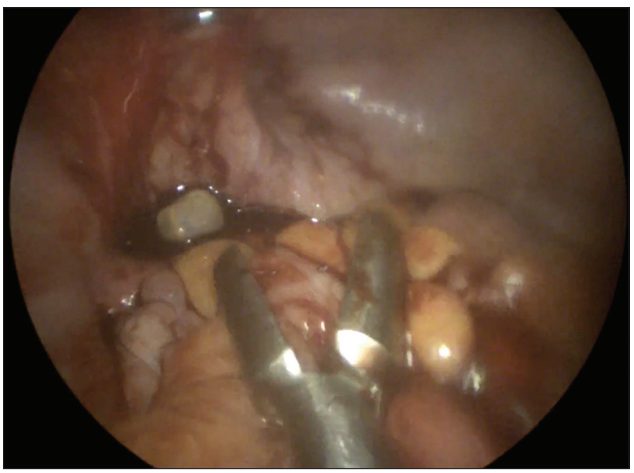

Figure 2: Dropped gallstone being retrieved from the uterovesical recess

cholelithiasis 2 years ago. She then presented with similar symptoms of abdominal pain while passing urine 1 year ago. On investigations, the patient had a thick-walled soft-tissue lesion with central abscess/necrosis/hemorrhage in the supravesical region abutting the superior wall of the bladder. The patient provides another operative history of excision of this mass. A histopathology of this mass suggested extensive xanthogranulomatous and foreign body reaction to (probably) biliary material with small microabscesses. Following this laparotomy the patient was apparently alright till 3 months ago when she developed current complaints and underwent 2 computed tomography (CT) scans and a magnetic resonance imaging (MRI) which were all suggestive of loculated ascites and some adhesions of small bowel to the anterior abdominal wall. Ascitic tapping was done and fluid was sent for investigations which all came back within normal limits.

On examination, there were no positive findings. The patient was advised a diagnostic laparoscopy. Intraoperatively, adhesions of the small bowel to the lower anterior abdominal wall which were cleared and hemostasis was confirmed (Fig. 1). On further exploration, a large gallstone was visualized sitting in the uterovesical recess (Fig .2). This stone was retrieved and no other stones were found on further exploration. The procedure was uneventful. Post-operatively, the patient passed urine and was vitally stable. Oral liquids were started the same day which the patient tolerated. On post-operative day (POD)1, the patient was vitally stable with only mild suture site pain and tolerated a full diet by the same night. The patient being clinically and vitally stable was discharged on POD2.

DISCUSSION

Laparoscopic cholecystectomy has become one of the most common surgeries performed in modern times.[1] With the advent of laparoscopy as the method of choice for cholecystectomy, instances of iatrogenic perforation and spillage of stones have also risen.[2-5] They disseminate throughout the abdominal cavity due to pneumoperitoneum and irrigation.[6] Although rare, these dropped stones have been recognized to cause complications such as abscess formation later.[7] Some even rarer complications include the migration of stones to the pleural cavity due to diaphragmatic defects, especially in the elderly causing pleural empyema, pleural lithiasis, and cholelithoptysis.[4] The need for re-exploration to tackle these complications can be avoided by careful separation of gall bladder from gall bladder fossa during laparoscopy as most perforations occur during this step.[8] Perforation can also occur while delivering the gall bladder out from port and hence extra care should be taken at this step too. Perforation of gall bladder is not considered a major problem by most surgeons and they believe that its harmless[7] even though several studies have established its complications. On CT, dropped gallstones (DGs) with high calcium content appear as one or more calcified high-attenuation foci. Wide window settings are beneficial in discerning calcified stones. Pure cholesterol gallstones and those with low calcium content may go undetected. On magnetic resonance, pigmented DGs may appear as hyperintense on T1-weighted images, whereas other stones are hypointense on both T1- and T2-weighted images. The lack of contrast enhancement is useful for making the correct diagnosis.[5] On ultrasound, DGs appear as mobile hyperechoic foci casting marked posterior acoustic shadowing.[9]

CONCLUSION

Complications of retained gallstones are rather rare. Even though rare, it is advised to retrieve every DG owing to its cumbersome complications. This case has also taught us that radiological investigations are not 100% sensitive to picking up stones. As in this case, ultrasonography, CT, and MRI proved to be of limited use. The lesson learned here is that proper history-taking and clinical examination take us a long way and radiological investigations need only be tools of support in such cases.

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