Subcapsular Hepatic Hematoma Post Endoscopic Retrograde Cholangiopancreatography (ERCP): a case report

Hematoma Hepático Subcapsular Pós-Colangiopancreatografia Retrograda (CPRE): relato de caso

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Mateus Araújo dos Santos
Medical Graduating Student
Institution: Universidade Tiradentes (Unit)
Address: Avenida Murilo Dantas, 300, Farolândia, Aracaju - SE, Brasil,
CEP: 49032-490
E-mail: mateus.ados@souunit.com.br

Paulo Vicente dos Santos Filho
Doctoral Student in Surgical Sciences
Institution: Universidade Tiradentes (Unit)
Address: Avenida Murilo Dantas, 300, Farolândia, Aracaju - SE, Brasil,
CEP: 49032-490
E-mail: paulovicentefilho@gmail.com

Victor Cury Menezes
Orthopedics and Traumatology Resident
Institution: Hospital Universitário de Lagarto (HUL-UFS)
Address Av. Brasília, 49400, Santa Terezinha, Lagarto - SE, CEP: 49400-000
E-mail: curymedicina.unit@gmail.com

Jennifer Camila de Souza Fornari
Medical Graduating Student
Institution: Universidade Tiradentes (Unit)
Address: Avenida Murilo Dantas, 300, Farolândia, Aracaju - SE, Brasil,
CEP: 49032-490
E-mail: fornarijennifer@gmail.com

Tiago Oliveira Morita
Graduation in Medicine
Institution: Universidade Federal de Sergipe (UFS)
Address: Av. Ministro Geraldo Barreto Sobral, 2277, Jardins, Aracaju - SE, Brasil,
CEP: 49026-010
E-mail: tiagomorita@redeprimavera.com.br

ABSTRACT

Subcapsular hepatic hematoma is a rare complication found after the ERCP, which can lead to abdominal pain, anemia, fever and hypotension. The case of a 34-year-old patient who developed a subcapsular liver hematoma after ERCP is presented in this paper. The

patient had abdominal pain and anemia, which did not improve with conservative treatment. Drainage therapy was performed, leading to remission of the condition.

Keywords: ERCP, hematoma, liver, complications.

RESUMO
O hematoma hepático subcapsular é uma complicação rara encontrada após a CPRE, que pode levar a dor abdominal, anemia, febre e hipotensão. Apresentamos o caso de um paciente de 34 anos que desenvolveu um hematoma hepático subcapsular após CPRE. O doente apresentava dor abdominal e anemia, que não melhoraram com o tratamento conservador. Foi realizada terapia de drenagem que levou à remissão do quadro.

Palavras-chave: CPRE, hematoma, fígado, complicações.

1 INTRODUCTION

ERCP is a procedure widely used in pancreaticobiliary diseases. It is still a complex procedure that has innate iatrogenic risks for the patient. The most common adverse effects reported in the literature are pancreatitis, hemorrhage, perforation, infections and other less common adverse effects, which include Hepatic Hematoma (HH) [1-4].

The development of HH is a rare occurrence, with a very limited case number documented in the literature and a high mortality rate [1,2]. We present a case of a 34-year-old man with a Subcapsular Hepatic Hematoma post-ERCP and review the literature regarding this complication.

2 CASE REPORT

34-year-old patient admitted in the Emergency Room (ER) with acute calculous cholecystitis and choledocholithiasis. He expressed right upper quadrant pain refractory to analgesia, positive Murphy's sign and jaundice (II/IV). Ultrasonography (US) revealed multiple micro-gallstones, thickened walls and extrahepatic bile duct dilation. Laboratory showed leukocytosis, elevation of canalicular enzymes and direct bilirubin.

Laparoscopic Cholecystectomy with intraoperative cholangiography and ERCP was indicated. Cholecystectomy was performed and cholangiography revealed a distal choledocholithiasis. Endoscopy team performed the procedure with single stone extraction in the distal bile duct on the same surgical procedure. Both procedures without complications. The patient showed progress and was discharged on the 1st postoperative day.

