SAS Journal of Medicine
Abbreviated Key Title: SAS J Med
ISSN 2454-5112
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Haemorrhagic Cholecystitis Complicated by Rupture of the Gallbladder with Hemoperitoneum

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DOI: 10.36347/sasjm.2023.v09i03.016 | **Received:** 22.01.2023 | **Accepted:** 27.02.2023 | **Published:** 30.03.2023

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Abstract **Case Report**

We report the case of a 56-year-old diabetic and hypertensive patient, taking antivitamin K for a cardiopathy complicated by a chronic pulmonary heart, who presented an acute cholecystitis with a hypovolaemic shock. The abdominal CT scan showed a ruptured lithiasis hemocholecysis with medium-sized hemoperitoneum and the patient was operated on,the gallbladder was distended containing a lot of stones and it was perforated at the fundus with a large hemoperitoneum containing stones. The procedure consisted of cholecystectomy, haemostasis and evacuation of the haemoperitoneum. Hemocholecyst is a rare complication of anticoagulant treatments. The presence of gallbladder stones promotes intravesicular bleeding. The usual complication is the vesicular perforation. In spite of its rarity, haemocholecyst should be suspected when an anticoagulants treatedpatient presents symptoms of acute cholecystitis with or without haemorrhagic shock.

Keywords: Haemocholecyst, Haemoperitoneum, Retroperitoneumhaematoma, Anticoagulant.

INTRODUCTION

Haemocholecyst is defined by the presence of haemorrhage within the gallbladder. It is a rare complication of anticoagulant therapy and may progress to spontaneous rupture of the gallbladder resulting in haemorrhagic shock. Due to imaging, the diagnosis can be made early, allowing rapid surgical management.

OBSERVATION

A 56-year-old woman, hypertensive, diabetic and having acardiopathy complicated by a chronic pulmonary heart, was initially presented an acute cholecystitis complicated one week later by an extensive pulmonary infection to Covid 19 for which was transferred to the intensive care unit. The patient was then taking an anticoagulant therapy with low molecular weight heparin (LMWH). A fifth day of her hospitalization, the patient presented with an acute abdominal pain. On examination, the patient was apyretic; her blood pressure was 82/53 mmHg, with a heartbeat of 120 and polypnoea of 33 c/min. Abdominal palpation revealed abdominal guarding. An emergency blood test showed a drop in haemoglobin of9 g/dl, a normal platelet count, a prothrombin rate (PT) of 79 %, and a correct activated partial thromboplastin time (APTT). The initial diagnosis was an acute mesenteric ischaemia. Emergency CTangiography of abdomen showed a distended and gallstones with spontaneoushyperdense contents flowing intraperitoneally and in subhepaticspace througha large perforation of the fundus (Figure 1) with a medium-sized haemoperitoneum containing stones. The diagnosis of lithiasishemocholecyst complicated by a rupture of the gallbladder and a medium-sized hemoperitoneum was retained. The patient underwent emergency surgery. Intraoperative exploration showed the presence of a massive haemoperitoneum with gallstones and defect of the fundus gallbladder wall measuring approximately 3 cm (figures 2 and 3). The procedure consisted of cholecystectomy, haemostasisand evacuation of the haemoperitoneum. The evolution during the first 24 hours after surgery was marked by hemodynamic and respiratory instability. The patient died on day 2 post-op.

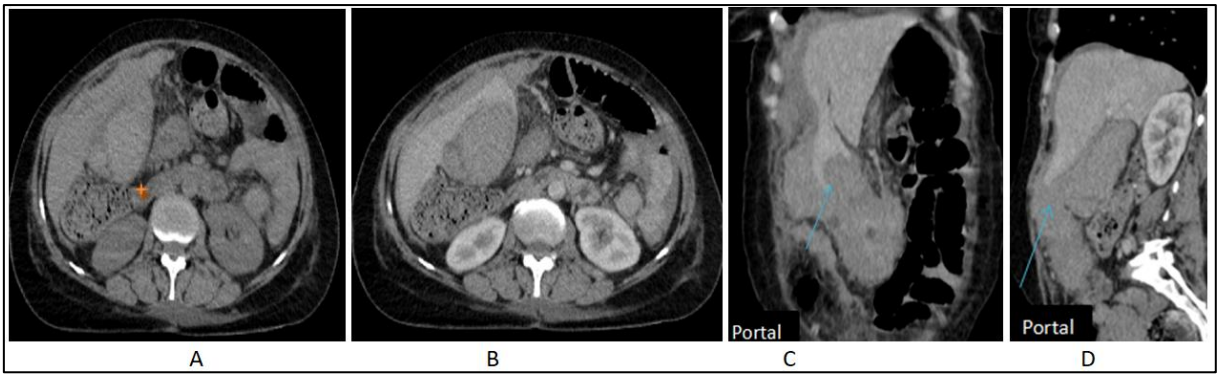

Figure 1: Axial (A and B) coronal (C) and sagittal slice non-enhanced (A) et enhanced (B, C, D) Abdominal CT scan demonstrate a high density fluid (indicating haemorrhage) within the gallbladder (asterix) and peritoneal cavity through a large rupture of the vesicular fundus (Arrow)

