

Subcapsular Intrahepatic Hematoma As A Rare Complication of ERCP Secondary to Choledocholithiasis Case Report

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ABSTRACT

Subcapsular Intrahepatic Hematoma represents a challenging clinical entity in the field of endoscopy. We present an interesting and rare case report and a bibliographic review to provide a comprehensive overview of this condition. The article delves into this condition, including its definition, risk factors, incidence, and management strategies. The discussion section highlights emerging approaches and future directions in managing subcapsular liver hematoma. In conclusion, the importance of evidence-based practices in addressing this rare complication of ERCP.

KEYWORDS: ERCP, endoscopy, choledocholithiasis, liver, hematoma, complication, bleeding, cholecystectomy.

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INTRODUCTION

Subcapsular Intrahepatic Hematoma is one of the rarest complications after ERCP that affects less than 1.3% of these patients. It's challenging to diagnose in the setting of the early evolution of a patient, also for a general surgeon

It is a rare but clinically significant disorder that affects a little less than 1.3% submitted to ERCP in the normal setting of choledocholithiasis, usually, it doesn't develop symptoms, and because it's not a usual complication, suspect that it is not the mind of a general surgeon. Usually, it can be solved with an endoscopic approach if it is diagnosed early and the patient is still stable.

We as specialists must have in mind this kind of complication in a routine procedure like this and even more in small hospitals where the volume can be small, with around 10 to 40 ERCPs a month.

CASE REPORT

The 23-year female started with pain in the right hypochondrium on October 21, 2023, that progressed with the vomit of gastro biliary content and icteric dye in scleras, so she went to the emergency department of our hospital for evaluation, during her stay in the hospital laboratories are requested for approach and an ultrasound with the following results.

10/21/2023: hemoglobin 12.2, hematocrit 38, platelets 389 thousand, tp 11, inr 0.9, ttp 31.2, glucose 136, urea 22.2, creatinine 0.63, direct bilirubin 5.08 indirect bilirubin 0.83 total bilirubin 5.91 AF 494.4 ALT 322

10/21/23: Choledochus 8 mm, Gallbladder 74x23x36, thin wall. Biliary vesicle lithias of 7,8,6 mm,

After these results, an ERCP is requested by an endoscopy specialist and performed two days later with the following results

10/22/23 ERCP: Intrahepatic biliary tract, right and left hepatic duct of 6 mm, common hepatic duct of 11, choledochus of 10 mm in the upper third, lower third of 4 mm, filling defect at the level of the common hepatic duct of 10 mm is observed. Guided sphincterotomy was performed, observing biliary sediment outflow, balloon catheter replacement was performed, and serial sweeps were performed without being able to extract the bile, it was decided to place a 10 cm x 10 fr plastic prosthesis under fluoroscopic control, observing adequate vacuity of the contrast medium in the biliary tract.

After returning from recovery, normal control studies were requested at 12 hours, consisting of blood biometry, the patient presenting with mild pain in the right hypochondrium that responded little to the administration of analgesics.

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10/23/23 08:00 hrs: glucose 154.08, urea 52.02, creatinine 0.97, ast 634.15, af 451, total bilirubin 2.76, direct bilirubin 2.11, indirect bilirubin 0.65, albumin 3.55, D-dimer 383, TP 12.6, INR 1.1, TTPA 25.5, fibrinogen 435.8, hemoglobin 5.8, hematocrit 18.1, platelets 332, leucocytes 13.86, neutrophils 10.8.

With these results, post-sphincterotomy bleeding is suspected, so an ultrasound of the liver and biliary tract and transfusion of 2 globular packages is performed to stabilize the patient, with the following result.

USG 10/23/23: Presence of free fluid at abdominal level 236 cc, findings to consider hepatic hematoma of 806 cc, associated with areas of hepatic necrosis in segment VII.

After these results, resolution by endoscopy was ruled out, so exploratory laparotomy was performed and the following was found:

Subcapsular hematoma in segments VI, VII, and VIII, drainage and cleaning is performed with a physiological solution of hematic residues with a total of 2250 cc, hepatic fundus is found without active bleeding so surgical time is completed.



Figure 1. Images of ERCP

DISCUSSION

General

Endoscopic retrograde cholangiopancreatography (ERCP) has a complication rate with a frequency of 4-16% and a mortality of 0.1-1.5%. Less frequent complications include pneumomediastinum, pneumothorax, air embolism, subcutaneous emphysema, cardiac arrest, splenic lesions, and hepatic subcapsular hematoma (HSC), the latter with a frequency of less than 1% of the reported cases which, if not treated promptly, can have a fatal outcome.

Risk Factors:

In these cases there are few cases, the main ones being anatomical variations, and mainly lack of expertise of the specialist performing the procedure, as well as hospitals with a low rate of ERCP being defined as less than 2 per week².

Diagnosis:

The main tool for this are imaging studies, the first thing to perform is secondary bleeding to Sphincterotomy, in suspicion of unwarranted hemoglobin decrease.

