



Case Report

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# Late Onset Abdominal Wall Abscess after Laparoscopic Cholecystectomy



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## Abstract

**Background:** Spillage of gallstones during the extraction of the gallbladder through the abdominal wall incision in laparoscopic cholecystectomy may lead to considerable complications.

**Methods:** We describe an abdominal wall abscess formation in a 50-year-old female that developed 8 months after a laparoscopic cholecystectomy.

**Results:** Undetected spillage of gallstones at the epigastric port site followed by stones migration through subcutaneous plane has led to abdominal wall abscess formation at hypochondrial area 8 months later.

**Conclusion:** Retained stone should be considered in any patient with foreign body in the subcutaneous tissues after a laparoscopic cholecystectomy. The use of a retrieval device avoids stone spillage. Spilled gallstones always should be removed when possible. In delayed presentations of abdominal wall abscesses due to Spilled gallstones, open drainage of the abscess and open retrieval of the stones followed by antibiotics and daily dressing should achieve adequate results.

**Keywords:** Gallstones; Abscess; Laparoscopic complications

## Introduction

Laparoscopic cholecystectomy has become the preferred method for removal of the diseased gallbladder. While its morbidity and mortality rates are lower than those of the open technique, the spillage of gallstones is one of the common complications in Laparoscopic cholecystectomy. The process of removal of the spilled stones can be a difficult and is often incomplete [1]. Many articles reported the delayed complications of intra-abdominal retained gallstones [2]. However, there are fewer reports addressing the delayed presentation of subcutaneous abscess from spilled gallstones [3,4]. The morbidity associated with spilled gallstones is not well studied yet, and little can be found in the literature on this article. We report a case of an anterior abdominal wall abscess at left hypochondrial area presenting 8 months after laparoscopic Cholecystectomy due to retained subcutaneous gallstones.

## Methods and Results

A 50-year-old Sudanese female presented to the emergency department complaining of anterior abdominal swelling in the left hypochondrial area associated with pain and fever. The swelling has started 10 days prior to hospital presentation and

was gradually increasing in size during this period. Patient denied any other gastrointestinal symptoms. In her past medical history, she underwent an uncomplicated laparoscopic cholecystectomy for symptomatic gall stones 8 months earlier with uneventful postoperative course. On physical examination, the patient was febrile with pulse rate of 109 beat / min. BP was 120/75. Her abdomen was not distended and soft with no detectable organomegally. A fluctuant tender mass was present in the left hypochondrial area, with moderate surrounding erythema, and slightly warm overlying skin. Investigations revealed leukocytosis of 13,600. Abdominal Ultra Sound (US) demonstrated an 12x9-cm anterior abdominal wall, complex cystic mass suggestive of an abscess. Drainage under general anesthesia was done (Figure 1). The drained material was about 100mL of pus and retained gall stones (Figure 2). Culture was obtained, and the patient was then admitted for intravenous antibiotics and observation. Bacteriologic cultures of fluid were positive for *Klebsiella*, and *Enterobacter*. The patient did well and discharged home on day 3 with oral ciprofloxacin. Postoperatively, she was free of symptoms at 2-week and wound completely healed within 4-week follow-up visits.



**Figure 1:** Anterior abdominal abscess after drainage.



**Figure 2:** Gall stones extracted after abscess drainage.

### Discussion

Laparoscopic cholecystectomy has become the treatment of choice for patients with gallbladder disease. However, it has increased inherent risks of gallbladder tears and spilled stones, when compared with the open one [5,6]. In some studies the frequency of stone spillage was reported to be from 5.7% to 36% [7]. However, reported complications from retained stones are occurred in only 0.08% to 6% of laparoscopic cholecystectomies [8]. Abdominal wall abscesses represent 18% of all complications from retained stones [9]. Several factors contribute to the causes of retained stones within the subcutaneous tissues. The facts that the incidence increases when the operation is performed for an acutely inflamed gallbladder, in males, the elderly, obese patients, or in the presence of adhesions are noted by Hawasli [10]. Loss of a cystic duct clip, laceration by an instrument, and tearing during retrieval through a port site, are other causes of spillage

of the gallbladder contents [11]. The usage of a retrieval bag is the most efficient method of preventing retained subcutaneous gallstones. It avoids further contamination of the peritoneal cavity and protects the port site from stones or contaminated fluids [5]. Any suspected spillage of stones should be documented clearly in the operative report so that any future complications from such stones can be more easily diagnosed. If a gallstone abscess does occur, as in our case, drainage of the abscess should be performed with retrieve to all spilled stones. Then the patient should be placed on antibiotics to cover the infection.

### Conclusion

Retained stone should be considered in any patient with foreign body in the subcutaneous tissues after a laparoscopic cholecystectomy. The use of retrieval device avoids stone spillage. Spilled gallstones always should be removed when possible. In

delayed presentations of abdominal wall abscesses due to Spilled gallstones, open drainage and retrieval of the stones followed by antibiotics should achieve adequate results.

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