

# Hemosuccus Pancreaticus: A Diagnostic Masquerader

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## INTRODUCTION

Hemosuccus pancreaticus or pseudo-hemobilia, defined as bleeding into the pancreatic duct, which is a rare cause of upper gastrointestinal hemorrhage and recurrent pain abdomen. South Asia has high prevalence of Tropical chronic pancreatitis (TCP) [1]. Due to its rare presentation diagnosis is often delayed or missed as there is insufficient knowledge available in literature leaving with few case reports and a few case series. The syndrome is classically attributed to erosion of the splenic artery aneurysm into the pancreatic duct or bleeding into a pseudopancreatic cyst as a result of acute or chronic pancreatitis causing intermittent severe upper gastrointestinal (GI) bleeding [2]. The most common cause is a pseudoaneurysm following of the peripancreatic arteries due to acute or chronic pancreatitis. If massive bleeding is untreated, the mortality rate is approximately 90%, whereas the mortality rate ranges from 25% to 37% in treated cases [2].

## CASE REPORT

A 21yrs female presented with recurrent pain abdomen of 4yrs duration was diagnosed to have symptomatic chronic pancreatitis and anemia. Initially treated by medical gastroenterologist but couldn't find the cause and had twice blood transfused for fall in Hb, 4yrs after suffering she referred to us the detailed history. Investigations revealed Hb 10.5 gm%, Platelet 2.89 L, Serum Amylase 469 U/L, Endoscopy was repeated after an episode of hematemesis which showed blood spurting from the ampulla. Further evaluation with abdominal contrast enhanced computer tomography (**Figure 1a & 1b**), reveals dilated pancreatic duct with pancreatic calcifications with a well-defined cystic mass and with hemorrhagic clots within it with loss of fat planes between splenic vein and cystic mass. She was counseled and taken for surgery. Provisional diagnosis was Hemosuccus pancreaticus with communication in between mass and splenic vein. A diagnostic laparoscopy ruled out peritoneal metastasis. On

laparotomy, a mass in the tail of pancreas with adherent splenic vessels were found. Distal Pancreatectomy and splenectomy done, a fistulous communication between the pancreatic duct and the splenic vein was found (**Figure 2 & 3**). Histopathology examination showed evidence of chronic calcifying pancreatitis and splenic congestion, confirming Hemosuccus pancreaticus. Post-operative period was uneventful with follow-up of >6 months.

## DISCUSSION

In countries like India, the incidences of tropical chronic pancreatitis are higher. While treating these patients the complications related to disease should be in mind. Hemosuccus pancreaticus was first termed in literature by Sandbloom in 1970 in his discovery of bleeding pancreatic duct [3, 4]. Splenic artery aneurysm following pancreatitis (pseudoaneurysm), and bleeding into a pseudopancreatic cyst remain the principal causes of this condition [5]. In our case, patient had cystic mass which probably eroded into splenic vein which resulted in anemia. In literature, causes of hemosuccus pancreaticus include acute and chronic pancreatitis, vascular malformation, pancreatic tumors (cystadenocarcinoma and osteoclastoma), pancreatic divisum, and iatrogenic or accidental trauma [6, 7, 8]. A pseudoaneurysm can rupture into the pseudocyst, GI tract, peritoneal cavity, or pancreatic parenchyma. Hemosuccus pancreaticus may be differentiated from hemorrhage due to pancreatic abscesses or stones eroding vessels in the wall of the GI tract. The diagnosis is based clinical history, endoscopic and angiographic findings. The proposed therapeutic options are angioembolization and in failed cases, surgery remains the only option [9]. A past medical history of alcoholic pancreatitis also found in patients with Hemosuccus pancreaticus after presenting with gastrointestinal bleeding [10]. CT abdomen with contrast is a good investigation in these patients as it not only identifies the pancreatic parenchymal etiology but also demonstrates radiological signs of peripancreatic cystic and aneurysmal lesions. However, the pathognomonic clotted blood in the pancreatic duct, described as the sentinel clot, is usually not identified [11]. CT may also indicate the concomitant aneurysmal artery opacification or contrast persistence within a pseudocyst. It is particularly notable that these radiologic features can only suggest the diagnosis [11]. Thus, the gold standard diagnostic modality remains selective CTA with a sensitivity of 96% [12].

