Case Report: Diagnosing Ulcerative Colitis Retrogradely in a Young Indian Male Presenting with Anemia and Thrombocytosis with no Gastrointestinal Symptoms

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KEYWORDS
ulcerative colitis (UC), initial gastrointestinal (GI), GI symptoms.

ABSTRACT
We report a rare case of a young Indian male diagnosed with ulcerative colitis (UC) retrogradely due to the presentation of anemia and thrombocytosis without any initial gastrointestinal (GI) complaints. This case emphasizes the importance of considering inflammatory bowel disease (IBD) in patients with unexplained hematologic abnormalities, even in the absence of GI symptoms.

1. Introduction

Case Presentation

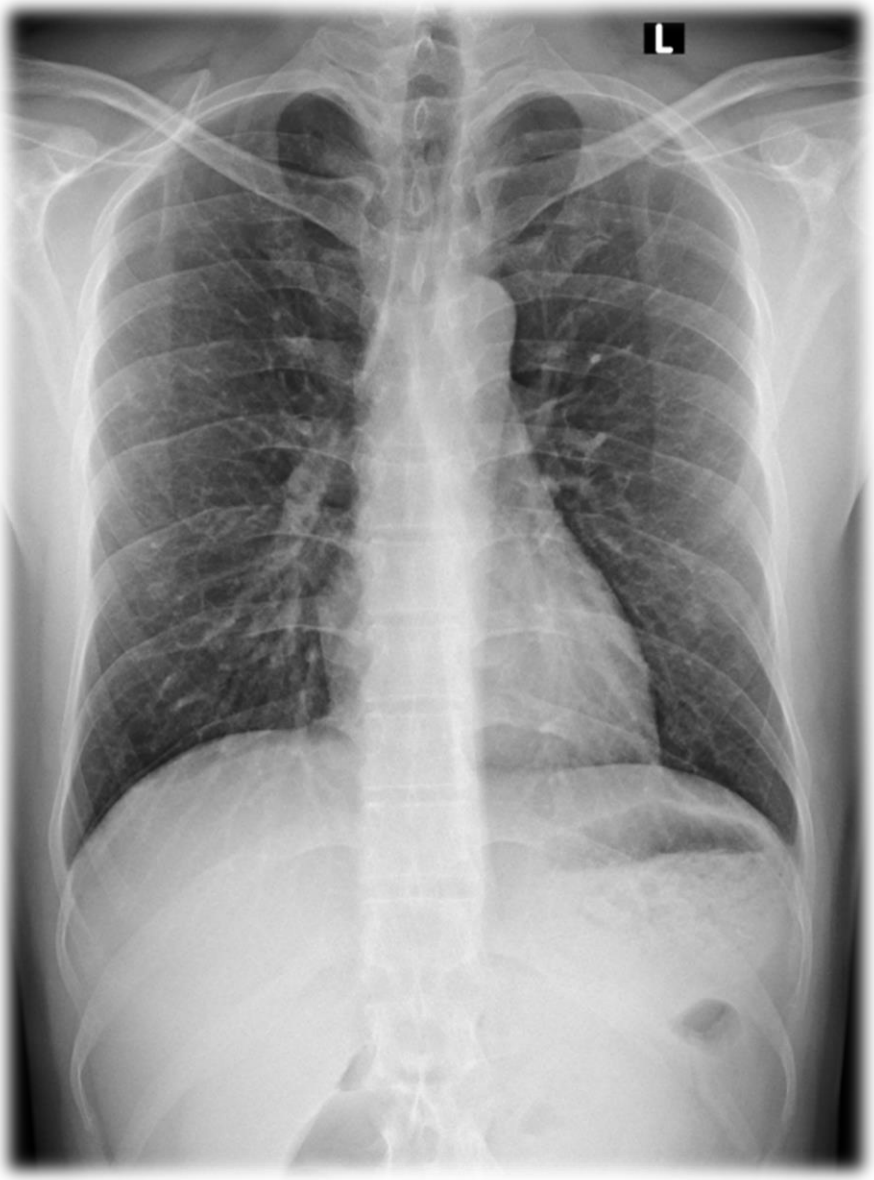
Patient Profile:

