

A Red Herring?

Duodenal vasculitis in the setting of post-COVID-19 infection

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Background

- The Coronavirus disease 2019 (COVID-19) is caused by Severe Acute Respiratory Coronavirus 2 (SARS-CoV-2) and seen to primarily result in respiratory complications.
- COVID-19 is linked to many different forms of organ damage, and even failure.
- The acute and chronic manifestations of infection continue to be discovered, specifically for gastrointestinal implications.
- GI-centered COVID-19 manifestations typically describe symptoms that vary from mild abdominal pain, diarrhea to acute gastrointestinal bleeding.
- Given the intimate connection of the gastrointestinal system with all organ systems, there is evidence of multiorgan involvement during or after COVID-19 infection, including GI involvement.
- We describe a case of a female patient presenting with acute on chronic abdominal pain and melena who was found to have a duodenal vasculitis in the setting of a recent COVID-19 infection.

Case Description

- 55-year-old female who presented with a two-day history of intermittent epigastric pain associated with nausea, poor appetite and acute anemia.
- PMHx: triple-negative left breast cancer s/p mastectomy with recurrent lymph node and chest wall metastasis not on active chemotherapy.
- Admitted two weeks prior with a similar presentation of anemia and melena; found to have an upper GI bleed suspected to be secondary to NSAID-use in the setting of COVID-19 pneumonia.
 - Sx resolved without endoscopic intervention.
- Additionally, reported developing a new non-tender, non-pruritic, erythematous rash within the same timeframe.
- Physical exam significant for epigastric tenderness and a macular rash over bilateral lower extremities with few palpable purpura.
- Labs:
 - Leukopenia (3.09)
 - Negative ANA, C-ANCA
 - Low C4 (<2)
 - Elevated CRP (25)
 - Negative IgA, IgG, IgM, and C3
- Angiography studies did not reveal any other large - or medium - vessel vasculitides.
- Patient was transitioned to oral steroid and PPI therapy with a plan for repeat outpatient endoscopy, which ultimately showed resolution.

Images

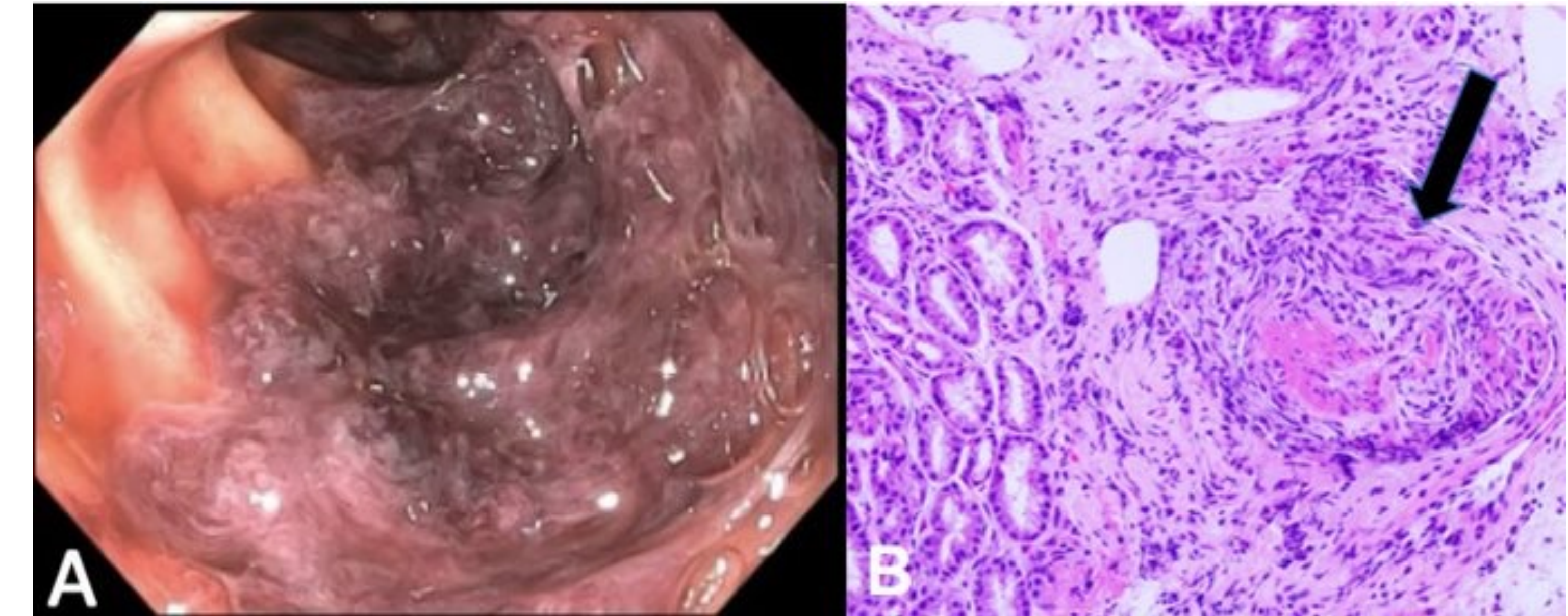


Figure A. Endoscopy revealed mucosal changes in duodenum involving the descending duodenum and proximal jejunum with fibrinoid-like necrosis and mild inflammatory cell infiltrates.

Figure B. Active duodenitis with hemorrhage and focal changes in blood vessels (blue arrow); submucosal blood vessels demonstrating fibrinoid-like necrosis and mild inflammatory cells infiltrates.

Discussion

- In this specific case, pathology effectively ruled out IgA vasculitis, despite the patient's cryoglobulin level was elevated as it did not meet diagnostic criteria for cryoglobulinemia.
- Literature has demonstrated post-mortem analysis of direct viral mononuclear cell infiltration in the vascular intima and lumen of vessels causing complications such as coagulopathy and vasculitis, which has also been documented post-vaccination, suggesting COVID-19 may be a possible trigger for an immune complex hypersensitivity reaction.
- As the gastrointestinal manifestations of the novel COVID-19 continue to be documented, vasculitides secondary to COVID-19 should remain on the differential in the presentation of abdominal pain, melena and skin findings in the setting of recent COVID-19 diagnosis.