The interventional endovascular embolization of visceral artery aneurysm has a success rate of 79% [13]. In

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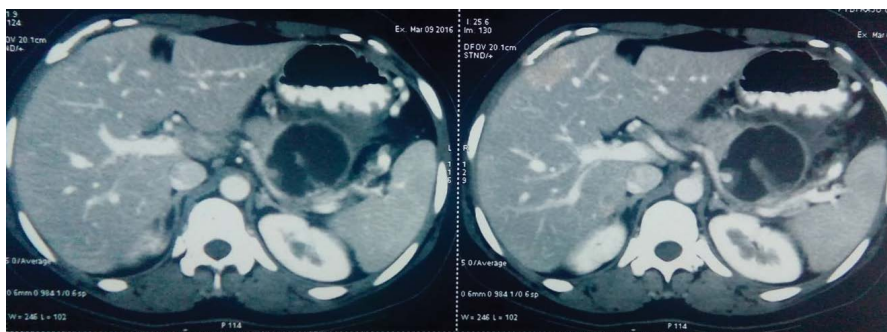


Figure 1a & 1b. CECT showing pancreatic cyst with loss of fat planes with splenic vein.

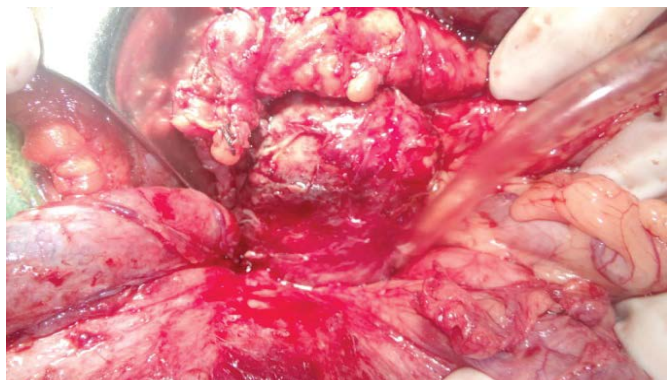


Figure 2. Intraoperative pancreatic mass.

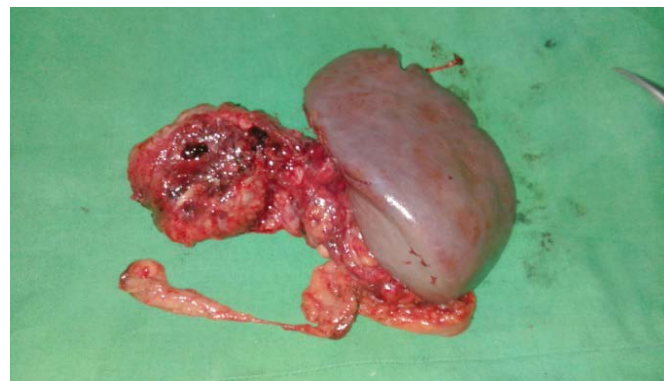


Figure 3. Pancreatic cystic mass with spleen.

patients where there is venous fistulization, interventional intervention is likely to success. Most surgical series have documented success rates of 70-85%, with mortality rates of 20-25% and rebleeding rates of 0-5% [8]. The rate of pseudoaneurysm formation varies from 4% to 17% in operated pseudocyst patients and is about 7% in endoscopically treated series [14, 15, 16].

## CONCLUSION

The diagnosis of hemosuccus pancreaticus requires a high level of expertise knowledge. It should be considered in patients presenting with upper gastrointestinal bleeding and a history of acute or chronic pancreatitis or a pseudocyst. Splenic artery Embolization and surgery are both equally effective and complementary. The choice of therapy depends on the clinical condition of the patient as well as local availability and expertise of the practitioner.

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