- Age: 32 years
- Gender: Male
- Ethnicity: Indian
- Medical History: No significant past medical history
- Family History: Non-contributory

Clinical Presentation:

- The patient presented to the OP department because of fever, lethargy, Myalgia for last 1 week. the patient mentioned Recent travel history to INDIA- 3 weeks back.
- No gastrointestinal complaints such as diarrhea, abdominal pain, or rectal bleeding were reported.
- The case was admitted as a case of fever for study and the Initial Laboratory Findings were :
- Complete Blood Count (CBC):
  - Hemoglobin: 6.1 g/dL (anemia)
  - Mean Corpuscular Volume (MCV): 58.5 fL (microcytic anemia)
  - Platelet count: 1,152,000/µL (thrombocytosis)
  - White blood cells : 12.02 10^{3} /µL
  - CRP = 85 MG/DL
- Dengue Fever IgG Abs (IA) POSITIVE Dengue Fever IgM Abs (IA) negative
- MALARIAL ANTIGEN NEGATIVE
- Renal function was normal.

So as we can see the patient has severe anemia along with thrombocytosis, it was tempting to try to explain the case with viral infection, but it turns to be something more serious, so more investigations were warranted to explain the whole picture:
chest X ray was done : No obvious significant abnormality.



Iron Studies: Low serum iron 7.83 ug/dl , low ferritin 27.30 ng/ml (despite the high inflammatory marker "CRP"), and high total iron-binding capacity (TIBC), indicative of iron deficiency anemia.

- RBCs: Predominantly microcytic RBCs with severe hypochromia. Target cells (2+). Few schistocytes (<1%) and elliptocytes present. 35nRBC / 100 WBC present.

WBCs: There is mild leucocytosis with monocytosis.No abnormal cells seen.

Platelets: Increased, large platelets present.

Parasite : Not seen.

Impression: Microcytic hypochromic anemia with thrombocytosis.

- RETICULOCYTE COUNT 1.82% (normal)
- WIDAL: neg
- Liver function test :

Total proteins: 9.8 g/dl (high)
Albumin : 3.78 g/dl normal

globuline: 6.09 g/dl (high) bilirubin normal . ALT, AST, and ALP: normal. GGT= 66.3 U/L.

- INFECTIOUS AGENT ANTIGEN DETECTION BY IMMUNOASSAY WITH DIRECT OPTICAL OBSERVATION INFLUENZA A & B : NEG
- INFECTIOUS AGENT ANTIGEN DETECTION BY IMMUNOASSAY WITH DIRECT OPTICAL (IE, VISUAL) OBSERVATION; RESPIRATORY SYNCYTIAL VIRUS: NEG
- INFECTIOUS AGENT ANTIGEN DETECTION BY IMMUNOASSAY WITH DIRECT OPTICAL (IE, VISUAL) OBSERVATION; STREPTOCOCCUS, GROUP A: NEG
- Leptospira IgG Abs (EIA)* 5 U/ml (neg)
- Abdominal ultrasound was done, and it showed No significant abnormality (the spleen was obscured by gases).

So till now we have seen that we have iron deficiency case, but the other findings are not explained till now, so now we need to explain the severe iron deficiency anemia in young male, along with the thrombocytosis and the inflammatory response, could it be a kind of infection? Or is it a manifestation of myeloproliferative disease? Or is it a gastrointestinal loss (the patient was denying any abdominal complaints!)? So more investigations should be done:

- Stool Occult Blood Test: POSITIVE
- STOOL FOR CALPROTECTINE: poistive
- Echinococcus (Hydatid Cyst) IgG (Serum,EIA) Negative,5.38
- Leishmania Abs (IFT)* <1:2 (neg)
- JAK 2 EXON 12 MUTATION: neg
- CALR (CALRETICULIN) (EG, MYELOPROLIFERATIVE DISORDERS), GENE ANALYSIS, COMMON VARIANTS IN EXON 9 : neg

So the findings were referring to gastrointestinal source of blood loss along with inflammation in the bowels, So more radiological evaluation of the gastrointestinal tract was indicated, for this reason CT Abdomen and Pelvis (plain and IV contrast) was done which showed:

- Mild hepatomegaly.

