CASE REPORT JSLS

Laparoscopic Management of Chronic Abscess Due to Spilled Gallstones

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ABSTRACT

Introduction: Bile and gallstones are spilled during 13% to 40% of all laparoscopic cholecystectomies. They can act as a septic focus and cause complications. We present 2 cases of perihepatic abscess formation due to dropped gallstones presenting some years later. Delayed diagnosis resulted in unnecessary investigations and had negative economic consequences.

Case Description: In 1 patient a posterolateral cutaneous fistula had developed that was initially biopsied by cardiothoracic surgeons before computed tomography showed the cause. The other patient presented with recurrent Pyrexia of unknown origin (PUO) causing repeated absence from work and was diagnosed only after 18 months of medical investigation. Both patients were treated with laparoscopic drainage of the abscess and successful retrieval of all stones.

Discussion: Radiologic and open drainage and retrieval of stones have been well described in these cases. We suggest that a laparoscopic approach is superior because the cavity can be clearly identified and stones visualized and removed under direct vision. The need for a formal laparotomy is avoided. We also highlight the economic burden to both patient and health care professional of delayed diagnosis, as shown in these 2 cases. Spilled gallstones are a recognized complication of laparoscopic cholecystectomy. All stones should be actively sought and removed to avoid complications. Laparoscopic drainage is preferable to open or radiologic drainage. Dropped gallstones should be considered a possible diagnosis in patients who have had a previous cholecystectomy and present with unusual symptoms.

Key Words: Laparoscopy, Cholecystectomy, Lost gallstones, Subphrenic abscess.

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INTRODUCTION

Laparoscopic cholecystectomy (LC) is the gold standard for the treatment of symptomatic gallstones. The incidence of common bile duct injury during LC has decreased over time as experience and technologies have improved. The incidence of gallstone spillage, however, remains unchanged.

Woodfield et al.[1] described the incidence of gallbladder perforation at 18.6%. It has been estimated that gallstones are spilled in approximately 40% of these cases.[1,2] The incidence of "lost" gallstones (i.e., unretrieved spilled gallstones) has been estimated at 16% to 50%.[3–5]

Lost gallstones act as a septic focus and can cause a number of complications. Over 100 case reports and studies document complications after gallstone spillage after LC, and > 40 different presentations are described in the literature.[6]

We present 2 cases of complicated lost gallstones after LC with clinical and socioeconomic consequences. Both cases were treated by laparoscopic drainage of the chronic abscess and successful retrieval of the lost stones, and both patients made a complete recovery.

CASE REPORT

Case 1

A 61-year-old man presented to the general surgical outpatient department 3 years after a difficult LC with stone spillage. He gave a 12-month history of persistent right upper quadrant pain, 8-kg weight loss, loss of appetite, night sweats, and an intermittent pyrexial illness. He was absent from work for a number of days with this illness.

Computed tomography scan showed an abscess with 2 retained stones (**Figure 1**). The patient underwent laparoscopy, during which the abscess was localized (**Figure 2**) and the stones were located (**Figure 3**) and retrieved (**Figure 4**). All his symptoms resolved after the procedure.

Case 2

An 86-year-old man presented to the general surgical outpatient department 5 years after a difficult LC with

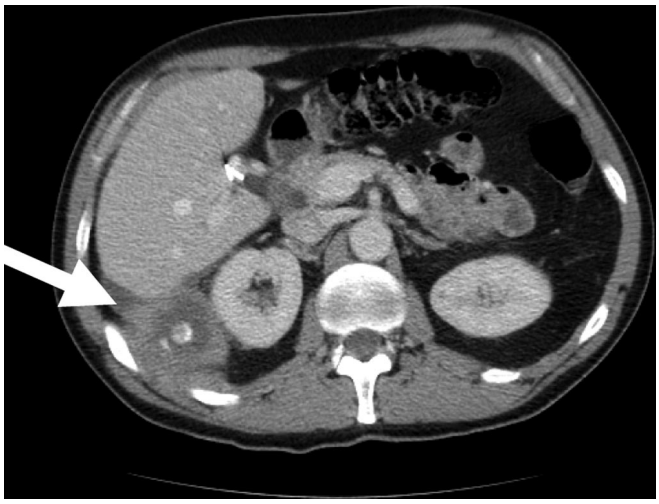

Figure 1. Computed tomography scan showing abscess cavity containing gallstones in case 1. Arrow - Abscess cavity containing gallstones.

