

Hemoperitoneum secondary to haemocholecyst due to acute cholecystitis

Hemoperitoneo secundario a hemocolecisto por colecistitis aguda

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Abstract

The haemocholecyst is a rare disease with a low index of suspicion, which is even lower if the patient does not present risk factors. Likewise, the course of this pathology with a hemoperitoneum without vesicular perforation is equally infrequent. We present an unusual case in which the diagnosis of the patient was carried out intraoperatively. We consider that communicating these unusual cases in clinical practice helps to increase clinical suspicion and prompt diagnosis.

Key words: Acute cholecystitis. Hemocholecyst. Haemoperitoneum

Resumen

El hemocolecisto es una patología poco frecuente y con un índice bajo de sospecha, que todavía es menor si el paciente no presenta factores de riesgo. Asimismo, su curso con clínica de hemoperitoneo sin perforación vesicular es igualmente infrecuente. Presentamos un caso poco habitual en el cual el diagnóstico de la paciente se llevó a cabo intraoperatoriamente. Consideramos que comunicar estos casos poco habituales en la práctica clínica colabora a aumentar la sospecha clínica y el diagnóstico precoz.

Palabras clave: Colecistitis aguda. Hemocolecisto. Hemoperitoneo.

Introduction

Hemocholecyst is a term introduced in 1961 by Fitzpatrick^{1,2}, which defines gallbladder hemorrhage. It is a rare pathology³ that can occur with large clinical variability, and is difficult to be differentiated from hemobilia³.

Clinical case

Fifty-four-year-old woman with a personal history of hypertension, diabetes mellitus, dyslipidemia, central diabetes insipidus and adrenal insufficiency secondary to resection of a functioning pituitary microadenoma. The patient attended the emergency department of

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our center with a 3-day history of epigastric pain associated with low-grade fever without further clinical manifestations. On blood tests, leukocytosis with acute phase reactants elevation, without liver function tests anomalies, and hemoglobin at 13.5 stood out. Abdominal ultrasound showed a marked distension of the gallbladder, whose lumen was completely invaded by hyper-echogenic material, and an image with posterior acoustic shadow consistent with cholelithiasis. Maximal wall thickness was 3-4 mm. Sonographic Murphy sign was negative. A minimal, narrow strip of perivesicular fluid adjacent to the fundus was identified. The patient was started on empirical antibiotic treatment with amoxicillin-clavulanic acid and showed a good evolution on laboratory parameters within the first hours; however, in view of abdominal pain worsening and generalization with peritoneal irritation, urgent surgical treatment was decided 28 hours after admission to the emergency department. Laparoscopic approach was undertaken. The intraoperative finding was a four-quadrant hemoperitoneum, of about 500 mL of hematic material. The gallbladder showed wall thickening and a voluminous stone inside, with no perforation (Fig. 1). When it was percutaneously emptied to facilitate its manipulation, hemobilia was obtained. Cholecystectomy was laparoscopically completed with no incidents.

Postoperative evolution was favorable and empirical intravenous antibiotic therapy was maintained during hospitalization. She was discharged at third postoperative day with no evidence of anemia development, with hemoglobin level being maintained at 13.1, and with no other laboratory anomalies. She completed the amoxicillin-clavulanic acid 5-day cycle.

On anatomopathological report, the gallbladder interior showed lithiasis and abundant hematic material that completely obstructed the lumen, with absence of epithelial lining of the mucosa being identified on microscopic examination.

Discussion

Hemocholecyst is a pathology that has been associated with different etiologies, and may be secondary to cholecystitis, gallbladder neoplasm, cystic artery aneurysm, post-traumatic, ischemic, infectious by parasitosis and secondary to coagulation disorders, including those dyscrasias caused by kidney disease, liver cirrhosis or anticoagulant and antiplatelet treatments²⁻⁴. Gallbladder bleeding due to cholecystitis is unusual because inflammation mainly

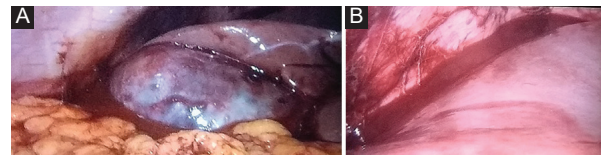


Figure 1. A: Gallbladder under tension with wall thickening secondary to cholecystitis and hemoperitoneum on Morrison space. B: Hemoperitoneum at right subdiaphragmatic space.

causes vascular thrombosis. However, it can also cause damage to vessels' adventitia, weakening their wall and generating bleeding^{4,5}. Furthermore, bleeding secondary to cholecystitis can be produced by ulceration and necrosis of the mucosa or by liver bed involvement when gallbladder perforation occurs⁵.