Absent spleen.? Auto splenectomy.
Diffuse circumferential mural thickening and oedema involving all the colonic segments, ileocecal junction, and terminal ileal loop, suggest non-specific inflammatory bowel disease .
Non-specific mesenteric and retroperitoneal lymphadenopathy.

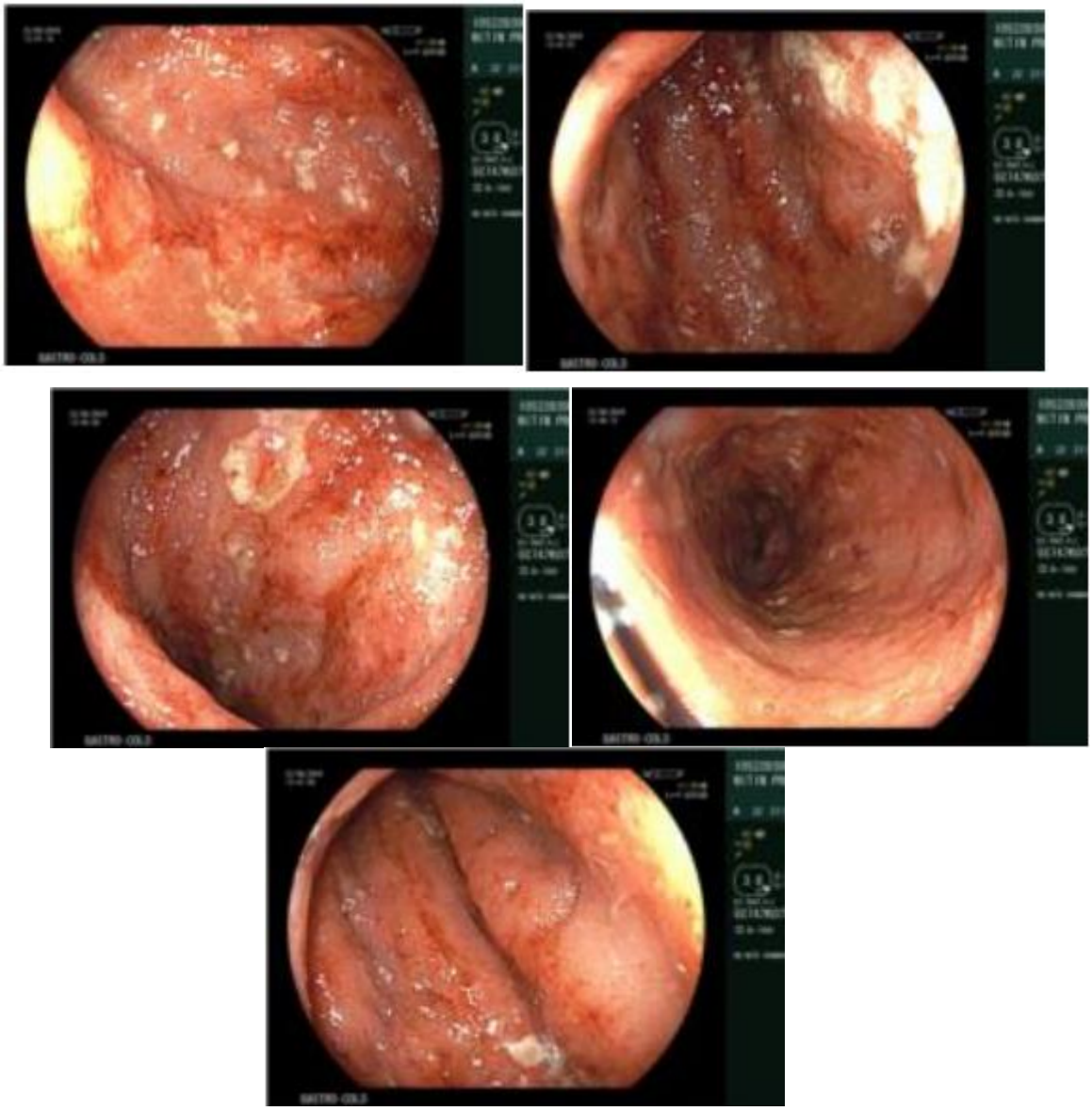
As we can see now, we have more evidence about gastrointestinal involvement in this case despite the absence of abdominal complaints currently or even previously, So what we need now is to go deeper with endoscopy.

