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Right Retroperitoneal and Subhepatic Abscess; Late Complications Due to Spilled Stones During Laparoscopic Cholecystectomy – Case Report

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Rezumat

Abces subhepatic și retroperitoneal drept; complicație tardivă după calculi pierduți cu ocazia colecistectomiei laparoscopice – prezentare de caz

Introducere: Efracția colecistului cu exteriorizarea de calculi în timpul colecistectomiei laparoscopice este considerată ca fiind un incident fără urmări.
Prezentare de caz: Se prezintă cazul unei paciente în vârstă de 66 de ani, care se internează prezentând un abces voluminos în regiunea lombară dreaptă. Din antecedentele personale menționăm colecistectomie laparoscopică pentru o colecistită acută litiazică. Se practică în urgență incizia şi evacuarea abcesului, acesta conținând o formațiune cu aspect de calcul vezicular. Examenul CT abdominal evidențiază o colecție fluidă, biloculată, cu bule aerice, localizată subhepatic şi retroperitoneal drept. Se intervine chirurgical prin abord laparoscopic, se descoperă şi evacuează un abces subhepatic, cavitatea abcesului conținând 19 calculi veziculari.
Rezultate: Evoluția postoperatorie a fost favorabilă. Pacienta a fost externată în ziua a 6-a postoperator.
Concluzii: În anumite situații abandonarea în cavitatea peritoneală a calculilor pierduți cu prilejul colecistectomiei laparoscopice poate să fie sursa unor complicații redutabile.

Cuvinte cheie: calculi pierduți, colecistectomie, abces abdominal

Abstract

Background: Gallbladder perforation with gallstone spillage during laparoscopic cholecystectomy is usually an event with no consequences.
Case report: We report the case of a 66 year-old female admitted in our hospital with severe large abscess in the right lumbar region. Her medical history reveals a laparoscopic cholecystectomy for acute gallstone cholecystitis. Emergent abscess incision and drainage are performed, noticing a mass of stone outline. The abdominal CT scan shows fluid, air-bubbled collection with biloculate walls located in the right retroperitoneal subhepatic region. Laparoscopic procedure is performed, the subhepatic abscess is located and drained, the abscess cavity containing 19 gallstones.
Outcome: The post-operative evolution was favourable. The patient was discharged on the 6th post-operative day.
Conclusions: The stones left in the peritoneal cavity during laparoscopic cholecystectomy may be sometimes the cause of severe late complications.

Key words: lost stones, cholecystectomy, abdominal abscess

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Introduction

The laparoscopic cholecystectomy has become a golden standard method of treatment for symptomatic gallstone disease and it may be performed in most medical surgical units.

The gallbladder effraction is a rather frequent incident varying between 6 and 40% (1, 2). Under these circumstances the biliary liquid externalizes together with the spilled stones in 0,1-20% (2, 3, 4). The causes of gallbladder wall effraction are multiple and they are strongly connected to the surgeon's expertise, the degree of difficulty of the undergoing intervention (acute cholecystitis, adherent syndrome) and to the patient as well (obesity, old age, male gender) (4).

Gallbladder injuries may often occur during dissection in the vesicular bed or as a result of an excessive traction of the infundibularis area (4, 5). The detachment of the clip from the cystic proximal stump during vesicular extraction may also be one of the causes (4, 6, 7). Once the effraction has already occurred, the stones can been entirely removed in up to 63% of cases (4).

Case report

A 66 year-old woman was admitted to our hospital (Military Emergency Hospital of Sibiu) on 2 January 2014 with fever and large abscess in the rigth lumbar region. The symptoms occured in the previous month and registered a progressive enhancement. The patient's medical history reports obesity, diabetes mellitus type II and laparoscopic cholecystectomy performed for acute lithiasis cholecystitis into another medical surgical unit, in 2010.

The surgical incision and abscess evacuation are performed as an emergency, with the drainage of 200 ml purulent, fetid liquid, and externalization of a 5 mm hard-faceted mass of biliary stone outline (Fig. 1).

Bacterial testing of fluid: Klebsiella. Another gallstone fragment is evacuated from the lumbar cavity on the second post-operative day.(PO) (Fig. 2).

The abdominal CT scan reveals air-bubbled fluid biloculate mass and an enhancing wall in the lumbar and subhepatic region. (Fig. 3, 4).

