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# Surgery Quiz – Case 20

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A 66-year-old female patient, with a history of type 2 diabetes mellitus and laparoscopic cholecystectomy for chronic cholecystitis one year ago, presented to the emergency department complaining of non-specific low back pain over the preceding two months and right lumbar tumefaction over the preceding 7 days. Clinical examination revealed the presence of a tender 6×4 cm palpable soft tissue mass suggestive of right lumbar abscess. Chest, abdominal and retroperitoneal computed tomography (CT) performed to delineate disease extension and etiology. CT images (figures 1, 2) are presented below.

What is your diagnosis?

## Comments

*CT revealed the presence of (a) two small 10 and 7 mm hyperattenuating lesions at the edge of the Morrison's pouch behind the upper pole of the right kidney (fig. 1), (b) no evidence of intraabdominal and retroperitoneal abscess formation (figures 1, 2), and (c) abscess formation at the superficial and intermediate muscle layer of the posterior abdominal wall (latissimus dorsi, external oblique and internal oblique muscle) without involvement of the deep muscle layer (quadratus lumborum and psoas muscle) (fig. 2). Taken into account the history of cholecystectomy, the two lesions in Morrison's pouch considered to be unretrieved spilled gallstones; it is valuable to be mentioned that gallbladder perforation and gallstone spillage disregarded to be mentioned in surgical report. The right lumbar abscess considered to be secondary as late septic complication of spilled gallstones. Taken into consideration the small number and size of gallstones and the absence of intraperitoneal abscess formation, management strategy included: (a) Open drainage of the lumbar abscess with a right flank incision including entering the retroperitoneal space after incision of the transversalis fascia without entering the peritoneal cavity, and (b) watch and wait approach for surgical (transabdominal laparoscopic or open) gallstone removal in case of posterior abdominal wall abscess recurrence or intraperitoneal abscess formation.*

*Gallbladder perforation occurs frequently during laparoscopic cholecystectomy with a reported incidence ranging between 10% to 40%. In such case, gallstone spillage can occur with a reported incidence that ranges between 6 to 30%. If gallbladder perforation occurs, every spilled gallstone should be retrieved and intense irrigation should be performed to minimize possible complications. The most common complications related to unretrieved spilled gallstones are septic complications. However, gallstones related septic complications are uncommon with a reported incidence ranging*

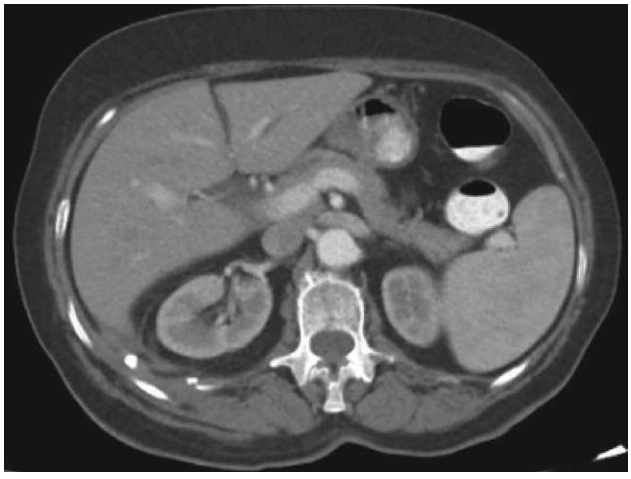

**Figure 1**

**Figure 2**

*between 0.08% to 0.3%. The combination of pneumoperitoneum and peritoneal irrigation can disseminate spilled gallstones within the peritoneal cavity; these unretrieved gallstones can develop local and unusual distant septic complications, including (a) abdominal wall abscess, (b) intraabdominal abscess, (c) retroperitoneal abscess, (d) hepatic, splenic, greater omentum abscess, (e) peritonitis, and (f) pulmonary abscess and thoracic empyema.*

*Time interval between cholecystectomy and septic complications can range between one month and 20 years with a peak incidence around 4 months. Significant risk factors for septic complications development include acute cholecystitis, pigmented stones, perihepatic localization of gallstones, multiple stones, stone size >1.5 cm and older age. Intraoperative gallstone spillage should be clearly documented in patient's surgical and medical report as high clinical suspicion index is needed for early recognition of early and late postoperative gallstone related complications. Treatment of septic complications consists of eradication of the source of infection. Intraabdominal abscesses should be managed by surgery first approach or percutaneous drainage and elective surgery. Abdominal wall abscesses should be managed by open drainage. In all cases, gallstones, if possible, should be completely removed.*

## References

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***Diagnosis:*** *Secondary right lumbar abscess as a late septic complication of spilled unretrieved gallstones in Morrison's pouch during laparoscopic cholecystectomy*