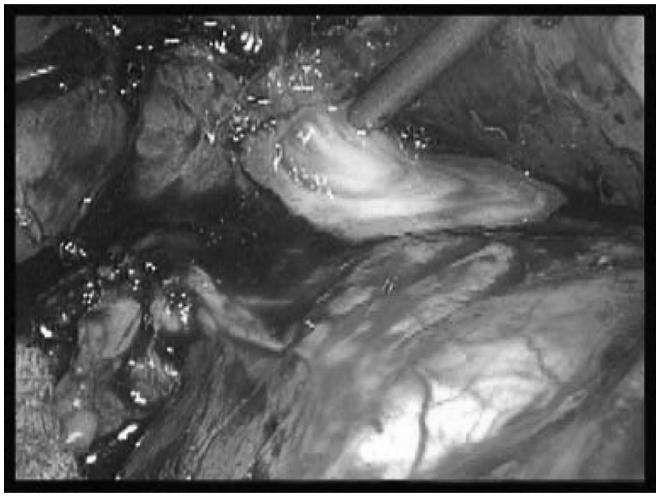

Figure 2. Localization of subhepatic abscess in case 1.

stone spillage. He gave a 12-month history of a chronically discharging fistula on the right side of his back (**Figure 5**). He was initially referred to respiratory physicians, who performed a bronchoscopy and pleural biopsy because the condition was thought to be due to underlying lung pathology. This was subsequently ruled out after normal results. He went on to have a computed tomography scan, which showed a subphrenic abscess containing several "lost gallstones" and an obvious fistulous tract to the skin (**Figure 6**). He underwent laparoscopy and adhesiolysis (**Figures 7** and **8**). The abscess was localized and drained (**Figure 9**), and the stones were retrieved (**Figure 10**). He made a full recovery with complete healing of his fistula.

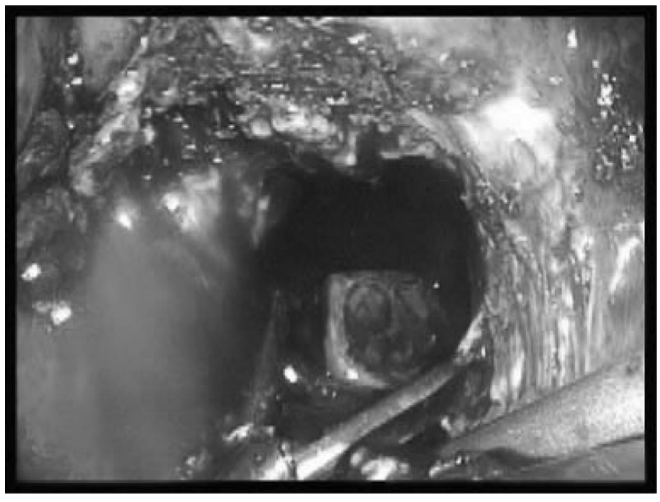

Figure 3. Removal of gallstone from abscess cavity in case 1.

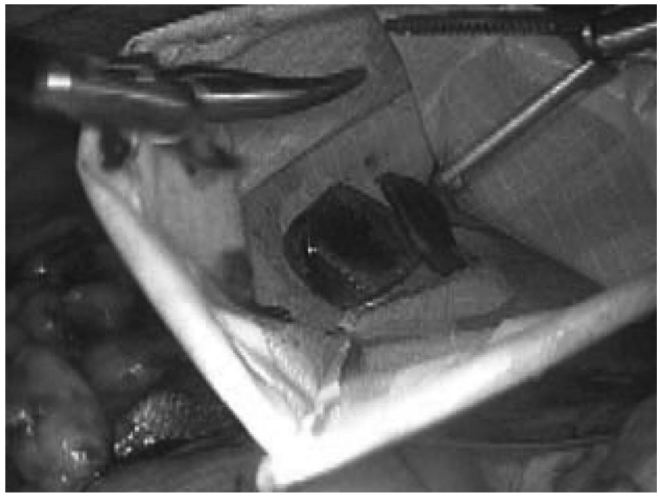

Figure 4. Retrieval of gallstones in case 1.

DISCUSSION

Although lost gallstones were initially thought of as innocuous, it is now recognized that they are a small but significant cause of morbidity in patients who have had complicated LC. Patients can present up to 10 years after the initial operation with unusual symptoms, and the diagnosis of lost gallstones needs to be borne in mind. Primary physicians as well as surgeons need to be aware of this phenomenon because it can often be left untreated for a considerable period, leading to personal as well as health issues for the patient, as shown in case 1. Often, expensive investigations are also performed with little diagnostic value (case 2).

It is important for the surgeon to document clearly whether the gall bladder was perforated and whether

Figure 5. Location of external fistula in case 2. Arrow - external fistula opening.

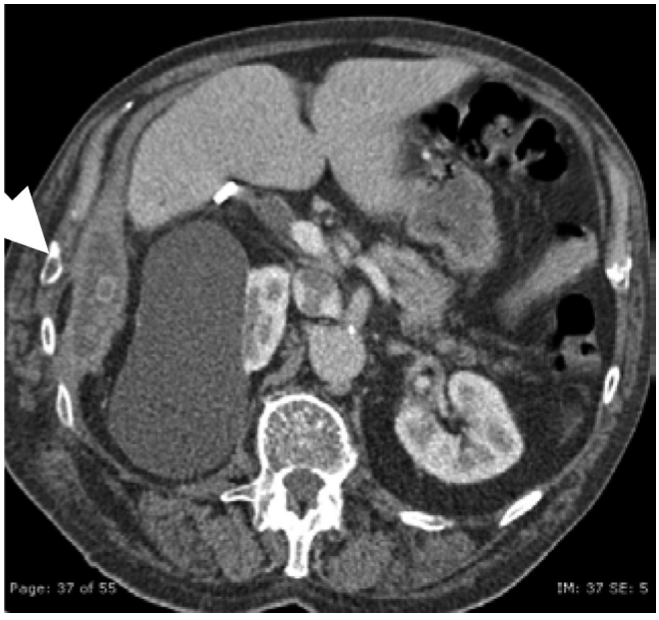

Figure 6. Computed tomography scan showing abscess cavity with several stones (with incidental renal cyst noted) in case 2. Arrow - abscess cavity containing gall stones.

