A Case of GI Tract Involvement in a Patient Presenting With Granulomatosis With Polyangiitis

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INTRODUCTION

- Gastrointestinal involvement is a rare manifestion in granulomatosis with polyangiitis (GPA) and can clinically mimic inflammatory bowel disease (IBD).
- Early recognition and a high suspicion in the appropriate clinical setting for GI involvement in GPA is critical as delayed diagnosis and therapy can lead to increased morbidity and mortality.

CASE DESCRIPTION

A 51-year-old male with no significant past medical history presented with a one-week history of diarrhea with intermittent hematochezia, mild arthralgias, and a nonpainful, nonpruritic purpuric rash on his lower extremities (**Figure 1A**). Initial work up showed a leukocytosis of 16.1 x 10^9 / L, hemoglobin 11.8 g/dL (baseline ~15 g/dL), and platelet count of 436 x 109 / L. Further laboratory workup showed hsCRP of 21.9 mg/dL, ESR of 53 mm/h, negative ANA, and fecal calprotectin of 1610 ug/g. CT scan with IV contrast revealed diffuse colonic thickening with pericolonic fat stranding (**Figure 1B**). He was empirically treated for IBD with IV steroids with mild improvement in diarrhea.

Given ongoing symptoms, he underwent expedited colonoscopy, which revealed diffuse friable, ulcerated mucosa with punched out ulcers in the sigmoid, descending, transverse, and ascending colon (**Figure 2**). Biopsies revealed ulcerated mucosa without features of IBD (**Figure 3**). He then developed hematuria and worsening renal function. A renal biopsy was pursued which showed pauci-immune necrotizing crescentic glomerulonephritis (**Figure 4**). Subsequent workup showed positive c-ANCA / PR3, consistent with granulomatosis with polyangiitis. He was continued on IV steroids and initiated on rituximab and plasmapheresis with clinical resolution of symptoms.

CASE DESCRIPTION, CONT.

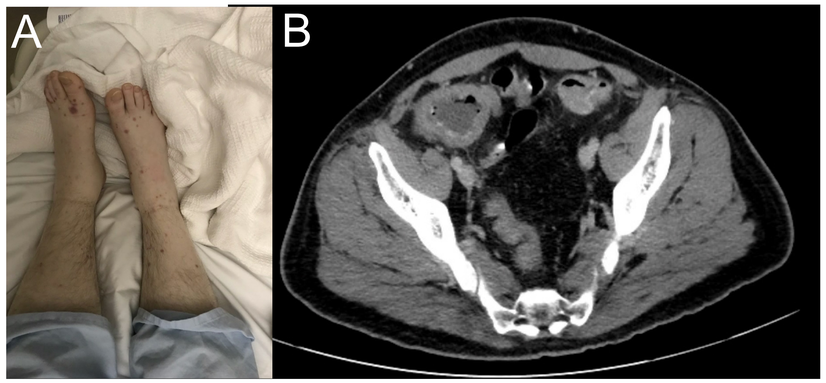

Figure 1. Initial presentation. **Figure 1A.** Image of nonpainful, nonpruritic purpuric rash on lower extremities. **Figure 1B.** CT scan with IV contrast showing diffuse colonic thickening with pericolonic fat stranding from the splenic flexure through rectum as well as in the cecum and ascending colon.

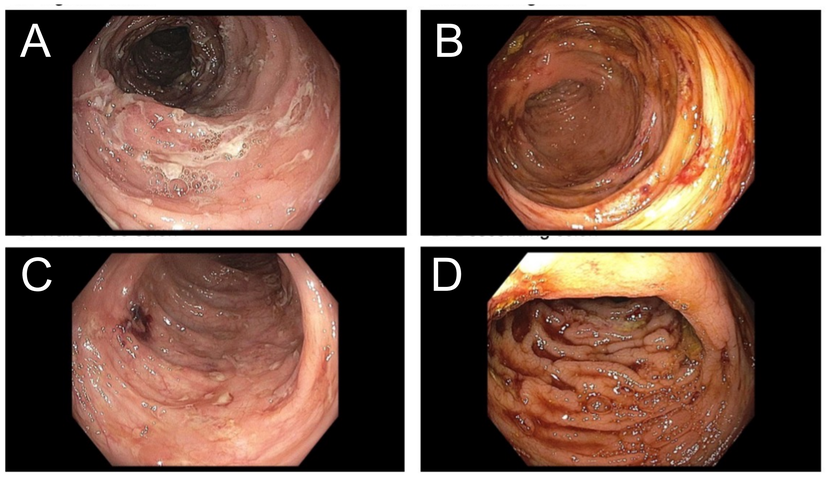

Figure 2. Colonoscopy showing moderate to severe diffuse friable, ulcerated mucosa with some bleeding. Punched out ulcers were noted in the descending, transverse, and ascending colon, cecum, and distal sigmoid and rectal sparing. **Figure 2A**. Sigmoid colon. **Figure 2B**. Ascending colon. **Figure 2C**. Transverse colon. **Figure 2D**. Descending colon.

CASE DESCRIPTION, CONT.

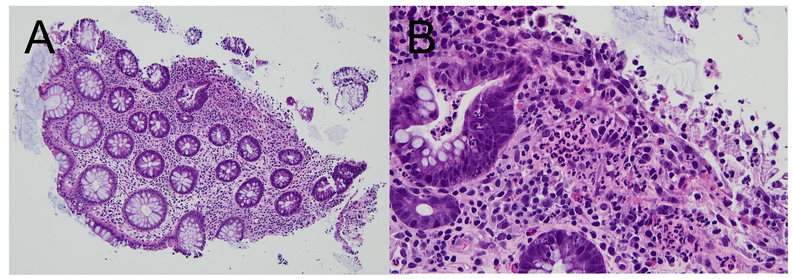

Figure 3. Terminal ileum biopsy showing small intestinal mucosa without histopathological abnormalities. **Figure 3A.** 100X magnification. **Figure 3B.** 400X magnification.

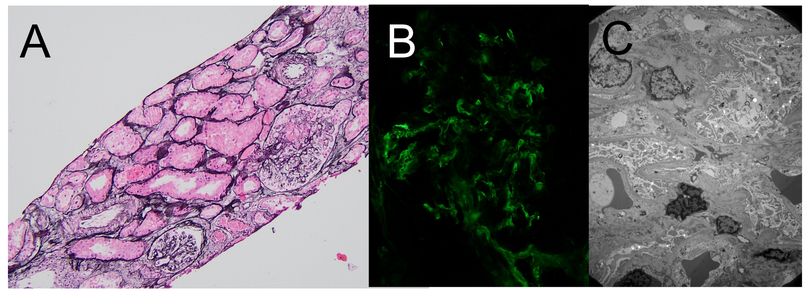

Figure 4. Renal biopsy. **Figure 4A.** Light microscopy showing 21 glomeruli, of which 4 are globally sclerosed. **Figure 4B**. Immunofluorescence microscopy showing minimal immunoglobulin staining. **Figure 4C**. Electron microscopy showing minimal immune complex deposits.

SUMMARY/CONCLUSIONS

- GI manifestations of GPA are rare and typically present later in the disease course. However, GI tract involvement may rarely be the first clinically significant presenting symptom.
- Early endoscopic evaluation and high clinical suspicion are critical to differentiate IBD colitis from non-IBD colitis, as clinical presentations of vasculitis and IBD can be similar.