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CASE REPORT

Hemosuccus Pancreaticus in a 50-Year-Old Male with Chronic Pancreatitis. A Case Report

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Abstract: Hemosuccus pancreaticus (HP) is a rare cause of upper gastrointestinal (GI) bleeding, characterized by bleeding into the GI tract via the pancreatic duct and major papilla. It often occurs in conjunction with chronic pancreatitis and the development of pseudoaneurysms in the vessels near the pancreas. This association is attributed to the close proximity of these vessels, such as the splenic and gastroduodenal arteries, to the pancreatic parenchyma and duct, making them susceptible to pancreatic enzyme damage. The patient was a 50-year-old male with a known history of chronic alcoholism and pancreatitis who had recurrent admissions due to abdominal pain, hematemesis, melena stools, early satiety, and anemia. On admission, his hemoglobin level was 3.6 g/dL, and he exhibited deranged liver function test results. Contrast-enhanced abdominal CT done showed a complex, heterodense mass in the pancreatic head.
Keywords: hemosuccus pancreaticus, upper gastrointestinal bleeding, chronic pancreatitis, pseudoaneurysm

Introduction

Hemosuccus pancreaticus, also known as wirsungorrhagia, hemowirsungia, or hemoductal pancreatitis, is a condition in which gastrointestinal bleeding occurs in the pancreatic duct, specifically from the major papilla to the ampulla of Vater. This occurrence was initially documented by Lower and Farell in 1931, who noted bleeding from splenic aneurysms, and the term "hemosuccus pancreaticus" was coined in 1970 by Sandblom.[1–3]

Patients typically exhibit episodic and intermittent gastrointestinal bleeding of uncertain origin along with acute abdominal pain and elevated serum amylase and lipase levels, particularly in the context of chronic pancreatitis. Sudden onset of pain is triggered by rapid expansion of the pancreatic duct due to bleeding, which flows through the ampulla of Vater into the duodenum, resulting in symptoms such as melena and hematemesis.

Blood flow within the duct can either coagulate to form a clot or the increasing pressure within the duct can lead to compression of the aneurysm, halting bleeding and stabilizing the patient's condition. However, at later variable intervals spanning months to years, the clot may dissolve, initiating a harmful cycle that can result in recurrent hemorrhage and deterioration of the patient's health.[3,4]

HP presents challenges in identifying the source of bleeding, which is a common hurdle in the diagnosis and management of this rare clinical condition. The initial diagnostic approach typically involves upper gastrointestinal endoscopy employing a side-viewing duodenoscope to inspect the ampulla of Vater and to rule out alternate sources of upper gastrointestinal bleeding. If no bleeding source is detected, particularly in the second part of the duodenum, bleeding originating from the pancreatic duct or biliary tree should be suspected.[3–6]

Case Presentation

A case of a 50-year-old male, who presented with abdominal pain for one-month, vomiting blood, and passing black stool for two weeks. The epigastric abdominal pain was constant, dull, and radiating to the back worsened after food

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intake and lying down associated with hematemesis and melena stools. The patient also reported early satiety, a reduced appetite, and marked weight loss. He reported loose stools and yellow discoloration of the eyes. He also reported a history of fatigue and occasional palpitations.

This was his third admission; the previous admission was 1 year prior due to abdominal pain and was managed as a peptic ulcer. There was no history of other chronic illnesses and the patient was HIV seronegative. He reported ~30-years of alcohol use (more than five liters of local brew (tonto) and 2–3 glasses of local gins 'Kasese' per day, with a CAGE SCORE 4/4).

On examination, he was a middle-aged male, afebrile with a temperature of 36.0 C, wasted, and had moderate dehydration with severe pallor and leukonychia. However, jaundice, digital clubbing, and lymphadenopathy were absent.

Systemic examination revealed scaphoid and epigastric abdominal tenderness. He had tender hepatomegaly 3 cm below the right costal margin with a hepatic bruit. Per rectal examination: normal anal sphincter tone, black stool on the examining finger, and no palpable masses. Cardiovascular exam; pulse- 102 bpm, BP-90/60 mm Hg. Heart sounds S1 and S2 were heard and normal, and the apex was in the fifth intercostal space at the mid-clavicular line.

