Acute cholecystitis caused by hemocholecyst : Unusual clinical manifestation of gallbladder cancer

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Abstract

Gallbladder cancer presenting as acute cholecystitis associated with a hemocholecyst is a rare entity. Up to date there are only 2 cases reported in literature. Acute cholecystitis may appear secondary to an obstruction of the cystic duct by the tumour itself or to an obstruction of the cystic duct by blood clots.

Case report : A 74-years-old woman complained of right upper quadrant pain during the last 48 hours, associated to fever of 38ºC and vomits. Physical examination revealed a positive Murphy's sign. Laboratory data showed leukocytosis and mild increasement of liver enzymes. Ultrasonography revealed a mobile extense formation located antigravitatorily in fundus and body of the gallbladder. CT scan showed a mass adhered to the fundus and the body of the gallbladder without wall infiltration and contrast enhancement, suggestive of hemocholecyst. Laparoscopic cholecystectomy was performed, observing cholecystitis signs without any other relevant features. Pathology revealed a large amount of clotted blood inside the gallbladder, some of them obstructing the cystic duct ; an irregularity was discovered in the gallbladder wall, whose microscopic analysis revealed a gallbladder adenocarcinoma, infiltrating up to the serosa (T3NxMx). The patient underwent a second operation with resection of the gallbladder bed and lymph node dissection of the hepatic hilium, without evidence of neoplastic infiltration. (Acta gastroenterol. belg., **2013**, 76, **57-58**).

Key words : Hemocholecyst, gallbladder cancer, acute cholecystitis.

Introduction

Gallbladder neoplasms are the most common malignancy of the biliary tract with a reported incidence of 2.5 cases per 100000 habitants (1). The most usual symptoms of this disease are right upper quadrant pain, jaundice, anorexia and weight loss, but other atypical presentations have been described, such as empyiema, biliary stricture, gastric outlet obstruction, liver abscess or acute cholecystitis (2). Hemocholecyst, defined as hemorrhage into the gallbladder, occurs in less than 1% of gallbladder tumours (1-3).

Case report

A 74-years-old woman, without any relevant personal history, came to the Emergency Department of our institution complaining of a right upper quadrant pain during the last 48 hours, associated to fever of 38ºC and vomits. Physical examination revealed a palpable, distended and painful gallbladder and a positive Murphy's sign. Laboratory data showed 16500 WBC/mm^3, AST 134 U/L and ALT (150 U/L. Ultrasonography revealed an hydropic gallbladder with a thickened wall and a mobile extensive formation of intermedium echogenicity, located antigravitatorily in the fundus and the body of the gallbladder (Fig. 1). The imaging study was completed with a contrast-enhanced CT scan, showing a mass adhered to the fundus and the body of the gallbladder without wall infiltration and contrast enhancement, suggestive of an hemocholecyst of undetermined origin (Fig. 2). Given the absence of clinical improvement in the next 12 hours, despite analgesia, a laparoscopic cholecystectomy was performed, observing cholecystitis signs without any other relevant features. The patient recovered uneventfully and was discharged the 2nd day after surgery.

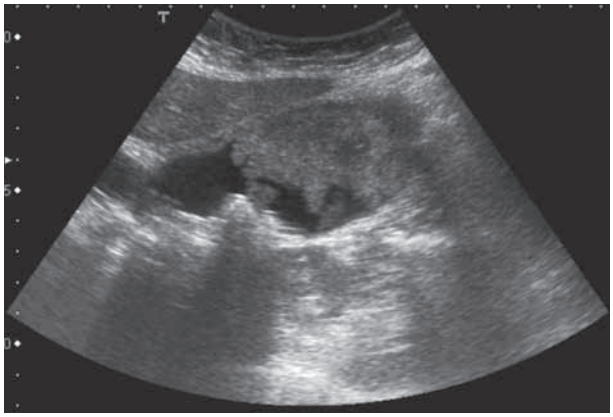

Fig. 1. — Ultrasonography. Mobile extense formation of intermedium echogenicity, located antigravitatorily in the fundus and the body of the gallbladder.

