

## *Hemosuccus pancreaticus*, a diagnostic challenge

K. Abbass<sup>1,2</sup>, P. Rao<sup>2</sup>, R. Kibria<sup>1,2</sup>

(1) Dayton Veteran's Affairs Medical Center 4100 W. Third St. Dayton, OH, 45428; (2) Wright State University, Boonshoft School of Medicine, Dayton, OH, USA.

### To the Editor,

Hemorrhage from the papilla of Vater via the pancreatic duct, known as *Hemosuccus pancreaticus* (HP), is an uncommon cause of intermittent upper gastrointestinal bleeding. Up till now, less than 100 cases are reported in the literature (1). HP cannot be easily detected by endoscopy. The diagnosis is supported by direct visualization of the hemorrhage through the main pancreatic duct at angiography. We report an unusual case of HP.

A 30-year-old male with a history of chronic pancreatitis secondary to alcohol abuse presented to the emergency room with epigastric pain, hematemesis and melanic stools. He had two prior admissions for similar episodes and emergent endoscopy each time revealed fresh blood in the second part of the duodenum and in the anterior wall of the stomach. During one of these episodes, a small non-bleeding angiodysplasia in the stomach was treated with argon plasma coagulation. A CT scan of the abdomen without IV contrast at prior hospitalization showed an atrophic pancreas with extensive calcification but was otherwise unremarkable. On this admission he was hypotensive with a hemoglobin of 5.9 g/dL (13.8-17.2 g/dL). After initial resuscitation, an esophagogastroduodenoscopy revealed fresh blood in the second part of the duodenum at the site of the major papilla as shown in Figure 1. Examination with a side-viewing endoscope revealed blood oozing from both minor and major papilla. An endoscopic retrograde cholangiopancreatography with a spy scope exam showed the presence of blood in the pancreatic duct and normal biliary system. Emergent selective celiac arteriogram revealed active contrast extravasation from the superior pancreaticoduodenal branch of the gastroduodenal artery. Coil embolization of the artery was then carried out at and before the level of the acute bleed with satisfactory result. The patient remains asymptomatic with no further evidence of bleeding on regular follow up for 6 months.

HP predominantly affects males with a reported male to female ratio of 7:1. The average age for an established diagnosis is usually 50 years. The most commonly involved vessel is the splenic artery (65%) (1). The overall mortality of HP remains high at around 28% (2). It is difficult to make a diagnosis of HP because of intermittent hemorrhage from a source that is not readily accessible by endoscopy (1, 3). Intermittent colicky epigastric pain followed by hematochezia, melena or hematemesis

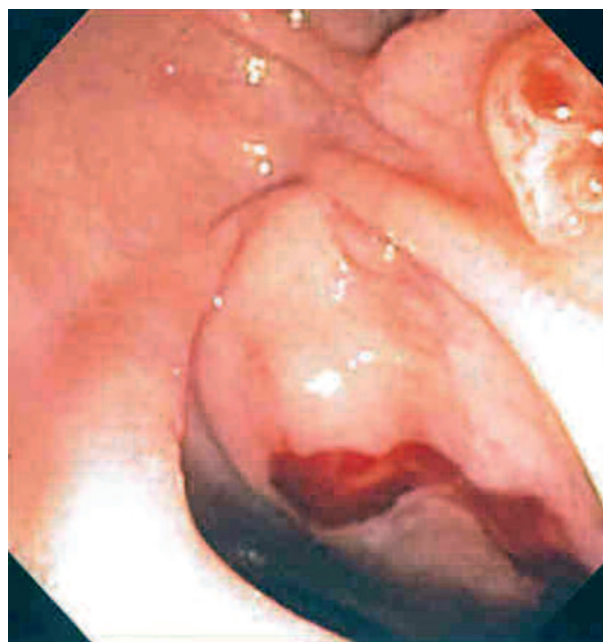


Fig. 1. — Esophagogastroduodenoscopy showing fresh blood at the site of the major papilla.

within 30-40 minutes is the characteristic finding, and is reported to be very specific and nearly pathognomonic (4). If there is any suspicion on upper endoscopy, examination with side viewing duodenoscope may reveal blood exiting either major or minor papillae as was seen in our patient and can assist in the diagnosis. In all patients with active upper GI bleeding and a non-diagnostic endoscopy, an early angiography should be carried out. With the advent of a spy glass system, direct visualization and biopsy of the pancreatic as well as the bile duct can assist in the diagnosis as was manifested in our case.

Correspondence to : Khurram Abbass, M.D., Dayton Veteran's Affairs Medical Center 4100, W. Third St. Dayton, OH, 45428; Wright State University, Boonshoft School of Medicine, Dayton, OH, USA  
E-mail : drkhuramabbass@gmail.com

Submission date : 13/06/2010  
Acceptance date : 04/10/2010

Angiography is the standard for the demonstration of the fistulized aneurysmatic vessel; however, to demonstrate extravasations through the main pancreatic duct, the exam should be performed while the patient is experiencing pain. In hemodynamically stable patients, ultrasound, contrast-enhanced CT scan and MRI have all been successful in the identification of pseudoaneurysms and are acceptable diagnostic modalities (5).

Interventional radiology is the gold standard for early diagnosis and is also the primary choice of treatment for high risk or hemodynamically unstable patients undergoing angiography. When angiography shows no abnormal findings or interventional radiological therapy is not possible, surgery should be considered without delay (1,4).

## References

1. TABRIZIAN P., NEWELL P., REITER B.P., HEIMANN T.M. Successful multimodality treatment for hemosuccus pancreaticus. *Am. J. Gastroenterol.*, 2009, **104** : 1060.
2. SUTER M., DOENEZ F., CHAPUIS G., GILLET M., SANDBLOM P. Hemorrhage into the pancreatic duct (HP). Recognition and management. *Eur. J. Surg.*, 1995, **161** : 887-92.
3. TOYOKI Y., HAKAMADA K., NARUMI S., NARA M., ISHIDO K., SASAKI M. Hemosuccus pancreaticus : problems and pitfalls in diagnosis and treatment. *World J. Gastroenterol.*, 2008, **14** : 2776-9.
4. MASSANI M., BRIDDA A., CARATTOZZOLO E., BONARIOL L., ANTONIUTTI M., BASSI N. HP due to primary splenic artery aneurysm : a diagnostic and therapeutic challenge. *JOP*, 2009, **10** : 48-52.
5. WAGNER W.H., COSSMAN D.V., TREIMAN R.L., FORAN R.F., LEVIN P.M., COHEN J.L. HP from intraductal rupture of a primary splenic artery aneurysm. *J. Vasc. Surg.*, 1994, **19** : 158-64.