INTRODUCTION

Laparoscopic cholecystectomy has become the gold standard treatment for symptomatic gallstones. Perforation of gallbladder resulting in spillage of stones is not an uncommon complication.1 Lost stones can migrate to distant sites and cause late complications.2 Spillage of gallstones during extraction of gallbladder from the umbilical or epigastric port sites may result in chronic abscess formation at these sites.3 It is very rare to have gallstones in the sub-costal post site because this is not the site for gallbladder extraction. The presence of gallstone in this port site in this patient remained a dilemma. However, this pathology should be kept in mind when dealing with unusual port site abscess and sinuses after laparoscopic cholecystectomy.

CASE REPORT

A 53 years female, known diabetic on oral hypoglycemic drugs was admitted to the surgical ward through OPD with 2 years history of intermittent discharging sinus from the right sub-costal region. She had history of laparoscopic cholecystectomy from the Middle East 9 years back. Seven years after surgery, she started having itching over the right sub-costal port site scar mark, which was followed by the formation of pustule and later ruptured leading to the discharge of non-odorous pus and serous fluid. Over the following week, discharge decreased both in quantity and frequency. She was treated with antibiotics by the local General Practitioners. She had also history of incision and drainage of the discharging wound twice in the last 2 years.

On local examination, a sinus tract was present in the right sub-costal region in midclavicular line. It was non tender and serous discharge was seen with no signs of inflammation at the time of examination. Her TLC was $8.3 \times 10^6/L$ with 72% neutrophils and ESR was 19 mm after 1-hour. Rest of the baseline investigations including X-ray of the chest did not reveal any abnormality. Ultrasound abdomen showed sinus tract in the subcutaneous space.

A plan of wide local exploration of sinus tract was made after pre anesthesia assessment and patient counselling. An elliptical incision was made around the sinus tract under general anesthesia and deepened to the parietal peritoneum. There were three stones lying in the pre-peritoneal space which were retrieved. Cavity was washed and left to granulate by secondary intention. Histopathology of the specimen showed chronic inflammation with lymphocytic infiltration without evidence of Langhans giant cells or malignancy.

DISCUSSION

Perforation of the gallbladder leading to spillage of gallstones during laparoscopic cholecystectomy is a known entity. Its incidence varies from centre to centre and is dependent upon the pathology, the instruments used

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and the experience of the surgeon. Perforation can occur during fundal retraction, dissection of the gall-bladder bed, grasping at the neck of inflamed gall-bladder, extraction of gallbladder from the port site or deliberate puncture to aspirate bile in grossly distended organ.

A combination of pneumoperitoneum and suction irrigation may be responsible for the migration of spilled stones at unusual sites. Irrigation is usually done through sub-costal port site and small stones and concretions less than the size of irrigation cannula come out with suction. As the pneumoperitoneum is released at the end of the procedure and cannula is taken out, these stones may have lodged in the sub-costal port site. This patient was operated in Middle East and operative notes were not available, so we cannot exactly make out the factors out of the possible listed above were responsible for stone spillage.

The reason behind only few patients with spilled stones developing complications and the wide variation of time interval after surgery and presentation of complications is not clear. Older patients with some co-morbid conditions especially diabetes mellitus are more prone to these complications as in this case.

Effort should be done to prevent spillage of stones by careful dissection and adherence of tissue planes and proper amount of traction on the tissues. Retrieval bags may be used if available to prevent spillage. In case of spillage, stone that can be handled with instruments should be removed and copious lavage should be done to remove any concretions and spilled fragments of stones. The patient should be counseled about this pathology as it is also recommended that this complication should be specifically mentioned in the consent form for laparoscopic cholecystectomy. The rare complications from spilled gallstones range from local septic complications in the liver bed to pelvic abscess, intestinal obstruction, fistula formation, migration in the chest or urinary tract or chronic abdominal wall abscess and fistula formation. Awareness of the surgeons performing laparoscopic cholecystectomy is also important to prevent complications.

Spilled gallstone should be taken seriously. Endorsement in the patient documents should be done regarding this complication and patient should be followed-up closely. High index of suspicion regarding the spilled stones should be kept in a patient presenting with non-healing port site sinuses after laparoscopic cholecystectomy and the same should be mentioned while requesting investigations like ultrasound or CT scan.

REFERENCES