An Unexpected Cause of Abdominal Pain in a Patient with Ulcerative Colitis

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Introduction

- Sickle cell crisis and ulcerative colitis (UC) can both present with abdominal pain, which can present a diagnostic challenge in patients with concomitant disease.
- Here we describe a complex case of a patient with both sickle cell disease (SCD) and UC.

Case Description

- A 27 year old female with a history of UC presented with non-bloody diarrhea, diffuse abdominal pain, and right lower extremity pain.
- On exam, she was mildly hypotensive with decreased strength in bilateral lower extremities.
- CBC showed Hgb 7.6 g/dL.
- Iron panel revealed: iron saturation 28%, elevated ferritin (580.5 ng/mL), low haptoglobin (<30 mg/dL), elevated reticulocyte count (7.47%), and reticulocyte index of 2.05.
- CT scan showed splenomegaly and diffuse bony infarcts.
- Colonoscopy revealed Mayo 3 ulcerative pancolitis (Figure B and C).
- Colonic biopsies showed sickle cells in the capillaries and lamina propria with background features of chronic colitis (Figure A).
- Her sickle cell crisis was managed with intravenous fluids, analgesics, and folic acid, and her UC was treated with IV solumedrol.
- She was discharged on a prednisone taper and initiated on infliximab infusions with significant improvement in her symptoms.

Diagnosis

Concomitant UC flare and sickle cell crisis

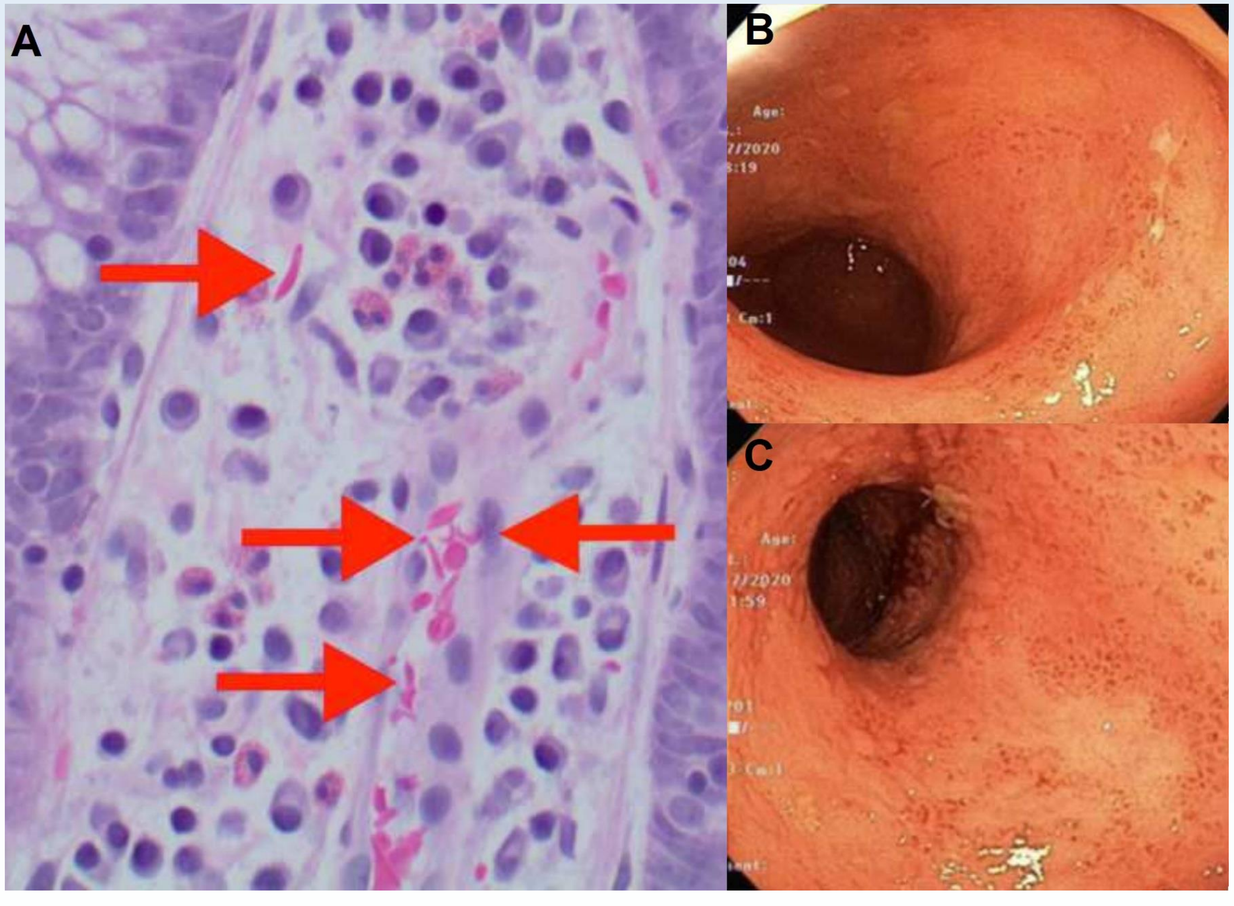

Figure A: Biopsy showing sickle cells in the capillaries and lamina propria with background features of chronic colitis

Figure B and C: Colonoscopy revealing Mayo 3 ulcerative pancolitis

Discussion

- There is a rare predisposition of SCD to inflammatory bowel disease (IBD), though the cause is not well elucidated [1].
- Both SCD crisis and UC can present with abdominal pain.
- While acute pain due to SCD vaso-occlusion often affects the extremities, it can also manifest as abdominal pain due to mesenteric vaso-occlusion.
- UC typically presents with left lower quadrant abdominal pain with associated diarrhea; however, UC can also present with diffuse abdominal pain in the setting of pancolitis.
- Dehydrated SCD patients, in the setting of travel, were more likely to be hospitalized for vaso-occlusive crises.
- Diarrhea and dehydration due to UC flares could presumably exacerbate SCD leading to more frequent crises.
- Additional complication to consider in treating concurrent SCD and UC is avascular necrosis (AVN). AVN is an associated complication of SCD, as well as a side effect of long-term corticosteroid use, such as used to treat IBD.
- Due to the pro-thrombotic state associated with both diseases, prophylactic anticoagulation can also be considered in the setting of immobilization or hospitalization, and do not necessarily have to be stopped due to bloody diarrhea or anemia [2].

References

1. Willen SM, Thornburg CD, Lantos PM. Travelers with sickle cell disease. *J Travel Med*. 2014;21(5):332-339. doi:10.1111/jtm.12142
2. Rankine-Mullings AE, Knight-Madden JM, Reid M, Ferguson TS. Gangrene of the digits of the right lower limb in a patient with homozygous sickle cell disease and ulcerative colitis. *Clin Pract*. 2014;4(1). doi:10.4081/cp.2014.610