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### Short Report

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## An haemocholecyst associated with an anticoagulant therapy

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#### Introduction

Hemocholecyst is an extremely rare pathology defined as hemorrhage into the gallbladder. It may be associated with the use of anticoagulant therapy and may be complicated by spontaneous rupture and hemorrhagic shock. Some cases have been reported in the literature [1-5]. In this article, we describe a case of hemocholecyst related to anticoagulant therapy, complicated by hemorrhagic shock.

#### **Case presentation**

We report the case of a 75-year-old woman with a history of hypertensive disease, mitral valve replacement, COVID-19 pneumonia, and appendectomy, treated with an Angiotensinconverting enzyme inhibitor (Captopril<sup>®</sup>) (50 mg/day), Furosemide (Lasilix<sup>®</sup>) (40 mg/day), Lanoxin (digoxin<sup>®</sup>) (50 mg/day), and oral anticoagulant therapy: Acenocoumarol (Sintrom<sup>®</sup>) (8 mg/day). The last international normalized ratio (INR) was 3.9, one week before admission. She presented to the Emergency Department (ED) with acute abdominal pain localized in the right upper and lower quadrants, associated with three episodes of vomiting, without fever or diarrhea. She had suffered from a renal colic attack three days prior, self-medicating with anti-inflammatory drugs (Ketoprofen®). Physical examination revealed a blood pressure of 100/70 mmHg, a pulse rate of 110 beats per minute, and a respiratory rate of 22 breaths per minute. Abdominal examination showed a mildly distended and diffusely tender abdomen, particularly on the right side. Laboratory results revealed an elevated INR of 12. The Creactive protein (CRP) was 39 mg/L (normal range: 0-5 mg/L). Liver function tests indicated cholestasis with hyperbilirubinemia at 70 micromol/L, alkaline phosphatase at 700 UI/L, and gamma-glutamyl transferase at 300 U/L. An abdominal CT scan showed (Figure 1) a distended gallbladder measuring 46 mm in transverse diameter with spontaneously hyperdense contents, producing a liquid/liquid level. The final diagnosis was hemo**Citation:** Bahria W, Boussaid I, Jemai K, Hamdi D, Nouira NE. An haemocholecyst associated with an anticoagulant therapy. J Clin Images Med Case Rep. 2024; 5(10): 3283.

cholecyst. Initial management consisted of vascular fluid resuscitation using isotonic saline and broad-spectrum antibiotics (3rd generation cephalosporins [Claforan<sup>®</sup>], aminoglycosides [Gentamicin<sup>®</sup>], and metronidazole [Flagyl<sup>®</sup>]). To achieve normal coagulation parameters, the vitamin K antagonist was stopped, and the patient received 1 mg of vitamin K. Laparoscopic cholecystectomy was requested and accepted by the surgery department. However, the patient became unstable before she could be transferred to the operating room. Hemorrhagic shock with gallbladder rupture was suspected. The condition rapidly deteriorated with persistent shock despite early resuscitation with vascular fluids, the introduction of epinephrine, intubation, and antagonization of the anticoagulant. Laboratory tests showed worsening liver cholestasis and an hemoglobin drop of 3 g/dL compared to the initial result (Hemoglobin = 9 g/dL). The patient died on the day of admission due to hemorrhagic shock.



**Figure 1:** An abdominal CT scan showing a distended gallbladder measuring 46 mm in transverse diameter with spontaneously hyperdense contents, producing a liquid/liquid level.

#### Discussion

Hemocholecyst is a rare pathology [1,2]. Some cases have been reported in the literature [1,5]. It is more common when a stone is lodged at the neck of the gallbladder or due to erosion of the gallbladder wall by stones [4]. However, less common causes, including cancer, hemophilia, post-radiofrequency ablation therapy for hepatocellular carcinoma, or the use of anticoagulant therapy (as in this case), account for the remaining cases [2-4]. Spontaneous minor bleeding, including gastrointestinal bleeding, can occur with the use of anticoagulant therapy such as Acenocoumarol (Sintrom<sup>®</sup>). Minor bleeding in the form of hemocholecyst is extremely rare. Only 65 cases of hemocholecyst associated with anticoagulant therapy have been reported in the literature [2-9]. Hemocholecyst remains asymptomatic in the majority of cases [7]. It may present as acute cholecystitis with or without stones or, more rarely, as hemorrhagic shock [8,9] with acute abdominal pain, as in our patient's case. Preoperative examinations should include ultrasonography, CT scan, or MRI to assess the state of the gallbladder walls, the biliary tract, and the abdominal cavity. Radiology findings, as in our patient's case, may reveal a distended gallbladder with spontaneously hyperdense contents, producing a liquid/liquid level, with or without stones. Cholecystectomy is the treatment for hemocholecyst. In our patient's case, it was not possible due to the unfavorable clinical course. In case of perforation, treatment includes resuscitation, intravenous antibiotics, and urgent surgical intervention [10].

#### Conclusion

Despite the rarity of hemocholecyst, this pathology should be considered whenever patients treated with anticoagulant therapy present with acute abdominal pain. Perforation is the most dreaded complication, involving parietal rupture, hemorrhagic shock and hemoperitoneum.

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