We can use both ultrasound and CT for complementary assessment of blood loss anemia as a suspected complication of any procedure. Both are highly sensitive and useful in making a therapeutic and approach decision, both endoscopic and conventional.³

Management:

Priority should be given to the hemodynamic status of the patient, starting with a stable patient, only analgesics, pro- In this particular case, we opted for open surgery because we did not have more resources and the hemodynamic stability of the patient progressed rapidly to hypovolemic shock with the findings already described, it was not necessary to opt for liver packing as a therapeutic resource, a total of 4 transfusions of globular packages were performed to achieve a hemoglobin goal of 10

coagulant agents, rest, serial follow-up with imaging studies, and hemoglobin measurements at 12 and 18 hours, and antibiotics are indicated. Cultures are only indicated in cases of infection refractory to treatment.⁴

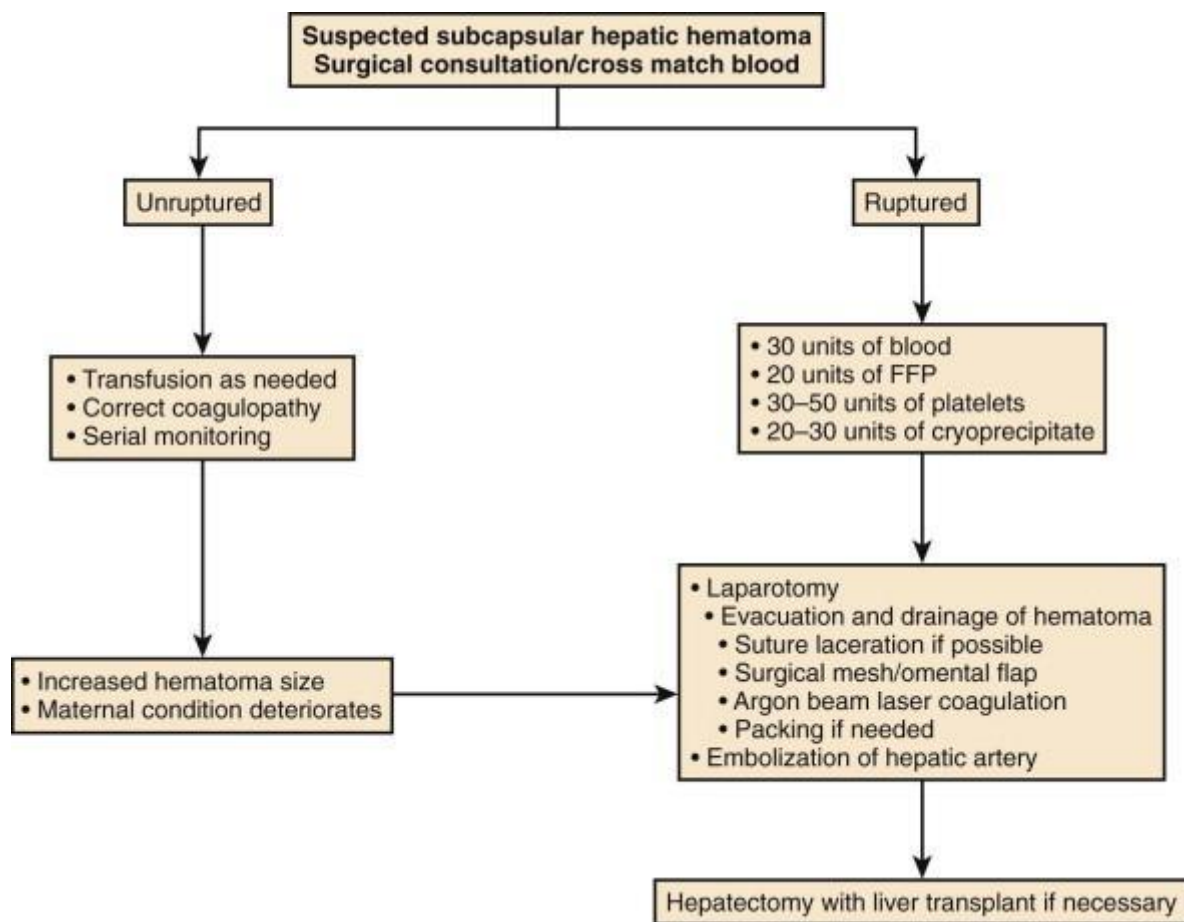
Patients with hemodynamic instability should be evaluated by the intensive therapy service and subsequently evaluated if they are candidates for conventional surgical treatment⁵⁵. The criteria for surgical treatment are related to the expansive increase of the hematoma in a few hours, the presence of hemodynamic instability, contrast extravasation in tomography, and hematoma superinfection. All this together with the availability of resources in each hospital as well as the surgeon's expertise for certain procedures are what sets the standard for definitive treatment.⁶

The series reported so far does not have more than 60 patients, so determining the effectiveness of each treatment is not very objective, in some series it is reported effectiveness of conservative treatment up to 36%, percutaneous or endoscopic drainage up to 73% with lower rates of mortality and morbidity associated with this. Concerning angio embolization, there is very little experience in this regard and the availability of this resource is very limited in most units around the world.⁷

Postoperative Care: Postoperative care is critical to ensure a successful outcome. Patients require close monitoring and may need nutritional support in the immediate postoperative period.⁸

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grams/dl without adverse effects, with good post-surgical evolution and discharge home 48 hours after the surgical event.⁹



CONCLUSION

Sub-hepatic hematoma after ERCP presents symptoms quickly after establishment usually associated with massive hemorrhage anemia, however being a rare entity and taking several hours to present in a young patient it can be overlooked and its diagnostic suspicion is not something that a general surgeon takes into account after the performance of each of these procedures. There is little information on the subject because it is a fairly rare complication and case series do not have much data to guide treatment guidelines, it is an entity with a high morbidity and mortality rate in its late diagnosis.¹⁰

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