



Post-Cholecystectomy Hemobilia: A Case Report

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Abstract

Case Report

Post-cholecystectomy hemobilia is a major complication of cholecystectomy. It is frequently associated with lesions of biliary convergence which aggravates the hepatic echoing of it and complicates surgical treatment. We report a case of complex injury of the cystic artery that has been treated successfully and which was revealed by a hemobilia, one year after a cholecystectomy. Surgical treatment consisted in the the reparation of the pseudoanevrysm and ligation of the cystic artery associated with a Kehr drain diversions. The evolution was satisfactory on the vascular and biliary level with a 36 months decline.

Keywords: Complication of cholecystectomy - Hemobilia - Pseudoanevrysm of cystic artery - Surgical treatment - Case report.

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INTRODUCTION

Hemobilia is defined by the presence of blood in the bile ducts whatever its origin. It is a rare and often poorly understood pathology, but it's potentially fatal and with increasing incidence. Its classic clinical presentation combines upper digestive hemorrhage, biliary pain and jaundice.

Its diagnosis can be made difficult by its time to onset. But once the diagnosis is mentioned, a diagnostic and therapeutic arteriography must be quickly performed.

We report a case of haemobilia caused by cystic artery pseudoaneurysm and occurring one year after laparoscopic cholecystectomy, which was successfully diagnosed and treated.

CASE REPORT

A 57-year-old woman who had undergone laparoscopic cholecystectomy for cholecystitis one year earlier was admitted to hospital with fever, jaundice, right upper quadrant pain and upper gastrointestinal bleeding. At laboratory tests, the patient had anemia with hemoglobin at 6.60 g, lipasemia at 357 UI/L and negative hepatic result without a kidney failure.

At the scanner, there was a dilatation of low bile duct of the DBD and the hepatic duct which are the seat of a dense content with a moderate dilatation of the intrahepatic bile duct, suggesting hemobilia. And a formation in projection of the vesicular bed, which may be related to a pseudo arterial anevrysm.



Figure 1: Scanner shows a dilatation of bile ducts with a dense content

Immediately, the gastro-enterology team steps in to realize an exploratory endoscopy which showed the presence of fresh blood from the papilla. Then they perform a retrograde catheter which confirms hemobilia and did an endoscopic sphincterotomy and placement of the biliary prosthesis.



Figure 2: Endoscopy shows bulging of the papilla of Vater with spurting blood

The evolution was favorable with stabilization of hemoglobin and reduction of jaundice and reduction of pain. The patient was discharged but was readmitted after 8 days with recurrent upper gastrointestinal bleeding and a pain attack. We asked for a blood test, she had anemia at 5.0 g hemoglobin. We immediately started

a blood transfusion with 4 blood pockets and 5 bags of fresh frozen plasma.

Then, we requested a coelio-mesenteric arteriography which showed a pseudoanevrism of the cystic artery and a communication between the pseudoanevrism and the common bile duct.

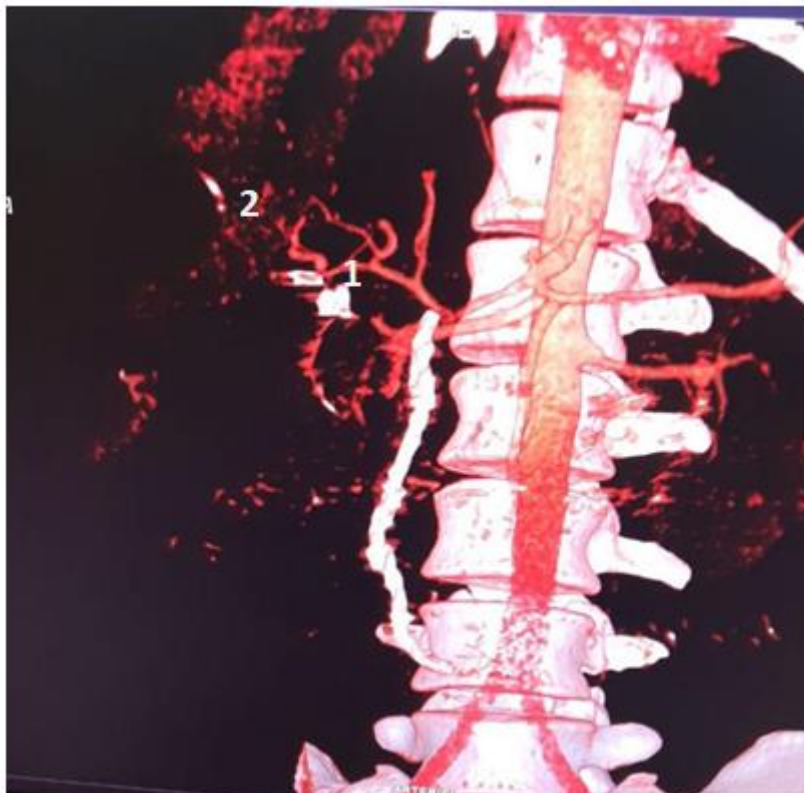


Figure 3: Coelio mesenteric angiography showing the pseudoanevrism (1) and clips (2)

We have proceeded to the reparation of the pseudoanevrism and ligature of the cystic artery with a

Kehr drain diversion. And the control by cholangiography was satisfactory.