- Upper GI Endoscopy which showed :Mild Gastritis. A single superficial erosion with mild inflammation pre pyloric region.
- Multiple biopsies were taken for histopathological examination.

Histopathology Report:

Duodenum 2nd part: The histomorphological features are consistent with hyperemia.

Gastric: The histomorphological features are consistent with moderate active gastritis with superficial erosion, intestinal metaplasia and focal low-grade dysplasia.

- Colonoscopy which showed: Severe Ulcerative Colitis with Continuous disease with serpiginous ulceration and Oedematose mucosa with inflammation Procedure performed to the Descending Colon only as disease is quite severe.
- Multiple biopsies were taken for histopathological examination.
- 

Histopathology Report:

Descending colon: The histomorphological features are consistent with mild active colitis.

Sigmoid colon: The histomorphological features are consistent with mild active colitis.
Rectum: The histomorphological features are consistent with moderate active ulcerative proctitis with focal low-grade dysplasia.

Diagnosis:

- Ulcerative colitis was diagnosed based on colonoscopy and histopathological findings, despite the absence of GI symptoms in a patient who presented with a flu- like symptoms and his initial lab tests revealed

anemia and thrombocytosis which prompted us to gradually study the case until we put our hands on the root cause.

Treatment and Management:

- Mesalamine (5-aminosalicylic acid) was started for anti-inflammatory effects, along with prednisolone.
- Iron Supplementation: Oral iron therapy was initiated to correct iron deficiency anemia.
- Follow-up: Regular monitoring of hematologic parameters and repeat colonoscopy after 6 months to assess disease progression and response to therapy.

Outcome:

- Significant improvement in hemoglobin levels and platelet count after 3 months of treatment.
- Patient remained asymptomatic from a gastrointestinal perspective but was advised to continue mesalamine for maintenance therapy.

2. Discussion:

Ulcerative colitis is a chronic inflammatory bowel disease primarily affecting the colon and rectum. It typically presents with symptoms such as diarrhea, abdominal pain, and rectal bleeding. However, extraintestinal manifestations, including hematologic abnormalities like anemia and thrombocytosis, can sometimes precede GI symptoms.

Anemia in UC is often multifactorial, involving chronic blood loss, iron deficiency, and anemia of chronic disease. Thrombocytosis can occur as a reactive process due to chronic inflammation. In this case, the absence of GI symptoms delayed the suspicion of UC, highlighting the importance of considering IBD in the differential diagnosis of unexplained anemia and thrombocytosis.

The presence of asplenia will raise the question of its reason as a possible result or cause of the case of Ulcerative colitis.

3. Conclusion

This case underscores the need for a thorough evaluation of hematologic abnormalities and the consideration of underlying inflammatory conditions like ulcerative colitis, even in the absence of gastrointestinal symptoms. Early diagnosis and appropriate management can significantly improve patient outcomes.

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