Laboratory investigations (Table 1) included complete blood counts, liver function tests, and renal function tests (RFT).

Imaging, endoscopy, and contrast-enhanced computed tomography (CT) Endoscopic findings: Figure 1A shows a ball of food called a gastric bezoar in the stomach due to gastric outlet obstruction.

Figure 1B shows an extrinsic mass protruding into the duodenal bulb causing gastric outlet obstruction. Gastrointestinal endoscopy revealed deformation of the duodenal lumen by a submucosal tumor-like mass.

Contrast-enhanced computed tomography (CT) findings Figures 2–4; showed a complex heterodense, bulky, cystic mass in the head of the pancreas with an enhancing (arterial phase) central lesion suggestive of a pseudoaneurysm branching from the gastroduodenal artery.

Management and follow-up. A diagnosis of severe anemia secondary to gastrointestinal bleeding and a gastric bezoar was made. On the ward, the patient received a blood transfusion with three pints of whole blood, intravenous omeprazole 40 mg twice daily, two liters intravenous normal saline administered over 24 hours. The patient was also treated with Coca-Cola 3000 milliliters for 12 hours to dissolve the gastric bezoar. Follow-up upper GI endoscopy was performed, and the bezoar was dissolved. The patient was discharged with oral medications to be reviewed in the clinic after two weeks and was advised to stop alcohol consumption and perform abdominal CT angiography. Unfortunately, the patient passed on after four months at a peripheral facility while receiving treatment.

Table 1 Laboratory Investigation Results

Complete blood count	
Hemoglobin	3.6 g/dL (11–17)- low
Hematocrit	13.5% (26–50)- low
Mean Corpuscular Volume	84.4 fL (86–110)- low
Red blood cells	1.60 million cells per microliter (2.5–5.5)
Liver function tests	
Amylase	102.7 U/L (28–100) - elevated
Serum GGT	394 U/L (9–64)- elevated
Serum alkaline phosphatase	743 U/L (40–150)- elevated
AST	77 U/L (5-34)- elevated
Albumin	21.3 g/L (35–52)
Bilirubin: - Total	47.6 micromoles per liter (up to 20.5)
- Direct	34 micromoles per liter (up to 8.6)
Renal function tests	
Creatinine	72 micromoles per liter -normal
Urea	3.0 mmol/L - normal

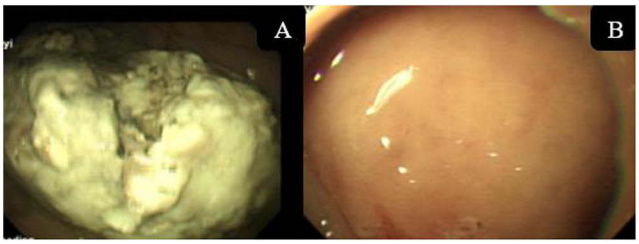

Figure 1 Gastrointestinal endoscopy; (**A**) shows a ball of food, a gastric bezoar due to gastric outlet obstruction and (**B**) shows the lumen of the duodenum deformed by a submucosal tumor-like mass (extrinsic mass) protruding into duodenal bulb causing gastric outlet obstruction.