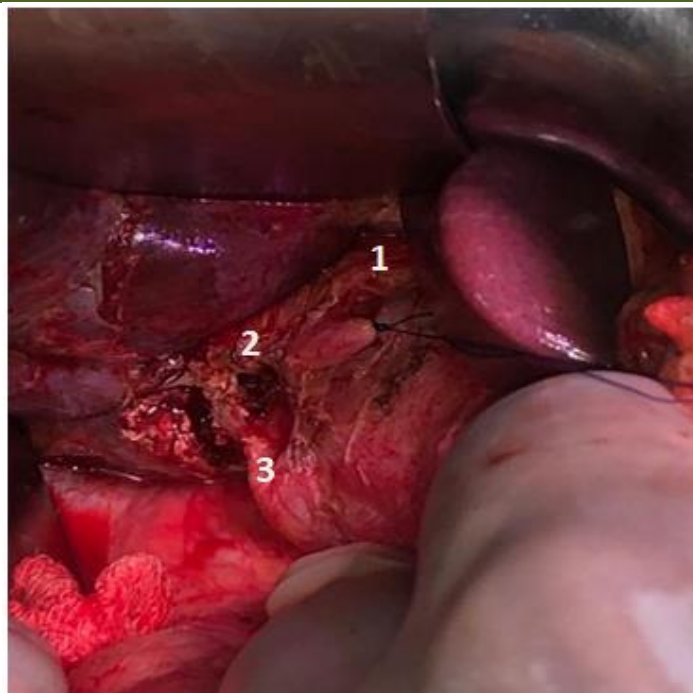


Figure 4: Ligature of a long variant of the cystic artery (1), the pseudoaneurysm (2), communication between the pseudoaneurysm and the common bile duct (3)

The patient was discharged 14 days later without problems. Currently, with 36 months of hindsight, there is no biliary retention or biological signs of.

DISCUSSION

Laparoscopic cholecystectomy has been accepted as the operation of choice in the treatment of gallstones, gallbladder polyps and early gallbladder cancer because of several advantages, such as minimal pain and an excellent cosmetic result.

It is reportedly associated with an increased incidence of biliary and vascular injuries. Specifically, biliary injuries are reported in 0.2–1% of procedures with a 10-fold increase when compared with open surgery, whereas vascular injuries occur in 0.25–0.5% of procedures [1]. Although the experience of the surgeon affects the results [2, 3].

About half the cases of haemobilia follow accidental or iatrogenic injuries to the liver and bile ducts. Other causes are inflammatory, vascular and neoplastic disease and cholelithiasis [4]. Haemobilia after laparoscopic cholecystectomy has rarely been described [5-7]. But can be a lethal complication that occurs weeks to months later [5, 6]. Our patient presented a year after surgery.

Only one case of severe haemobilia was reported among 77,604 cases of laparoscopic cholecystectomy in the USA [2]. However, the complication may be becoming more common, in part owing to the wide use of electrocauterisation, which can

injure arteries either directly or by transmission of heat through the metal clips [2].

Other causes are structural changes within the cystic artery, injury of the vessels during dissection of the cystic duct or artery, and injury by clips [4, 6, 7]. Even the clip on the cystic artery may injure the right hepatic artery by continued contact and result in a pseudoaneurysm [8]. In our case, it was a pseudoaneurysm of the cystic artery.

Bile is cytotoxic and the amphipathic properties of bile acids make them powerful solubilizers of membrane lipids, causing cell death. A canine study by Sandblom *et al.*, [9] showed that bile delays the healing of a liver wound, attributable to the fibrolytic or cytotoxic effects of bile. Bile can therefore cause a weakening of suture lines or sites of surgical clips in vessels. The most likely cause in the case of our patient was a traumatic injury.

The classical triad described by Quinke [10] for a diagnosis of haemobilia is upper gastrointestinal bleeding, colicky abdominal pain and jaundice, but all three features are only present in a minority of cases [11].

In our patient, the symptoms were fever, jaundice, right upper quadrant pain and upper gastrointestinal bleeding.

Severe bleeding requiring emergency treatment is infrequent but can arise after several weeks or even months. In the present case, we did suspect haemobilia at the time of first episode of bleeding.

Once haemobilia is suspected, angiography should be performed not only for diagnosis but also for embolisation (in our case at the second time of repeat bleeding).

Walter [11] first successfully reported angiographic embolisation in the treatment of haemobilia in 1976, and since that time it has become the mainstay of treatment for most cases. Although other techniques can be used. In our case, the placement of a biliary prosthesis and then the use of surgery.

Surgical intervention is rarely necessary and usually reserved for failed endoscopic, endovascular, and/or percutaneous therapies. However, it is first-line if pseudoaneurysms are infected or if they are compressing other vascular structures. Surgery may also be indicated if cholecystitis is present, among other uncommon scenarios. Options for surgery include hepatic artery ligation, pseudoaneurysm excision, or hepatic segmentectomy/lobectomy with the potential for concurrent cholecystectomy if cholecystitis is present or the gallbladder neck is involved. Although surgery has a high success rate of above 90%, it is also associated with a high mortality of up to 10% [12].

CONCLUSION

In conclusion, haemobilia should be suspected in any patient with upper gastrointestinal bleeding and recent biliary surgery. Once suspected, angiography should be performed for diagnosis and treatment. It's the treatment of choice, although other methods can be used. In our case, the stenting of the replaced right hepatic artery and gel-foam embolization of the left hepatic artery were performed. To prevent this serious complication, careful selection of patients, meticulous dissection, careful use of clips and avoiding excessive use of electrocauterisation are essential.

Authors declared they have no conflicts of interest.

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