After 5 days of discharge, the patient returned with abdominal pain, radiated to the back, high intensity (8/10), respiratory distress and sweating. On physical examination he presented abdominal pain without peritonitis, anicteric and discoloration of the mucous membranes (II/IV). Analgesia was performed with partial relief. Laboratory revealed decrease in hemoglobin (Hb) level in relation to the hospitalization tests (14-9.3 mg/dL). FAST Exam showed presence of free fluid in lower abdomen and hepatic hematoma. Abdominal Computed Tomography (CT) with contrast revealed significant subcapsular hepatic hematoma. (FIGURE 1 AND 2)

Figure 1: Abdominal CT scan, post-contrast phase, axial plane: large hepatic subcapsular hematoma, spontaneously hyperdense.

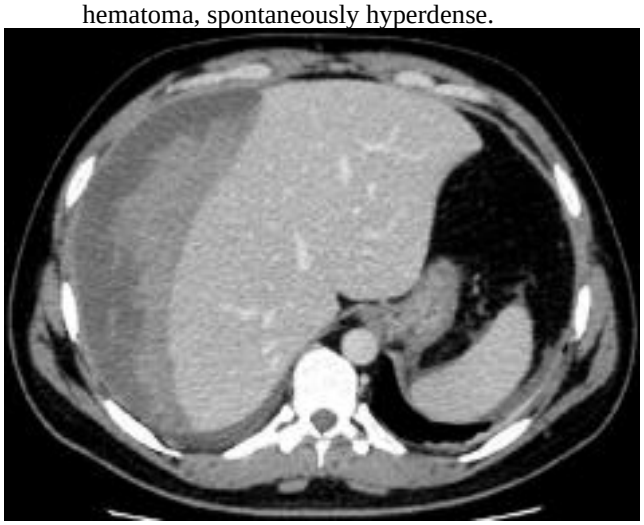


Figure 2: Abdominal CT scan, post-contrast phase, coronal plane: large hepatic subcapsular hematoma, free intraperitoneal fluid.

Due to the hemodynamic stability and pain relief after complete analgesia, hospitalization was chosen to monitor the clinical condition. On the 2nd day of hospitalization, the patient presented significant clinical worsening with pain refractory to analgesia. Then, we opted for percutaneous drainage of the hematoma guided by image with a 12fr drain.

The procedure drained 150 ml of blood. After that, the patient showed significant pain improvement. Percutaneous drain was maintained for 8 days with hematoma reduction (FIGURE 3). Hb varied between 8.7 and 9.3 mg/dL; receiving 01 red blood cell concentrate. The total amount in those 08 days was 485 ml with an average of 50 ml/day. On the day of the drain removal, it still produced 50ml in 24h. After removing, the patient was kept under observation; 5 days later, the abdominal pain returned and a new increase in hematoma was identified on CT. We decided to put a new percutaneous drain with an initial drainage of 700ml of blood and keep it for a longer time. (FIGURE 4 AND 5)

Figure 3: Abdominal CT scan, post-contrast phase, axial plane: drain well located inside the hematoma with partial reduction of the hematoma volume.

