

Perihepatic Abscess due to Remnant Gallstones Post-Cholecystectomy – Case Report

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Abstract

Background

Intraabdominal abscesses are collections of pus or infected material, surrounded by inflammatory tissues in the abdominal cavity. Clinically they are manifested with fever, abdominal pain, malaise, weakness, change in bowel habits, etc. On physical examination a palpable, swollen and tender mass of the abdomen may be noted. Blood tests may show an elevated number of leucocytes with the predominance of neutrophiles. Also, inflammation markers such as CRP, ESR and procalcitonin may be elevated. Diagnosis of an abdominal abscess is confirmed, but not limited to Computed Tomography, Ultrasound, MRI. Antibiotic therapy may be of use treating the cause of the abdominal abscess, however once the abscess is formed, antibiotics lose their effectiveness. Percutaneous drainage, laparoscopic or open surgery are the options for the definite treatment of intraabdominal abscesses.

Case presentation

Our patient is a 70 years old male with a past surgical history of a laparoscopic cholecystectomy 5 years prior to the current events. He presents to the surgical department for a lumbar region abscess which had been drained three times for the past 6 months. On clinical examination a considerable reddish tumefaction on the right lumbar region evacuates upon incision a moderate amount of odourless pus. An abdominal CT shows a subphrenic and subhepatic abscess with a communicating trajectory from the abscess to the skin opening in the lumbar region. Contrast MRI confirms the presence of numerous stones inside the subhepatic collection. The abscess was drained via open surgery and residual gallstones were removed. The patient recovers well.

Discussion

Only after the development of laparoscopic technique, cases of abdominal abscesses due to residual stones have started to appear in the literature, hence the name “disease of medical progress”. Studies show that between 5-40% of laparoscopic cholecystectomies are complicated by gallbladder perforation and stone spillage, more commonly in acute inflammation cases. 15-50% of the spilled stones are not retrieved and may migrate and cause significant complications. Most of the abdominal abscesses from residual gallstones form in the first year after cholecystectomy, or many years later. Compliances rate following gallstone spillage vary widely from 0.04% to 19%. Cases of acute cholecystitis, male sex, old age, number of lost stones greater than 15, diameter over 15mm and perihepatic localization are predictors of severe morbidity.

Conclusion

There is no clear consensus on the treatment and management of lost gallstones during cholecystectomy, but every attempt should be made to collect spilled stones. Surgeons should document cases of lost and unretrievable gallstones and inform patients, as complications may be rare but severe and demand more often than not open surgery.

Keywords: General Surgery, Laparoscopic Cholecystectomy, Residual Gallstones, Perihepatic Abscess.

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1. Introduction

Intraabdominal abscesses are collections of pus or infected material, surrounded by inflammatory tissues in the abdominal cavity. Clinically they are manifested with fever, abdominal pain, malaise, weakness, change in bowel habits, etc. On physical examination a palpable, swollen and tender mass of the abdomen may be noted. Blood tests may show an elevated number of leucocytes with the predominance of neutrophiles. Also, inflammation markers such as CRP, ESR and procalcitonin may be elevated.

Diagnosis of an abdominal abscess is confirmed, but not limited to Computed Tomography, Ultrasound, MRI.

Antibiotic therapy may be of use treating the cause of the abdominal abscess, however once the abscess is formed, antibiotics lose their effectiveness.

Percutaneous drainage, laparoscopic or open surgery are the options for the definite treatment of intraabdominal abscesses.

2. Case presentation

2.1 History of present illness

Our patient is a 70 years old male with a past surgical history of a laparoscopic cholecystectomy 5 years prior to the current events. He presents to the surgical department for a lumbar region abscess which had been drained three times for the past 6 months. On clinical examination a considerable reddish tumefaction on the right lumbar region evacuates upon incision a moderate amount of odourless pus.

An abdominal computed tomography is ordered, to differentiate between a urinary tract or psoas muscle pathology. The CT shows a subphrenic and subhepatic abscess with a communicating trajectory from the abscess to the skin opening in the lumbar region. Magnetic Resonance with IV contrast confirms the presence of numerous stones inside the subhepatic collection. The liver was thoroughly revised, as the presence of intrahepatic calculi was hypothesized. From the imaging report, the liver was intact.

The indication for surgical intervention is clear and the patient is prepared.

2.2 Details of the surgical procedure

The surgical procedure starts with an extended right subcostal incision. The liver, diaphragm and the greater omentum were attached. The omentum is prepared from adhesences. This manoeuvre releases a considerable amount of pus, along with numerous stones of different size.

The right-side triangular ligament is dissected to allow the mobilization of the right liver lobe. After copious amounts of saline lavage, we observe an intact liver parenchyma. This abscess was a consequence of remnant gallstones after laparoscopic cholecystectomy.

