Hemosuccus Pancreaticus or Just a Bunch of Hocus Pocus

Deep Patel DO, Yevgeniya Golster-Veksler DO, Nathan Colip DO, Marc Kudelko DO, Meir Mizrahi MD

HCA Florida Largo Hospital

Background

Hemosuccus Pancreaticus (HP), defined as bleeding from the pancreatic duct into the GI tract via the ampulla of Vater, is a rare etiology (1:1500) for gastrointestinal bleeding (GIB) that carries significant morbidity and mortality.[1]

HP exhibits strong male predilection and is seen in alcoholics.[1]

Many potential causes for HP exist. Some of these, like pancreatic inflammation are more common while others like arterial aneurysms and bariatric surgery are less typical.[2]

HP's classic triad includes waxing and waning abdominal pain, sporadic upper and lower GIB, and hyperamylasemia.[1]

HP remains a diagnostic challenge as it is rare, occurs sporadically, and is anatomically difficult to evaluate with EGD, particularly in Roux-en-Y gastric bypass (RYGB) anatomy.

A high clinical suspicion and multidisciplinary approach between General/Advanced GI, IR and Surgery is key for early diagnosis and treatment. Without intervention, mortality approaches 90%.[1]

Case Presentation

50yoF with pmhx of RYGB, cholecystectomy, pancreatitis, IDA, admitted to the ICU for GIB, cramping meg abdominal pain, and fatigue with hgb of 4.8.

Within the prior 5 months, she had multiple admissions for abdominal pain and GIB and was diagnosed with ETOH-induced pancreatitis, diverticular bleed, anastomotic erosions, PUD, and Dieulafoy lesion on numerous EGD/colonoscopy (5 total). Despite compliance with PPI and sucralfate, bleeding persisted.

Enteroscopy on day 2 revealed prior RYGB, old blood in the stomach, without evidence of active or old blood in the roux or biliopancreatic limbs. Colonoscopy showed old, adherent dark tarry stool throughout and diverticulosis.

Despite 11U pRBCs, her hgb did not respond appropriately. CTA abdomen/pelvis did not show evidence of extravasation. Nuclear medicine Meckel's scan was negative.

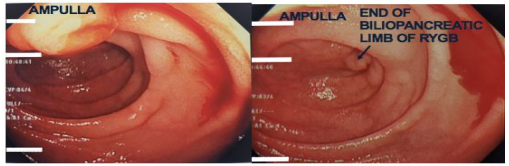
On day 6, cramping abdominal pain, hematochezia, hematemesis worsened, and she was intubated, and mass transfusion protocol initiated. Emergent Enteroscopy revealed fresh heme/clots at the J-J anastomosis, the roux and biliopancreatic limb, and major active bleeding at the ampulla mixed with bilious content, consistent with HP.

Angiography revealed a ~6mm splenic artery pseudoaneurysm. A covered stent was placed with confirmed exclusion.

Ultimately, her hgb remained stable without further bleeding or abdominal pain, and she was discharged in stable condition.

Endoscopic Findings

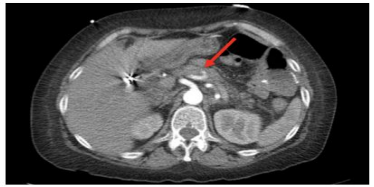
FIGURE A.



Enteroscopy imaging showing evidence of brisk bleeding from the ampulla of Vater, consistent with Hemosuccus Pancreaticus

CTA Findings

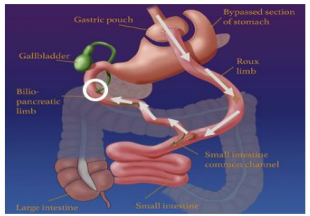
FIGURE B.



Red arrow depicts 6mm splenic artery pseudoaneurysm

Roux-en-Y Gastric Bypass Anatomy

FIGURE C.



Cartoon image with white arrows depicting the path traversed during an EGD/Enteroscopy in order to examine the ampulla[5]

Discussion

HP is an uncommon, obscure, and potentially life-threatening cause of GIB that is important to include in the differential diagnosis.

Despite the HP triad, patients present with nonspecific symptoms including intermittent bleeding (UGIB to LGIB) and crescendo-decrescendo abdominal pain, making it difficult to pinpoint. Amylase, not part of the standard workup for GIB, is rarely ordered.

80% of HP is due to pancreatitis. Inflammation leads to activation of lytic enzymes that alter the PD which causes vascular wall lyses, rupture and, ultimately, results in hemorrhage. Pseudoaneurysms (PSA), predominantly of the splenic artery, account for 6-17% of all cases. Rarer, and implicated without a clear mechanism, is HP resulting from RYGB complications.[1,3] Our patient's etiology for HP is multifactorial and good consolidation of a patient's history is integral to early diagnosis. She had a 6mm splenic artery PSA. We suspect this was a result of her presumed gallstone pancreatitis (given her hx of cholecystectomy) and ETOH-induced pancreatitis with binge drinking behavior.

EGD detects 30% of HP cases while Contrast-enhanced CT (CTA) detects 90% of cases, and Angiography, the gold standard diagnostic and therapeutic method yields positive results in >90% of cases.[1,4] Although, EGD is the 1st modality used to evaluate GIB, it does not rule out HP, but excludes other UGIB sources.[4] The ampulla is difficult to visualize on EGD and is best seen with side viewing scopes; rarely used in the algorithm for GIB.[2] RYGB anatomy, made the ampulla more difficult to reach and other obstacles to HP diagnosis in our case included diverticular bleeding, PUD, and Dieulafoy. CTA showed constant opacification within the aneurysmal vessel and Angiographic PSA findings and intervention resulted in cessation of bleeding.

In addition to IR and surgical treatment, advanced endoscopy has presented novel therapeutic options with EUS, lumen apposing metal stents and fibrin glue/histoacryl adhesives, especially for those with contrast allergies, negative angiographic studies, and are poor surgical candidates.[1] We did consider this as an option.

Conclusion

It is important to take a pragmatic approach in these patients. Clinicians and caregivers should remain cognizant and search for HP given classic symptomatology. Integrating multidisciplinary discussion can lead to early diagnosis and treatment which has proven to significantly reduce mortality and improve outcomes.

References

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