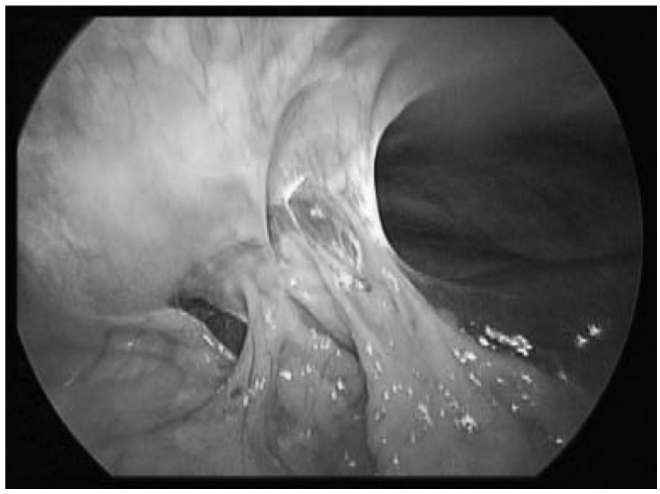

Figure 7. Dense adhesions around abscess in case 2.

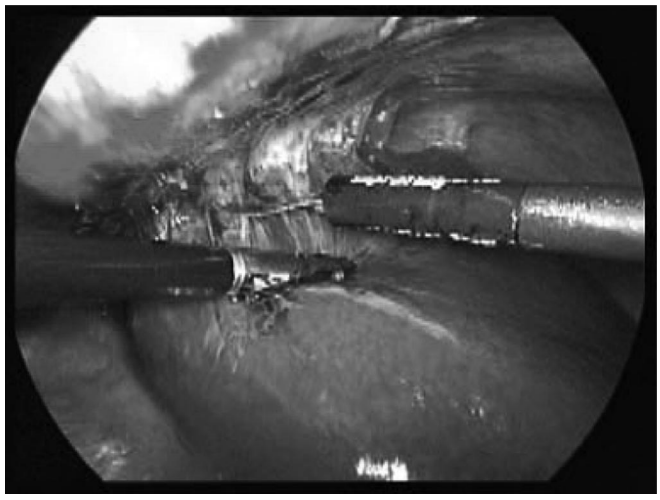

Figure 8. Dense adhesions around abscess in case 2.

stones were spilled during the initial LC. It is also important to make every effort to retrieve all spilled stones.

Radiologic[5,7,8] and open drainage of the abscess cavity has been well described in these situations. Chronic sepsis is due to the presence of these stones, and definitive treatment requires identification and removal of the lost gallstones. This is difficult by radiologic means, and abscesses may recur.[7–9] Open drainage is associated with the added morbidity of a larger wound. Access and identification of the stones may be difficult, and some stones may be inadvertently left behind.[5,8]

We believe that the laparoscopic approach is optimal, as shown by the 2 cases presented. The cavity can be easily

Figure 9. Localization of abscess in case 2.

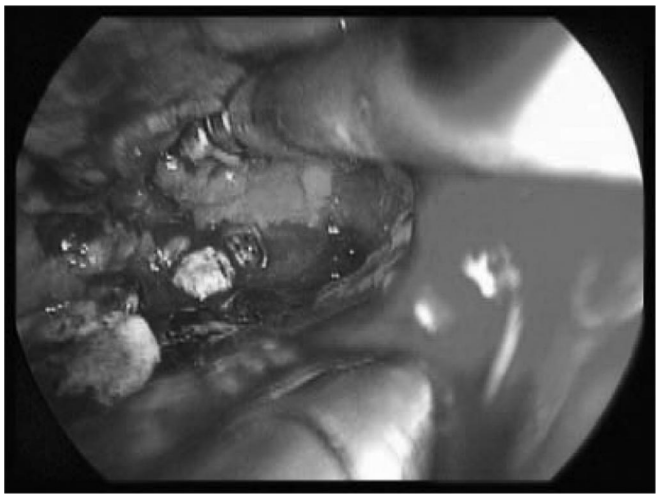

Figure 10. View of stones before retrieval in case 2.

identified and visualized. The abscess can be drained with minimal contamination, and the stones can be clearly identified and retrieved. The added morbidity of an open operation is avoided.

CONCLUSION

Spilled gallstones are a recognized complication of LC. All spilled stones should be actively sought to avoid future complications. Laparoscopic drainage of chronic abscess after stone spillage and retrieval of stones are feasible and safe in experienced hands and are preferable to open and radiologic methods.

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