The procedure ends successfully after the placement of drains.

2.3 Post-operative period

The patient was transferred in the intensive care unit where he was monitored for the following day. He was discharged in good health on the 7th postoperative day.

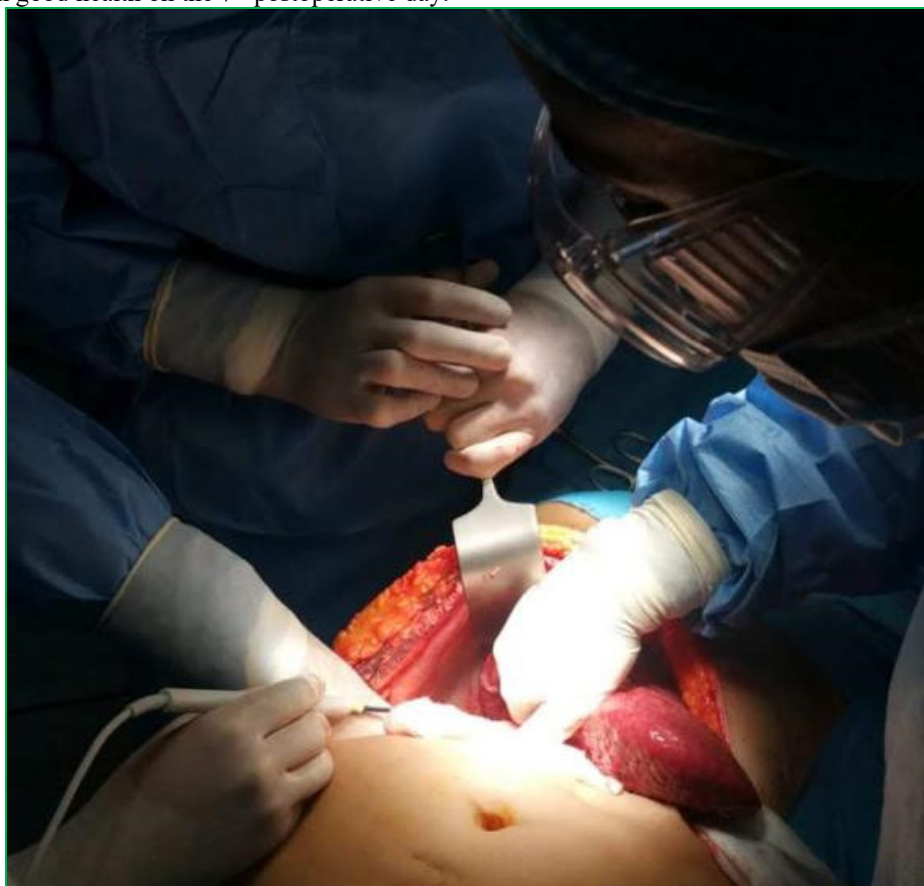


Figure 1. The liver mobilization drainage of the subphrenic and subhepatic abscess.



Figure 2. Operative image during the drainage of the subphrenic and subhepatic abscess.



Figure 3. Some of the gallstones in the abscess.

3. Discussion

Today laparoscopic cholecystectomy is the treatment of choice for gallbladder stones. Only after the development of such technique cases of abdominal abscesses due to residual stones have started to appear in the literature, hence the name “disease of medical progress”.

Studies show that between 5-40% of laparoscopic cholecystectomies are complicated by gallbladder perforation and stone spillage, more commonly in acute inflammation cases. 15-50% of the spilled stones are not retrieved and may migrate and cause significant complications.

Most of the abdominal abscesses from residual gallstones form in the first year after cholecystectomy, or many years later. Compliances rate following gallstone spillage vary widely from 0.04% to 19%. Cases of acute cholecystitis, male sex, old age, number of lost stones greater than 15, diameter over 15mm and perihepatic localization are predictors of severe morbidity.

The vast majority of intrabdominal abscesses caused by remaining gallstones after laparoscopic cholecystectomy are treated via major open surgery, with a minority of cases treated with percutaneous drainage.

4. Conclusion

There is no clear consensus on the treatment and management of lost gallstones during cholecystectomy, but every attempt should be made to collect spilled stones.

Complications of lost gallstones are rare, but have high morbidity, a treatment via major surgery is recommended, although laparoscopic and percutaneous approach is acceptable in select cases.

Surgeons should document cases of lost and unretrievable gallstones and inform patients, as complications may be rare but severe and demand more often than not open surgery.

Conflict of interest

The author(s) declare(s) that there is no conflict of interest. The authors alone are responsible for the content and writing of the paper.

Financial disclosure

There is no financial support to this study.

Ethical aspect

Informed consent was obtained from all participants in the study and all procedures were conducted in accordance with the Declaration of Helsinki.

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