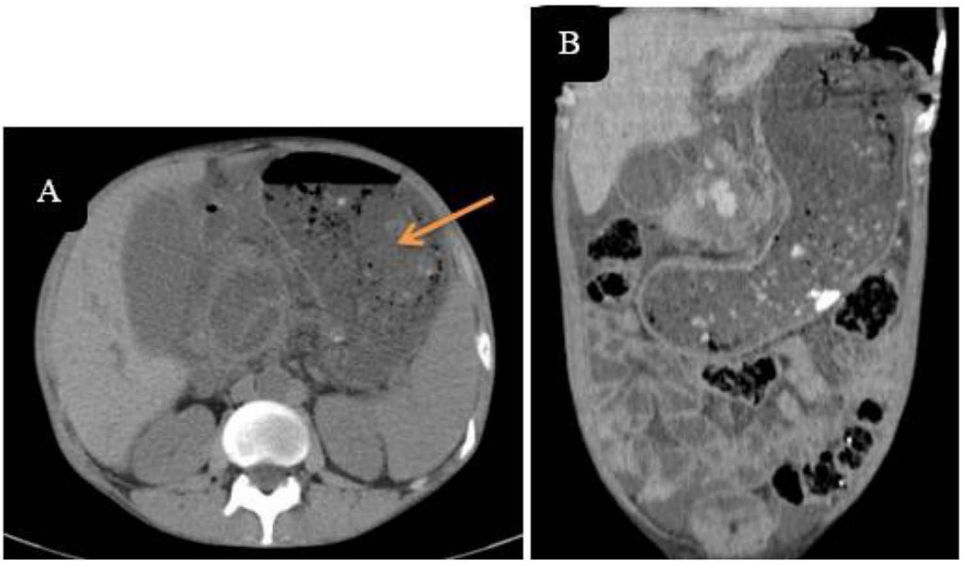

Figure 2 Non-contrast CT (**A**) axial and (**B**) coronal; showing a dilated stomach with heterodense contents. Orange arrow in (**A**) indicates the gastric bezoar.

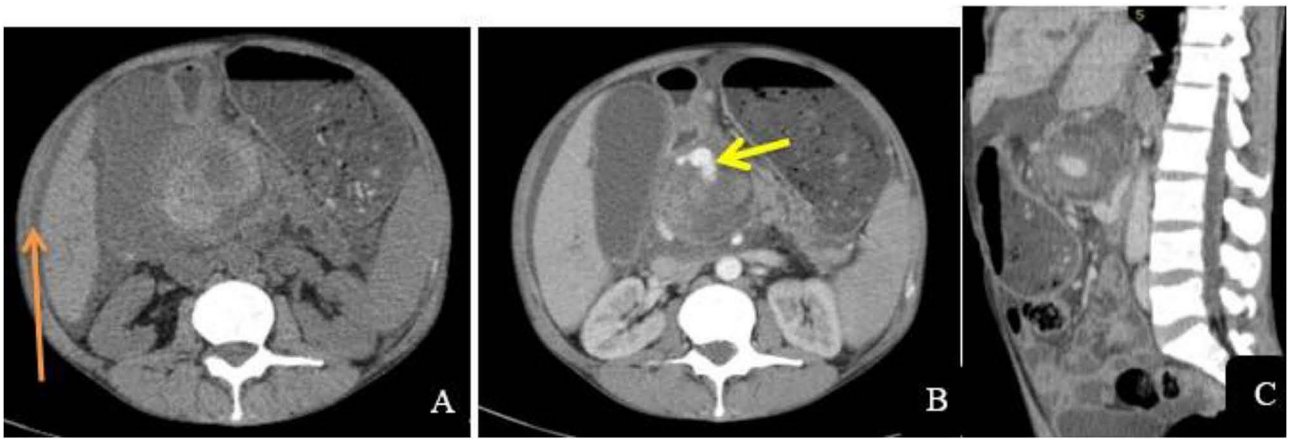

Figure 3 (**A**) Non-contrast CT axial, (**B**, **C**) contrast-enhanced axial and sagittal images show a 6 cm cystic lesion in the pancreatic head with an enhancing intralesional focus (yellow arrow)isodense to the aorta; suggestive of a pseudoaneurysm. Small ascites (Orange arrow in **A**).

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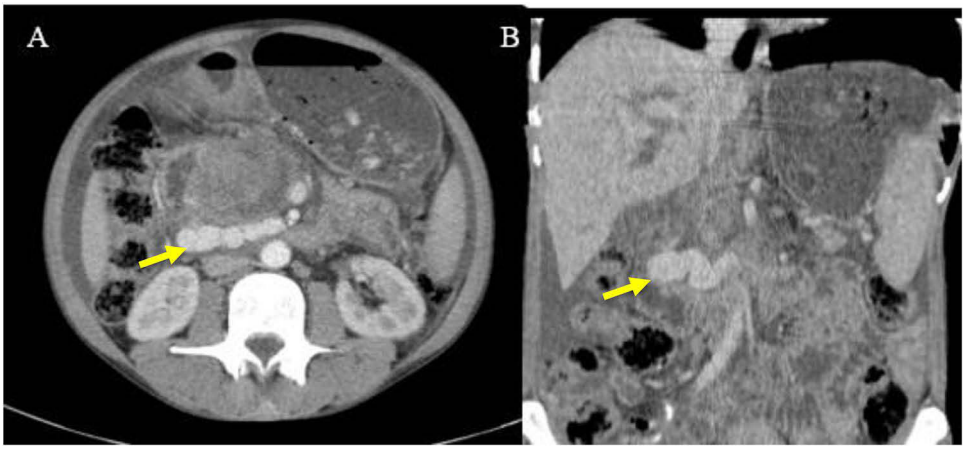