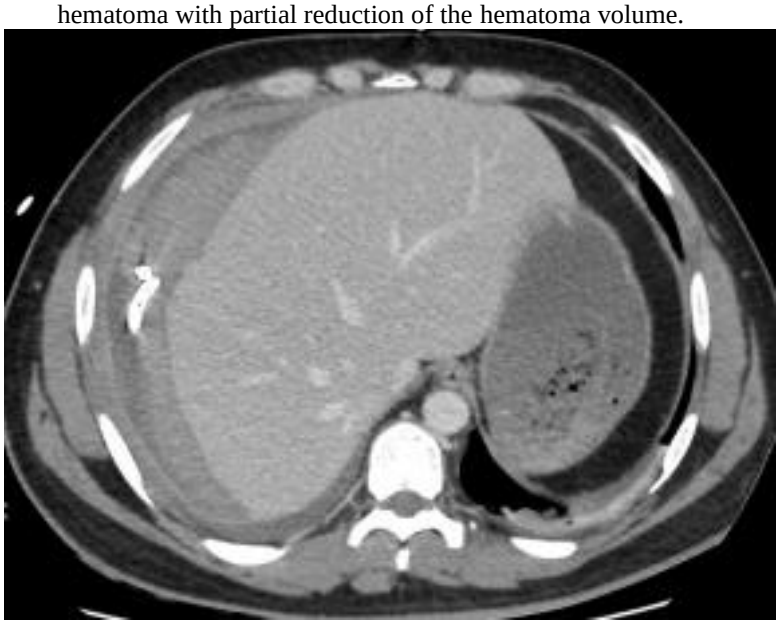


Figure 4: Abdominal CT scan, post-contrast phase, axial plane: new control, with progressive reduction of the volume of the hematoma, drain well located

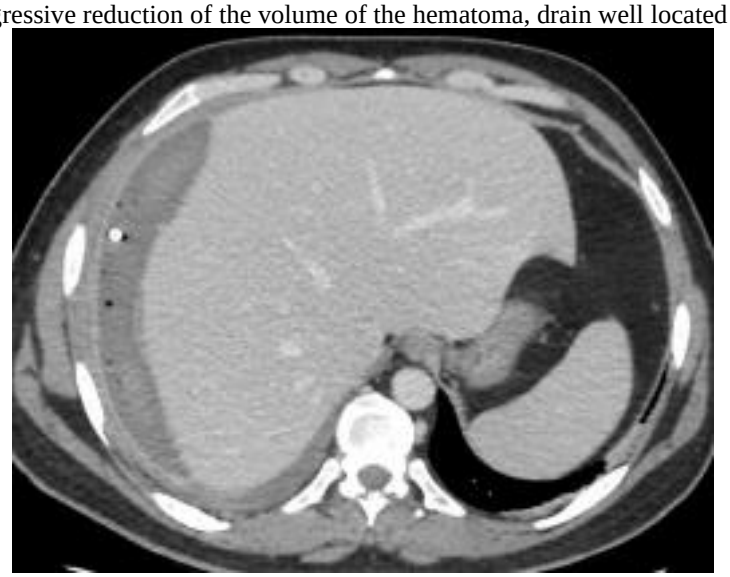
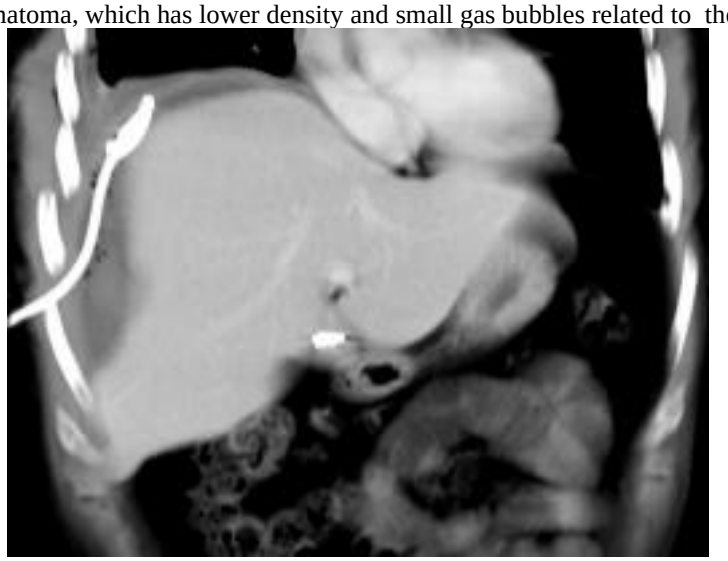
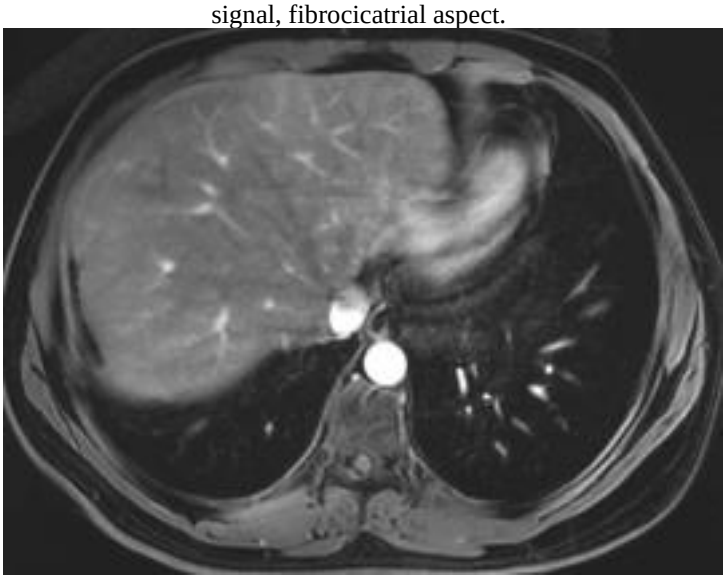