Macroscopic study showed a large amount of clotted blood inside the gallbladder, some of them obstructing the cystic duct. A big clot was adhered to the wall and, when removed, a subjacent irregularity was discovered, whose microscopic analysis revealed a gallbladder adenocarcinoma, infiltrating up to the serosa (T3NxMx).

The patient underwent a second operation with resection of the gallbladder bed (segments IVb and V) and lymph node dissection of the hepatic hilium. Neoplastic infiltration was not detected.

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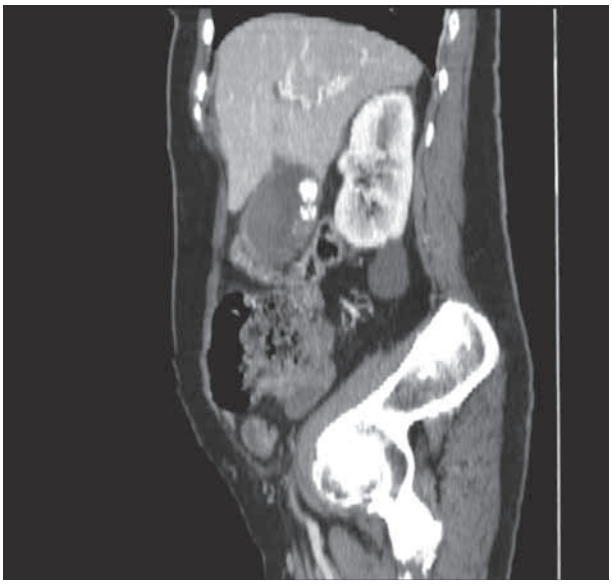

Fig. 2. — CT scan. Mass adhered to the fundus and the body of the gallbladder without wall infiltration and contrast enhancement, suggestive of hemocholecyst.

Discussion

Gallbladder cancer was first described by Macillian de Stoll in 1877. Despite clinical and imaging tests improvements, it is extremely difficult to achieve an early preoperative diagnosis, conditioning that the neoplasms are diagnosed in advanced stages and prognosis is dismal (1,4).

Many authors have described different manifestations of gallbladder cancer. Hemocholecyst is a very unusual presentation of gallbladder neoplasms and it is therefore not well documented. Hemocholecyst is not necessarily associated with hemobilia, specially when blood clots obstruct the cystic duct, avoiding the entrance of hematic content into the biliary tree up to the digestive tract (2,5). Diverse etiologies of hemocholecyst have been described in literature : the most common one is trauma and blood coming from the liver. With the advent of more invasive, nonoperative procedures, iatrogenic trauma has also come to be a concern. Direct causes of hemocholecyst are less frequent, including cholelythiasis, vascular disorders, the presence of heterotopic gastrointestinal mucosa in the gallbladder and malignancies (1,6,7). The possible mechanisms for the development of hemocholecysts in neoplasms include direct invasion of a tumour to either the liver or a vessel in its proximity, or it can be caused by a fungating necrotic mass with local extension. In our patient the "fungating mass" corresponded with a blood clot and the bleeding came from the invasion of a vessel in the infiltrated gallbladder wall (1). The unfrequent appearance of hemocholecyst secondary to neoplasms, the CT scan features without contrast uptake of the mass and the thickened gallbladder wall led us to consider cholecystitis rather than neoplasm as a more possible etiology of the hemocholecyst in our patient and therefore a laparoscopic cholecystectomy was performed.

Gallbladder cancer presenting as acute cholecystitis associated with a hemocholecyst is rare and poorly described in literature. Up to date there are only 2 cases reported in literature. Gimmon *et al*. (8) reported a cholecystitis secondary to obstruction of the cystic duct by the tumour itself, but Ku *et al*. (1) described a case similar to our one, suffering symptoms of acute cholecystitis secondary to obstruction of the cystic duct by blood clots, although the tumour was distant from it, as in our case located in the fundus and the body. The latter presentation is especially unusual, considering the large amount of fibrinogen present in the bile, which is thought to prevent complete obstruction of the cystic duct by clotted blood.

In conclusion, hemocholecyst causing acute cholecystitis is a very rare presentation of gallbladder cancer. To diagnose this disease earlier in its course, radiologists and clinicians need to be aware of all of its different presentations.

Conflict of interest

The authors declare that they have no conflict of interest.

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