Figure 4 (**A** and **B**) axial and coronal contrast-enhanced images; showing dilated and tortuous gastroduodenal artery being compressed with the pseudocyst as it curves through the head of pancreas (yellow arrows).

Discussion

Hemosuccus pancreaticus is a life-threatening and uncommon cause of gastrointestinal bleeding, characterized by bleeding from the papilla of Vater through the pancreatic duct. It is commonly associated with chronic pancreatitis, pseudocysts, and pancreatic tumors. It carries a high mortality rate of approximately 28%.[2,4,5,7]

This uncommon condition is estimated to manifest in roughly one out of every 1500 instances of gastrointestinal tract hemorrhage, with a higher prevalence among males, as evidenced by a male-to-female ratio of 7:1. It is primarily associated with chronic alcohol consumption and tends to occur between the ages of 40 and 60. The average age of onset is approximately 52.5 years when the pancreatic tissue is affected and approximately 60 years in cases that stem purely from arterial sources.[1,4]

Bleeding originating from the gastroduodenal artery was observed in up to 16% of patients, as was evident in our case. However, the primary cause of bleeding in the hemosuccus pancreaticus is the splenic artery, accounting for 54–60% of cases. This can be attributed to their proximity to the pancreas. Additionally, bleeding may arise from the pancreaticoduodenal and hepatic arteries, accounting for approximately 11% of cases.[7,8]

In 80% of cases, hemosuccus pancreaticus arises as a complication of an underlying pancreatic disease, whereas 20% are attributed to vascular anomalies. The most prevalent form of direct bleeding manifestation in hemosuccus pancreaticus involves the formation and rupture of a pseudoaneurysm.[1,2,7]

Hemosuccus pancreaticus usually occurs in individuals with a history of chronic pancreatitis and is often associated with chronic alcohol abuse. In this context, leakage of pancreatic proteolytic enzymes initiates gradual self-digestion of adjacent blood vessel walls, which culminates in the development of pseudoaneurysms in approximately 10% of patients with chronic pancreatitis. Owing to their instability, these pseudoaneurysms can rupture directly into the pancreatic duct or pseudocyst, serving as an intermediate link.[7,8]

Hemorrhage can also be induced by ductal calculi through erosion of neighboring vessels. Other potential contributing factors include pancreatic carcinoma, arteriovenous malformations, gastroduodenal duplications and villous adenomatosis. Notably, arterial aneurysms and pseudoaneurysms, which are more prevalent in chronic pancreatitis (~ 10% occurrence rate), can also play a role in this condition.[1–4]

In this case, the patient had chronic pancreatitis attributed to heavy alcohol consumption, with a daily intake of five liters of local brew (Tonto) and 2–3 glasses of local gins (Kasese). The clinical presentation of hemosuccus pancreaticus (HP) includes both abdominal and GI bleeding. Among these, gastrointestinal bleeding manifests as melena in 29.3% of patients, hematochezia in 11.8%, hematemesis in 23.5%, epigastric pain without bleeding in 11.8%, and iron-deficiency anemia in 11.8% of patients.[1,2,7]

The clinical features are in line with what our patient presented with the classic symptoms of abdominal pain, epigastric pain that was constant, dull, radiating to the back, hematemesis, and melena stools. In addition, a complete

blood count showed a Hemoglobin (HB) of 3.6 grams per deciliter with a microcytic picture due to excessive bleeding, which accounted for 11.8% of the occurrences of HP.