Different hemocholecyst presentations have been described³. Bleeding can produce intravesicular clots that cause vesicular distension and acute cholecystitis typical clinical manifestations^{1,2,4,5}. If it evolves, necrosis of the wall with vesicular perforation can occur, giving rise to acute abdomen secondary to hemoperitoneum^{1,2,5}. Hemoperitoneum can also be secondary to erosion of the cystic artery or one of its branches^{4,5}. Intravesicular blood can also advance towards the bile duct and obstruct it, which favors the development of cholangitis or, if it reaches the gastrointestinal tract, it can cause upper gastrointestinal bleeding clinical manifestations^{1,2,3,5}. Table 1 compares our findings with those described in the literature.

Diagnosis is difficult and is usually intraoperatively established¹. Ultrasound findings include gallbladder wall thickening or focal irregularities and presence of intraluminal echogenic material without posterior acoustic shadow²⁻⁵. Computed tomography shows high-density fluid within the gallbladder lumen, and contrast extravasation at early arterial phase can be demonstrated in case of significant active bleeding. This extravasation can go unnoticed on the late phase^{2,3,5}. When there is associated hemoperitoneum, hyperdense fluid is observed around the gallbladder, which may be accompanied by a wall defect and even by lithiasis outflow into the abdominal cavity if there is gallbladder wall perforation⁵. Endoscopic retrograde cholangiopancreatography can evince bleeding through the duodenal ampulla, although it only appears in 30% of cases³.

Treatment of this pathology depends on its etiology³. When the origin is traumatic or secondary to blood dyscrasia, it can be conservatively treated as long as the patient is hemodynamically stable, shows clinical improvement and no signs of active bleeding are

Table 1. Comparative chart of our patient and reviewed clinical cases

Risk factors	Chief complaint	Complementary tests	Approach
No risk factors for bleeding or known liver disease	Right hypochondrium pain	Lab tests: hemoglobin 13.5, leukocytosis Ultrasound: cholecystitis with gallbladder lumen invasion	Laparoscopic
Clopidogrel and acenocoumarol	Right hypochondrium pain	Lab tests: hemoglobin 10.8, leukocytosis, hepatobiliary profile alteration Ultrasound: gallbladder distension with invasion	Open
Liver cirrhosis of enolic origin, acenocoumarol	Upper gastrointestinal bleeding	Lab tests: hemoglobin 9.8, leukocytosis, altered hepatobiliary profile CT: gallbladder distension with obstruction	Laparoscopic
Acetylsalicylic acid, low molecular weight heparin at prophylactic dose	Lower gastrointestinal bleeding	Lab tests: hemoglobin 8, leukocytosis, hepatobiliary profile alteration CT: cholecystitis with blood-dense material within the gallbladder and bile duct dilation	Laparoscopic converted to open
Liver cirrhosis secondary to primary sclerosing cirrhosis in patient with ulcerative colitis	Right hypochondrium pain	Lab tests: hemoglobin 13.6, leukocytosis, hepatobiliary profile alteration CT: hematoma on gallbladder bed with gallbladder compression and active bleeding	Open

identified³. Emergency cholecystectomy is indicated when etiology is acute cholecystitis³ or if there is hemodynamic instability^{1,2}. If a neoplasm is suspected, elective cholecystectomy is indicated³. Percutaneous cholecystostomy is a valid alternative in patients who are not candidates for surgical treatment in order to avoid gallbladder perforation secondary to its distension by the blood². Most common postoperative complications are hemorrhage and hypovolemic shock².

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Ethical disclosures

Protection of human and animal subjects. The authors declare that the procedures that were followed adhered to the ethical standards of the responsible committee for experimentation on human beings and were in agreement with the World Medical Association and the Declaration of Helsinki.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained informed consent from the patients and/or subjects referred to in the article. This document is in the possession of the corresponding author.

Conflicts of interest

The authors declare that there are no conflicts of interest relevant to the execution of this work.

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