Figure 5: Abdominal CT scan, post-contrast phase, oblique coronal plane: well-located drain inside the hematoma, which has lower density and small gas bubbles related to the procedure.



After 15 days of hospitalization, the patient was discharged with the drain. 11 days after, a new CT revealed a significant decrease in the collection. The drainage had a progressive volume drop and in the last 03 days it had only 10 ml/day (totaling 2.2 L of blood content in the period of 26 days). The follow up progressed well, without complaints. Control MRI 8 months after drain removal showed the absorption of practically the entire intrahepatic collection. (FIGURE 6)

Figure 6: Abdominal MRI scan, T1-weighted image with post-contrast fat suppression, axial plane: complete resolution of the hematoma, with slight hepatic capsular retraction and a thin low-signal, fibrocicatrial aspect.



3 DISCUSSION

Hepatic hematoma is a rare complication of ERCP, which was first described in the early 21st century by Ortega, et all. and since then, about 50 cases have been documented with a mortality rate of 4-10% [1,2].The occurrence rate is still unknown and it is believed that it is underrated due to the asymptomatic forms [1,2].

Regarding the pathology, there are two main hypotheses: accidental laceration or ruptures of intrahepatic vessels by the guidewire and a secondary damage to the balloon traction in the main bile duct when trying to remove the stones, causing bleeding [1-5].

In the current literature, the first symptom reported by most patients was acute abdominal pain (91.7%), anemia (43.8%), hypotension (29.2%) and fever (20, 8%), which can occur from a couple of hours to 15 days after the procedure, more commonly in the first 48 hours. Asymptomatic cases can occur too [1,2,4]. In our case, the patient presented abdominal pain as the main complaint 5 days after the surgical procedure. [1,3].

For diagnostic confirmation it is necessary to perform an radiological exam, usually CT scan, US and MRI [3]. As used in our report, CT is the exam of choice, however, MRI was used as a final control test, due to multiple previous exposures of the patient to ionizing radiation [2].

The treatment is individualized. Hemodynamically stable patients are generally treated conservatively (41.3%) [1]. Hemodynamic instability, severe infection or clinical deterioration (reported in the case) and a higher risk of rupture of the HH requires a more

aggressive approach such as percutaneous drainage.

Surgery or embolization should also be considered in these cases [2]. In this case, the conservative approach was chosen initially. With the increase in pain and refractoriness to analgesics, it was decided to perform image-guided percutaneous drainage with a good initial response. Despite this, the patient presented relapse of the condition, requiring a second drain for a longer period – due to the liquefaction of HH, which can increase the chance of a new collection and return of clinical manifestations. After that, we consider that the drains should be maintained for a longer time until a complete clinical and laboratory resolution associated with radiological improvement and, above all, low drainage. Antibiotic prophylaxis was performed with ceftriaxone to avoid secondary infection.

HH is an uncommon complication of ERCP and must always be present in the differential diagnoses of patients undergoing the procedure and who develop abdominal pain and a drop of hemoglobin. When resolved by percutaneous drainage the drain should be kept until resolution of the clinical condition and low daily drainage.

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