

# “Spilled” Gallstones Causing Abdominal Wall Abscess

S Cheddie, L Allopi, B Singh

## Citation

S Cheddie, L Allopi, B Singh. “Spilled” Gallstones Causing Abdominal Wall Abscess. The Internet Journal of Surgery. 2012 Volume 28 Number 4.

## Abstract

A 45-year-old female presented five months after laparoscopic cholecystectomy for symptomatic cholelithiasis with recurrent abdominal pain and an abdominal mass. CT scan revealed an abdominal wall abscess over the epigastric port site with a subcutaneous hyperdense focus suggesting a “spilled” stone. At surgery, an abscess collection was drained and a gallstone was extruded from the collection. Port site abscesses are a rare complication of “lost” stones and a high index of suspicion must be maintained to appropriately investigate and manage this uncommon complication of laparoscopic cholecystectomy.

## INTRODUCTION

“Spilled” gallstones occur in less than 6% of cases and are often innocuous<sup>1</sup>. The long-term sequelae of this complication include intra-abdominal abscess, abdominal wall abscess, port-site sinus and even lumbar abscess. We report a rare case of port-site abscess following laparoscopic cholecystectomy from a “spilled” gallstone.

## CASE STUDY

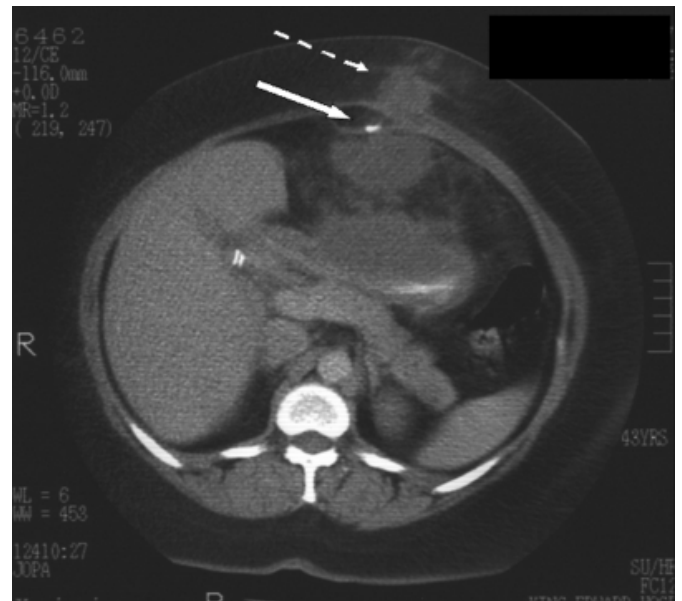
A 45-year-old female patient underwent a laparoscopic cholecystectomy for symptomatic cholelithiasis. The procedure was uneventful; there was no obvious spillage or contamination from the gallbladder. An intact gallbladder was retrieved from the dissecting site without the use of a retrieval bag. The patient was discharged within 24 hours.

The patient returned 4 months later with constant epigastric pain. In view of the abdominal ultrasonography and upper endoscopy revealing no abnormality, the patient was managed conservatively. Two months later the patient returned with an epigastric abdominal wall mass and pain localised to this mass. Abdominal CT scan revealed a hypodense abdominal wall mass in the epigastrium, associated with a hyperdense focus in the region of the port-site through which the gall bladder was retrieved (fig 1).

At surgery, a gallstone measuring 8mm in diameter was found in the abscess collection. The “lost” gallstone may have accidentally spilled from the gallbladder during removal through the port site during the laparoscopic cholecystectomy.

## Figure 1

FIG. 1: CT scan demonstrating an abdominal wall hypoechoic mass (dashed arrow) and a hyperdense calculus within the mass (solid arrow)



## DISCUSSION

Laparoscopic cholecystectomy (LC) is associated with a significant risk of gallbladder perforation with spillage of bile and stones into the peritoneal cavity. The retrieval of the spilled stones is not always possible by laparoscopic technique. The majority of these cases do not complicate but sometimes the lost stones lead to serious complications<sup>2</sup>. The overall incidence of complications from “spilled” stones is 8.5%<sup>3</sup>.

Factors that increase the risk of complications from “spilled” stones include: acute cholecystitis with infected bile, spillage of pigment stones, multiple stones (>15 stones), stone size (>1.5cm), and age<sup>4</sup>.

Current recommendation is not to convert to laparotomy in the pursuit of “spilled” stones. It is recommended that all visible stones should be retrieved. A variety of techniques have been described including the use of a “shuttle” stone collector, 10mm suction device and graspers. With the wider availability of endoscopic retrieval bags, complications related to “spilled” stones are seldom reported. Antibiotics should be commenced if there is evidence of acute cholecystitis or visibly infected bile<sup>4</sup>.

The risk of “spilled” stones may be reduced by careful dissection of the gall bladder from the gallbladder bed, aspiration of a distended gall bladder prior to dissection, use of retrieval devices and port-site flushing.<sup>5</sup>

Late complications such as port site sinus, abdominal wall abscesses and intra-abdominal abscesses must be investigated with ultrasonography and CT scan. Percutaneous techniques to drain abscess collections should be avoided and open drainage or laparoscopic drainage with extraction of the offending stone should be done<sup>3</sup>.

Medico-legal documentation of “spilled” stones during LC is imperative and patients should be counseled on the risk of

possible complications. This will also make the future diagnosis of possible complications easier<sup>6</sup>.

### **CONCLUSION**

“Spilled” stones are a well recognized complication of LC. Conversion to an open operation is not advocated; however, every effort should be made to extract “spilled” stones. Complications may occur in an acute or delayed manner with a myriad of clinical presentations. A high index of suspicion must be maintained and the diagnosis of “spilled” stones should be actively excluded.

### **References**

1. Pavlidis TE, Papaziogas BT, Koutelidakis IM, Papaziogas TB: Abdominal wall sinus due to impacting gallstone during laparoscopic cholecystectomy: an unusual complication. *Surg Endosc*; 2002; 16: 360
2. Hussain MI, Al-Akeely MH, Alam MK, Al-Abood FM: Abdominal wall abscess following laparoscopic cholecystectomy: an unusual late complication of lost gallstones. *J Coll Physicians Surg Pak*; 2010; 20: 763-5.
3. Zehetner J, Shamiyeh A, Wayand W: Lost gallstones in laparoscopic cholecystectomy: all possible complications. *Am J Surg*; 2007; 193 :73-78.
4. Woodfield JC, Rodgers M, Windsor JA: Peritoneal gallstones following laparoscopic cholecystectomy: incidence, complications, and management. *Surg Endosc*; 2004; 18: 1200 -7.
5. Maempel J, Darmanin G, Paice A, and Uzkalnis A: An unusual “hernia”: losing a stone is not always a good thing! *BMJ Case Rep*; 2009; 2009: bcr12.2008.1321. doi:10.1136/bcr.12.2008.1321
6. Tumer AR, Yuksek YN, Yasti AC: Dropped gallstones during laparoscopic cholecystectomy: the consequences. *World J Surg*; 2005; 29: 437-40.

**Author Information**

**S Cheddie, FCS(SA)**

Department of General Surgery, Nelson R Mandela School of Medicine, University of Kwa-Zulu Natal

**L Allopi, FCS(SA)**

Department of General Surgery, Nelson R Mandela School of Medicine, University of Kwa-Zulu Natal

**B Singh, FCS(SA) MD(Natal)**

Department of General Surgery, Nelson R Mandela School of Medicine, University of Kwa-Zulu Natal