The preoperative diagnosis of subhepatic abscess with lost stones during laparoscopic cholecystectomy indicates the obvious necessity of a surgical reintevention. On 9 january 2014 the subhepatic abscess is drained through laparo-

Figure 1. *Retrieved stone from lumbar abscess cavity*

Figure 2. *Postoperative lumbar abcess incision (ventral position)*

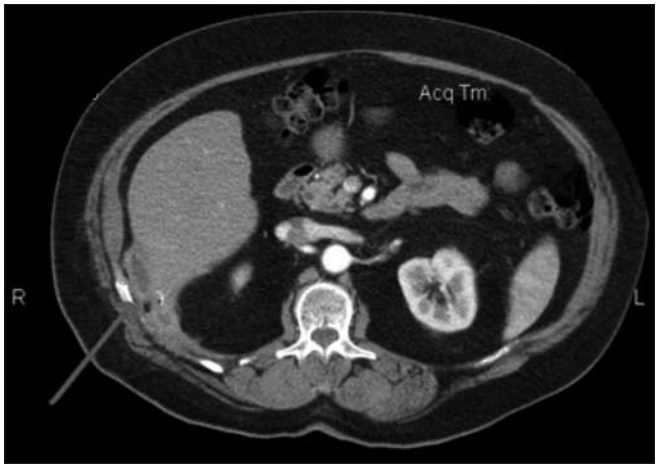

Figure 3. *Subhepatic abscess (CT scan image)*

Figure 4. *Subhepatic abscess (CT scan image)*

Figure 5. *Retrieved stones from subhepatic abscess cavity*

scopic procedure, followed by the extraction of 19 biliary stones (of 5 mm) and 3 mixed fragments removed from the abscess cavity. (Fig. 5).

The PO evolution was favourable. The drainage tubes were removed in the second, respectively the third PO days. The patient was released on 6thPO day.

The postoperative follow-up did not record recurrence or other complications within a year.

Discussion

Bile leak from gallblader perforation was initially regarded as a benign complication with no subsequent consequences (1, 8). As literature has not reported any cases of complications induced by lost stones during classic surgery, this type of complications is specific to the laparoscopic cholecystectomy (3).

The predisposing factors for complications of lost stones are older age, male gender, pigment stones, over 15 stones, over 1,5 cm in size and their perihepatic location (1, 9).

Complications may occur in the peritoneal cavity, at the level of trocar apertures, in the extraperitoneal space or they may be systemic (4).

The most frequent intraperitoneal complications are abscesses which represent 60% of the total number of complications, mostly located in the subhepatic and subphrenic regions. Unretrieved stones inside peritoneal cavity may be the cause of certain abscesses in 0,08-0,6% of the total number of cholecystectomies (1).

The lost stones may implant into ovaries, uterine tubes, they may cause dyspareunia and chronic pelvic pain, adherent syndrome (4) or they may locate inside inguinal hernia sac (1). They may equally induce 12% of cases of fistulas: enteral, colic, biliary ileus (10). Other biliary complications were described as: biliary obstructions, colangitis, jaundice, biliary cutaneous fistulas, hepatic abscess (4).

The complications occured at the trocar apertures level represent 14% of the total number (4). Early or late abscesses and granulomas were described (11).

The reported extraperitoneal complications are various: parietal abscesses, retroperitoneal abscesses and granulomas (12), pulmonary complications (empyema, stone migration into thorax often resulting into their expectoration, pulmonary abscesses (13), urinary complications (migration of stones into the bladder, hematuria (11), their release through urination), spontaneous cutaneous fistulization (6). Stone spillage into peritoneal cavity may result into abdominal actinomycosis whether the spilled stones migrate (in case of retroperitoneal or thoracic abdominal actinomycosis) (14).

Systemic complications in sepsis, even septic shock are possible, but fortunately they occur rarely (4).

Preventing these complications involves minimal gallbladder effraction during its dissection, systematic endobag usage and an enlargement of parietal aperture as gallbladder removal becomes difficult. If stones are retrieved they must be reduced in number, completely removed and thoroughly washed out if circumstances require. If there is any suspicion of large unretrieved stones masses remaining after these procedures (mostly pigment stones and infected bile) conversion may be one of the options to take (6, 8, 14).

The time span between laparoscopic cholecystectomy and complications which occur after it may vary from few days to 5 (1), 10 (3) even 20 years (11). The most frequent symptoms are: abdominal pain, fever, abdominal masses, bowel obstructions, granulomas or fistulas (2, 7).

If information regarding unretrieved stones during cholecystectomy is lacking or insufficient (2), the diagnosis of such a complication may be difficult, a waste of time and resources, while patients may simulate other inflammatory causes, hydatic disease or neoplasia (3, 4, 6). Imparting the incidents to the patient and their discription in the medical release letter may be a helpful method in order to facilitate a proper diagnosis (2, 15).

The final treatment of abscesses consists of the pus drainage and stones retrieval (4).

Conclusions

Leaving spilled stones inside peritoneal cavity after laparoscopic cholecystectomy is not always harmless.

Spilled stones may cause severe complications but occur rarely, in small percentage.

The diagnosis of such complications proves to be a difficult task; the acknoledgement for such pathology may be useful to diagnose other cases.

Conflict of interest

None of the authors declare any conflict of interests.

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