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Case Report

An unusual case of hemobilia

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ABSTRACT

We report a 64-year-old man who presented with upper gastrointestinal bleeding that was complicated by shock secondary to hemobilia. He had passed tarry stools for two days. In the previous month, the patient had undergone surgery for biliary lithiasis with acute cholangitis. Despite two consecutive upper endoscopies on two successive days, the patient remained hemodynamically unstable. Computed tomography and angiography subsequently revealed an outpouching lesion as a pseudoaneurysm from the orifice of the middle hepatic artery. Hemostasis was achieved by angioembolization of the middle hepatic pseudoaneurysm. The patient had a stable level of hemoglobin by discharge. Hemorrhagic shock resulting from hepatic pseudoaneurysm is difficult to diagnose and has a high mortality rate. We were able to make the diagnosis quickly and treat him successfully with percutaneous embolization.

1. Introduction

Hepatic artery aneurysms (HAAs) are rare but potentially life-threatening. The condition represents approximately 20% of all visceral artery aneurysms, and 80% of HAAs are extrahepatic. Rupture can occur into the biliary tract, peritoneal cavity, or gastrointestinal tract. Mortality following spontaneous rupture can be as high as 35% and is most commonly related to fistulization of the common bile duct, which then causes hemobilia. Hepatic artery aneurysms are difficult to diagnose because there are few localized symptoms. Delayed diagnosis of a ruptured HAA may be life-threatening. In this article, we report a case of upper gastrointestinal bleeding complicated by shock. The patient was diagnosed as having a hepatic artery pseudoaneurysm rupture into the biliary tree, and was treated successfully with percutaneous embolization.

2. Case report

A 64-year-old man with diabetes mellitus presented with tarry stool passage for two days. In the previous month, the patient had been discharged status post-cholecystectomy, choledochotomy, and choledocholithotomy—procedures he had undergone because of obstructive cholangitis. On admission, he presented with shock and was initially admitted to the intensive care unit. His physical examination revealed pale conjunctiva and right upper quadrant tenderness. Laboratory tests showed normocytic anemia (hemoglobin, 7.8 mg/dL) and conjugated hyperbilirubinemia (total bilirubin, 4.4 mg/dL; direct bilirubin, 3.3 mg/dL). The patient underwent an upper endoscopy, which showed one oozing lesion with fresh blood clots over the second portion of the duodenum. Immediate hemostasis was achieved and the bleeding temporarily stopped. Because of persistent hemodynamic instability, a repeat upper endoscopy was performed. It revealed active bleeding from the papilla (Fig. 1A). Computed tomography (CT) showed a saccular lesion with contrast enhancement without extravasation (Fig. 1B; white arrows). Angiography confirmed the outpouching lesion as a pseudoaneurysm from the orifice of the middle hepatic artery (MHA; Fig. 2A; black arrow). Selective embolization with platinum microcoils was successfully performed. The postembolization angiogram of the MHA showed complete obliteration of the pseudoaneurysm (Fig. 2B). A follow-up upper gastrointestinal endoscopy one day later showed the complete cessation of bleeding. The patient had a stable level of hemoglobin (11.0 mg/dL) and was eventually discharged in a stable condition.

3. Discussion

Among visceral artery aneurysms, HAA is the second leading type (approximately 20% of cases), after splenic artery aneurysm. However, HAA is uncommon. Approximately one-half of HAAs are pseudoaneurysms [i.e., hepatic artery pseudoaneurysm (HAPA)] [1].

Conflicts of interest: none.

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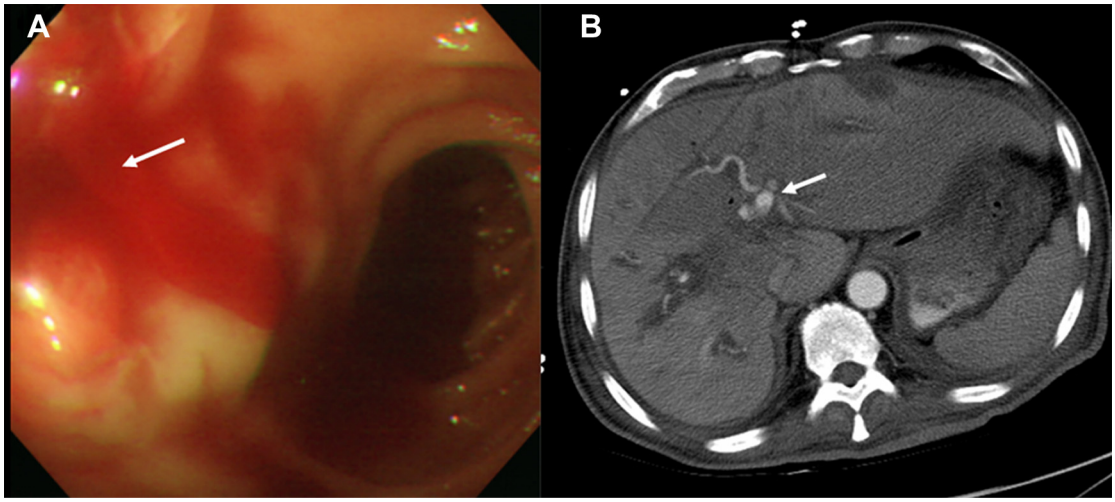

Fig. 1. (A) Upper gastrointestinal endoscopy reveals active bleeding from the papilla as hemobilia. (B) Computed tomography shows one saccular lesion with contrast enhancement without extravasation (white arrows).

