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Case Report

Postoperative Painless Biliary Peritonitis in a Young Adult: Case Report

Haddad F*, Raqi I, Bekkali K, Rhaousi FZ, Tahiri Joutei Hassani M, Hliwa W, Bellabah A and Badre W

Hepato-Gastroenterology Department, UHC Ibn Rochd, Casablanca, Morocco

***Corresponding Author:** Haddad F, Hepato-Gastroenterology Department, UHC Ibn Rochd, Casablanca, Morocco.

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Abstract

We describe a rare case of asthenic biliary peritonitis in a patient with no predisposing factors to this kind of clinical picture, highlighting the importance of paraclinical investigations in the diagnosis.

Keywords: *Biliary Peritonitis; Silent Peritonitis; Cholecystectomy*

Introduction

Bile leakage is the most serious and feared complication after cholecystectomy. Early and accurate diagnosis of bile duct injury is very important for surgeons because undetected bile duct injury leads to serious complications such as biliary peritonitis. This manifests as nonspecific abdominal pain and fever several days after surgery. It can be treated by laparoscopic washout with or without bile duct repair. We present the rare case of a young adult diagnosed with biliary peritonitis without specific symptoms that are usually present in this type of peritonitis.

Case Presentation

A 34-year-old woman who had undergone laparoscopic cholecystectomy (LC) 26 days prior to consultation presented to the emergency department with abdominal distension that had developed for 10 days without abdominal pain, fever or vomiting, without transit disorders or jaundice. No significant operative difficulties were reported for the LC.

Clinical examination reveals a distended, painless abdomen without guarding or contracture.

On examination: Initial blood tests showed a neutrophil count of 14874/mm^3 (reference: 2000 - 7500/mm^3) and a C reactive protein of 11 mg/L (reference: < 5 mg/L). Liver function test showed an ASAT of 48 (1,2 times the normal) and an ALAT of 50 (1,5 times the normal). Total bilirubin was 3 µmol/L (reference: < 22 µmol/L), and serum lipase was 17 IU/L (reference: < 60IU/L). The first CT of the abdomen and pelvis with contrast showed free fluid around the gallbladder fossa, liver, pancreas, paracolic gutter and pelvis (Figure 1). Diagnostic paracentesis showed ascites with a dark yellow- green colour (Figure 2), which was confirmed as bilious on dipstick examination for biliary and laboratory examination of the fluid. The initial impression was that the patient had biliary peritonitis due to an intraperitoneal bile leak. Therefore, the patient underwent a laparoscopic lavage.

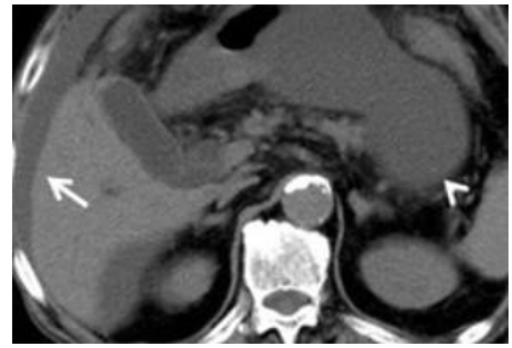

Figure 1: *CT of abdomen and pelvis with contrast showed free fluid around the gallbladder fossa, liver and pancreas.*

Figure 2: *Biliary ascites with a dark yellow-green colour.*

At exploration we note the presence of a very abundant peritoneal effusion made of bilious liquid, with false membranes throughout the abdominal cavity (suggesting advanced peritonitis) (Figure 3); presence of a release of the clips of the cystic duct responsible for a bile leak (Figure 4). Note that the cystic duct is cut flush with the main bile duct. The procedure consisted of transcystic drainage using a Kehr drain (Figure 5), peritoneal washing, then subhepatic and retropedicular drainage.

On examination, we note the presence of a very abundant peritoneal effusion of bilious liquid, with false membranes throughout the abdominal cavity (suggestive of advanced peritonitis) (Figure 3); presence of a release of the clips of the cystic duct responsible for a bile leak (Figure 4). Note that the cystic duct is cut flush with the common bile duct. The procedure consisted of transcystic drainage with a Kehr drain (Figure 5), peritoneal washing, then subhepatic and retropedicular drainage.

The outcome was favourable with clinical and biological improvement, and the drain was removed 10 days later without complications.

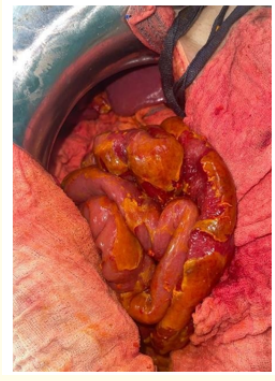

Figure 3: *False membranes throughout the abdominal cavity.*

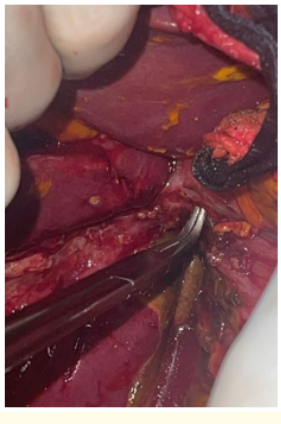

Figure 4: *Presence of a release of the clips of the cystic duct responsible for a bile leak.*

Figure 5: *Transcystic drainage using a Kehr drain.*

Discussion

LC has replaced the open procedure as LC is associated with much less discomfort, rapid recovery and short hospital stay, and better cosmesis. However, transcystic drainage with a Kehr drain as regards the study by Adamsen., *et al*. [1], bile duct injuries are reported more frequently after LC, which include fistulas, which were found in 1.3 - 5.5% of patients.

Minor bile duct injuries were a commonly reported problem in LC and were recorded with an incidence of ~ 1.2% [2-4]. If managed inappropriately, these injuries represent an iatrogenic catastrophe that limits patients' quality of life and leads to critical morbidity and mortality [5].

Iatrogenic injuries to the biliary tree can be difficult to detect, with only about one-third of injuries being recognised at the time of surgery. The majority of these unrecognised injuries are bile leaks from the cystic duct and rarely small Luschka ducts in the liver bed, which are in continuity with the biliary tree. True partial injuries or transections of the common bile duct (CBD) are recognised at the time of surgery in 70% to 80% of cases [6]. If not recognised at the time of injury, the signs and symptoms of iatrogenic bile duct injury can be vague and diagnosis can be difficult.

The initial signs and symptoms are related to biliary obstruction and bile leakage. The most common symptoms at presentation are abdominal pain, tenderness, fever and nausea/vomiting.

An atypical presentation is a diagnostic challenge. Risk factors associated with silent presentation include diabetes and cirrhosis [7], elderly patients and patients receiving peritoneal dialysis [8]. In our case, none of these factors were present and the only non-specific clinical sign was abdominal distension.

We suspect that the reduction in abdominal fibrinolytic activity that occurs in peritonitis may play a role, as the production of fibrin exudates is an important part of host defence, but large numbers of bacteria may be trapped in the fibrin matrix. This may delay the systemic spread of intraperitoneal infection and reduce the early mortality rates from sepsis.

Conclusion

In summary, we recommend that a high index of suspicion for biliary tract injury should be adopted in patients after cholecystectomy whose postoperative course is far from smooth. Vigilance should be high for initially subtle manifestations of bile in the abdomen. Even if there is no pain, fever, leukocytosis or abdominal tenderness, diagnostic imaging is required. Positive findings are important, but the absence of expected positive findings (e.g. fever or leukocytosis) is common and does not diminish the importance of the positive findings.

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