A CASE REPORT OF A CAUSE FOR UPPER GI BLEEDING FOUND TO BE PRIMARY DUODENAL NECROSIS AND ISCHEMIA.

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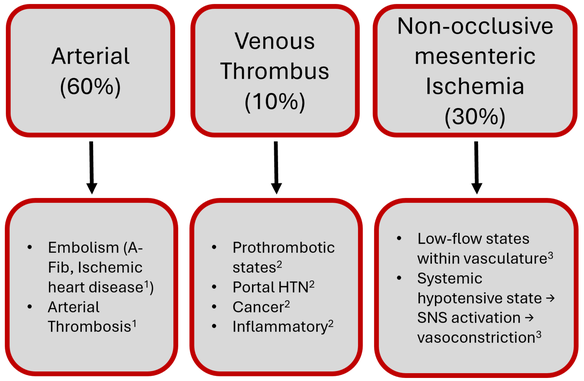
BACKGROUND

Small Bowel Ischemia

Small bowel ischemia is relatively rare due to robust vascular supply but associated with high morbidity.

Acute Small Bowel Ischemia



Chronic Mesenteric Ischemia:

- Secondary to buildup of atherosclerotic plaques in vessels[4].
- Poor blood flow initially causes vasodilation; prolonged ischemia leads to vasoconstriction that can persist after blood flow returns to normal[5].

Isolated Duodenal Ischemia and Necrosis:

- Rare conditions not well described in literature.
- Duodenal blood supply is highly collateral (from celiac artery and superior mesenteric artery), making ischemia without underlying pathology rare[6].

Clinical Presentation

68-year-old male with a 1-week history of sharp, constant abdominal pain in all 4 quadrants, melena, bright red blood per rectum 6 days prior to presentation. Denies B-symptoms. Denies ingesting any corrosive substances. Last bowel movement was 2 days before admission. Last colonoscopy was in June 2025 where colon and rectal polyps were found.

Past Medical History: Hypertension, Dyslipidemia, Diabetes Mellitus, Prostate Cancer, Radiation Proctitis.

Social History: EtOH – 7-8 drinks per week, Ex-smoker (quit 4 years ago).

Physical Exam: The abdomen was tender on palpation in all 4 quadrants, soft, nondistended, and resonant to percussion.

RESULT

Investigations

- OGD to identify source of bleeding (Figure 1)
- CT angiogram to assess vascular supply (Figure 2). Stenosis of abdominal vessels was ruled out.
- CBC, LBC, Extended electrolytes

Interventions and Outcomes

- Status changed to NPO
- Monitored glucose
- Started intravenous fluids
- Piperacillin/Tazobactam 3.75 mg IV Q6hr for 5 days
- Pantoloc 40 mg IV BID
- During the OGD, hemospray was applied to the necrotic areas to help minimize bleeding.
- The patient improved with conservative management.
- Discharged home on pantaloc 40 mg PO BID, famotidine 20 mg PO BID, and clavulin 875 mg 2 tablets PO BID for 5 days.
- Outpatient repeat OGD and CT abdomen-pelvis scan in 3-4 weeks.
- The follow-up CT abdomen-pelvis showed a few linear strand-like changes adjacent to the proximal duodenum, which is less pronounced when compared to the previous CT scan, and an area of small bowel wall hypodensity that had largely resolved.

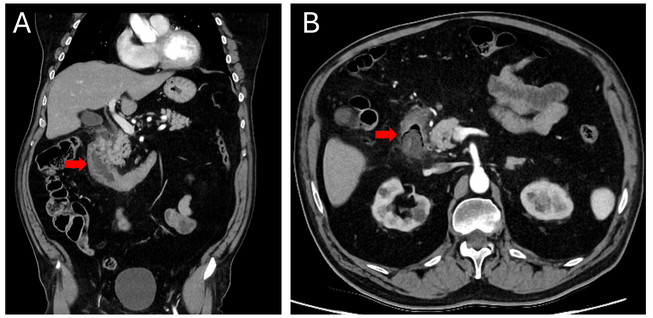


Figure 2. CT Imaging on Admission showing Duodenal Pathology.

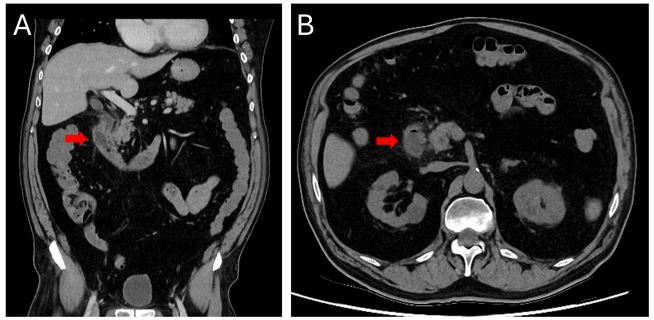


Figure 3. CT Imaging on Discharge showing Duodenal Improvement.

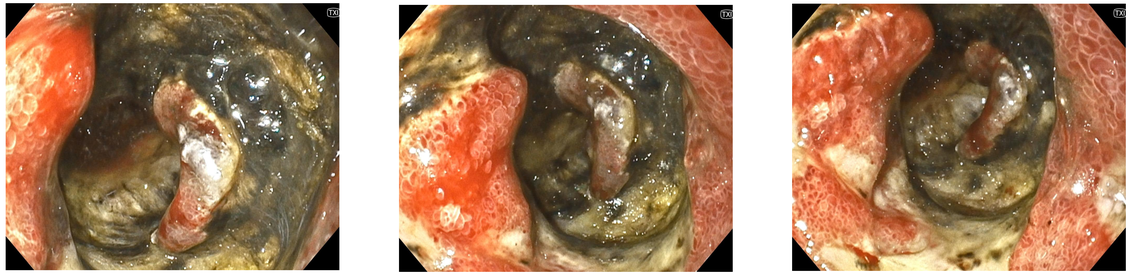


Figure 1. Necrosis and Ischemia Discovered by Oesophago-Gastro-Duodenoscopy in Duodenal Bulb.

DISCUSSION

Duodenal Necrosis

- Duodenal necrosis is rare due to the duodenum's robust blood supply.
- High mortality rate with rapid clinical deterioration possible.
- Early identification and readiness for surgical intervention are imperative.

Case Uniqueness

- No clear etiology identified despite investigations.
- CT ruled out main mesenteric vessel pathology.
- No surrounding structural pathology noted.
- Patient denied caustic chemical ingestion but had significant alcohol use history and was recently taking Ketorolac.

Previous Similar Cases (Limited Literature)

- Myelodysplastic syndrome patient with suspected microvascular ischemia - rapid decline, death shortly after surgery[7].
- Alcoholic cirrhosis patient with portal hypertension - atherosclerosis without significant stenosis, treated conservatively with esomeprazole, successful resolution[8].

Possible Etiologies in This Case

- Transient hypoperfusion state (vasoconstriction or blood pressure drop).
- Possible hypovolemia (responded well to fluid resuscitation).
- Potential small vessel atherosclerotic disease not visible on CT (similar to autopsy findings in a reported case[9]).
- Use of Ketorolac may have caused severe reaction in the duodenum.

Treatment Approach

- Conservative management successful in hemodynamically stable patient with so signs of frank peritonitis from perforation or reversible surgical cause.
- Bowel rest decreased metabolic demand.
- Fluid resuscitation provided.
- Crucial to maintain close observation to ensure the patient does not decline.

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