Most HAAs are solitary lesions and involve the common hepatic artery or the right hepatic artery [2,3]. Common procedures associated with HAPAs are liver biopsy, transhepatic biliary drainage, cholecystectomy, hepatectomy, and liver transplantation [1,2]. Symptoms of HAA include epigastric or right subchondral pain. However, most affected patients are asymptomatic until they develop an acute lifethreatening hemorrhage caused by rupture. A HAPA may rupture into the adjacent hepatic venous, portal, or gastrointestinal system, or may rupture directly into the abdominal cavity. Patients may present with acute upper or lower gastrointestinal bleeding, signs of an acute abdomen that is accompanied by jaundice or fever, or postoperative hemorrhaging from an intra-abdominal drain [2,3]. Rupture of an aneurysm is the initial clinical event in 80% of patients with HAAs, and the overall mortality rate can be approximately 35% [4]. Gastrointestinal hemorrhage caused by the rupture of a HAA is uncommon, and only a few cases have been reported [5–10]. In previous case reports, gastrointestinal endoscopy revealed no significant abnormality, and the HAA was diagnosed on ultrasonography, CT scan, or angiography. Our patient presented with hemobilia resulting from a HAPA rupture into the biliary tree. Computed tomography is useful for an accurate diagnosis; however, angiography can provide better characterization and localization of an aneurysm and can offer additional therapeutic advantages such as embolization [2]. During the past decade, the most commonly used technique for treating HAAs (in 37% of cases) has been percutaneous catheter-based embolization [11]. For stable unruptured HAPAs, occlusion is achieved by embolization in 88–100% of patients [13]. Good results by embolization have even been reported for treating ruptured HAPAs [12]. Postembolization complications include rupture, abscess formation, infection, sepsis, ascites, jaundice, gallbladder necrosis, and the formation of a pseudoaneurysm or hematoma at the catheter site [13].

Surgical intervention is reserved for complicated cases or failed angiographic treatment. The choices for surgical intervention include segmental resection of the liver or ligation of the involved afferent and efferent vessels. However, the surgical mortality for these patients remains high [14].

In summary, our patient with HAPA presented with severe hemobilia that resulted in hypovolemic shock. The diagnosis of HAPA was confirmed by CT after the failure of two consecutive therapeutic

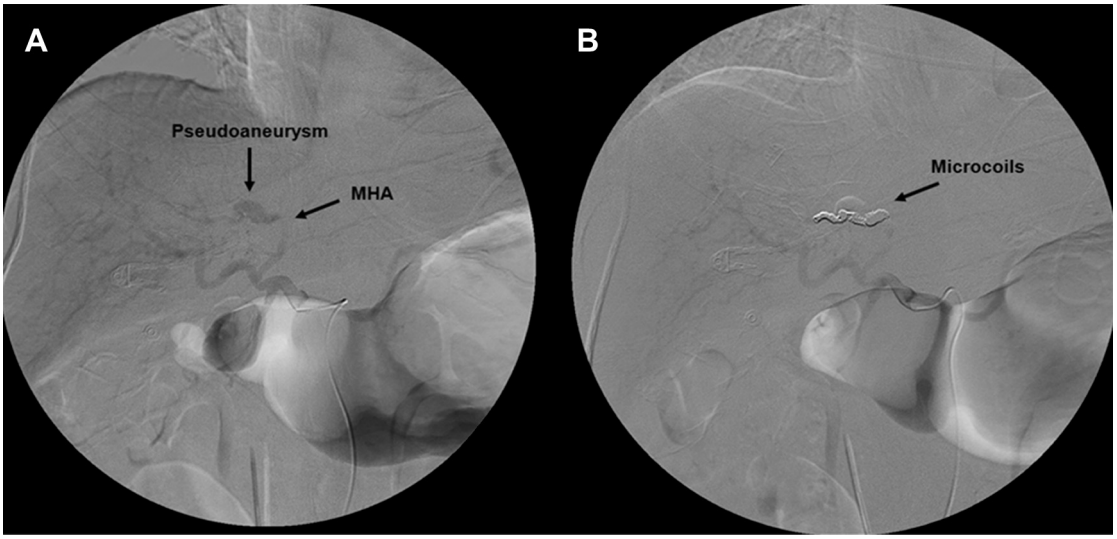

Fig. 2. (A) Angiography confirms that the outpouching lesion is a pseudoaneurysm from the orifice of the middle hepatic artery (MHA; black arrow). (B) Selective embolization angiogram of the MHA shows complete obliteration of the pseudoaneurysm.

endoscopies. Hemorrhagic shock because of hepatic pseudoaneurysm is difficult to manage and has a high mortality rate. In clinical practice, prompt diagnosis and treatment of HAAs are important to prevent the progression of lifethreatening complications. After successful angioembolization of the middle hepatic pseudoaneurysm, the patient was discharged with a favorable outcome.

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