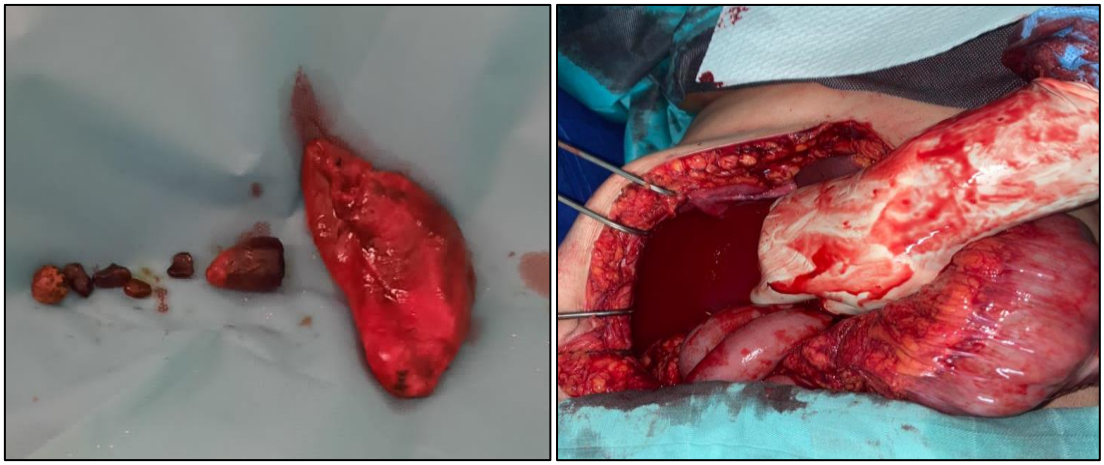

Figure 2 & 3: Intraoperative images show a massive haemoperitoneum with a distended gallbladder, with stones and perforated fundus measuring approximately 3 cm

DISCUSSION

This is a very rare condition, with approximately 66 cases of haemocholecyst on anticoagulants reported in the literature [1-4]. Intravesicularhaemorrhage is most often due to effraction of the cystic artery by irritation of a stone embedded in the gallbladder neck [1]. In some cases, it may be secondary to ulceration by stones that erode the vesicular wall [5]. Hypocoagulability, induced by anticoagulants and antiplatelet agents, aggravates intravesicularhaemorrhage which may lead to gallbladder perforation with haemoperitoneum, often of great abundance. The usual area of perforation is the fundus, which is less vascularised and more sensitive to intravesicularhyperpressure [6]. Vesicular perforation may be either in the form of a limited rupture or a sudden fissure responsible for acute haemoperitoneum, or secondary to a gangrenous haemocholecyst with a fissure and parietal haematoma evolving silently and without haemodynamic problems [7]. The haemocholecyst remains asymptomatic in the majority of cases, and may present as an acute cholecystitis or, less frequently, as anhemorrhagic shock with abdominal pain. Abdominal ultrasound is the initial imagng modality, but it does not contribute much. Abdominal CT is the most advanced examination to make a positive diagnosis. It often shows a distended gallbladder with haemorrhagic content. The hole sign refers to direct visualization of the perforation, although identification of calculi outside the gallbladder, an intraperitoneal effusion or compression of a neighbouring organ. PDC injection is used to study the vesicular wall and look for active extravasation of intravenous contrast. The diagnosis of haemocholecyst can be difficult to make, especially if it manifests as a symptom of vesicular lithiasis with a non-contributory ultrasound. Therefore, haemocholecyst should be suspected when anticoagulants treated patient presents symptoms of acute cholecystitis with or without haemorrhagic shock.

CONCLUSION

Despite the rarity of intravesicular haemorrhages, haemocholecyst must be suspected in any patient on anticoagulants who present an acute abdominal pain. Gallbladder perforation is the most dreaded complication, especially in the presence of gallstones, which promotes intravesicular hyperpressure and parietal rupture complicated by haemoperitoneum and haemorrhagic shock.

Competing Interests: None declared.

Author's Contributions

All authors have read and approved the final version of the manuscript.

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