Owing to the intermittent nature of bleeding in HP, initial endoscopic examination may yield negative results, necessitating repeated procedures. Alternatively, endoscopy during an active bleeding episode can enhance the likelihood of hemorrhage detection. Endoscopic Retrograde Cholangiopancreatography (ERCP) and endoscopic ultrasound are valuable diagnostic tools, respectively.[2,6,7]

The initial diagnostic workup for this patient included upper gastrointestinal endoscopy, which was performed twice; however, no source of bleeding was identified. Endoscopy was more effective during active bleeding episodes, particularly in the second part of the duodenum.

In the present case, this was the patient's third admission. During the previous two admissions, the patient was managed for peptic ulcer disease. On the third admission, the patient had blood transfusion and was treated for a gastric bezoar identified during endoscopy before being discharged.

Contrast-enhanced computed tomography of the abdomen is an excellent method for identifying true or false aneurysms, pseudocysts, and signs of chronic pancreatitis or other pancreatic abnormalities. Angiography is the gold standard for diagnosing HP resulting from aneurysms and pseudoaneurysms, with a sensitivity of up to 96%.[1–4]

In our patient, contrast-enhanced enhanced computed tomography (CT) scan revealed a pseudoaneurysm originating from the gastroduodenal artery. However, in this case computed tomography angiography was not performed because the patient was not sufficiently stable to undergo the procedure.

Indeed, diagnosing HP can be challenging both clinically and radiologically, often leading to missed diagnoses during initial evaluations. In cases such as our patient, who had been diagnosed with pancreatic head malignancy on abdominal computed tomography, gastric bezoar on endoscopy, and had been on long-term management for peptic ulcer disease in previous admissions.

Fortunately, with timely intervention, hemosuccus pancreaticus can be effectively managed. Angiographic intervention involving stent placement, metallic coil embolization, or surgery has shown promising outcomes with a good prognosis. Therefore, maintaining awareness of this condition and promptly initiating appropriate treatment can lead to favorable patient outcomes.

Conclusion

Hemosuccus pancreaticus (HP) is a rare yet clinically significant condition that presents a considerable challenge in both diagnosis and treatment. The first line of diagnosis of HP is endoscopy coupled with an abdominal contrast-enhanced CT scan that helps identify pseudocysts, pseudoaneurysms, and other related pancreatic and abdominal pathologies. Therefore, it is crucial to include HP in the differential diagnosis of any patient presenting with obscure upper gastrointestinal bleeding, to ensure timely and appropriate management.

Consent to Publish

The patient's next of kin provided an informed consent for publication of personal information and images. Institutional approval was not required to publish the case details.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Lermite E, Regenet N, Tuech -J-J, et al. Diagnosis and treatment of hemosuccus pancreaticus: development of endovascular management. *Pancreas*. 2007;34(2):229–232. doi:10.1097/MPA.0b013e31802e0315
2. Mandaliya R, Krevsky B, Sankineni A, Walp K, Chen O. Hemosuccus pancreaticus: a mysterious cause of gastrointestinal bleeding. *Gastroenterol Res*. 2014;7(1):32. doi:10.14740/gr596w
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(17):2776. doi:10.3748/wjg.14.2776
4. Sheety S, Shenoy S, Costello R, Adeel MY, Arora A. Hemosuccus pancreaticus. *J Ayub Med Coll Abbottabad*. 2019;31(4):622–626.

5. Krishnan J, Tanabe M, George GM, Demetria M. Hemosuccus pancreaticus: an unusual cause of gastrointestinal bleeding: 2578. *Am J Gastroenterol*. 2016;111:S1300. doi:10.14309/00000434-201610001-02578
6. Han B, Song Z-F, Sun B. Hemosuccus pancreaticus: a rare cause of gastroirtestiral bleeding. *Hepatobiliary Pancreatic Dis Int*. 2012;11(5):479–488. doi:10.1016/S1499-3872(12)60211-2
7. Ru N, Zou W-B, Qian -Y-Y, et al. A systematic review of the etiology, diagnosis, and treatment of hemosuccus pancreaticus. *Pancreas*. 2019;48(5):e47–e9. doi:10.1097/MPA.0000000000001278
8. Yashavanth H, Jagtap N, Singh JR, et al. Hemosuccus pancreaticus: a systematic approach. *J Gastroenterol Hepatol*. 2021;36(8):2101–2106. doi:10.1111/jgh.15404