POLYARTERITIS NODOSA: A CASE REPORT OF ISOLATED LARGE BOWEL INVOLVEMENT AND SURGICAL INTERVENTION

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INTRODUCTION

- Polyarteritis nodosa (PAN) is a **necrotizing vasculitis** commonly affecting **small and medium-sized vessels**
- Standard treatment: glucocorticoids alone for mild cases, with cyclophosphamide, azathioprine or other disease modifying antirheumatic drugs reserved for nonresponding or relapsing cases
- Treatment significantly improves outcomes, however, there is no clear role for surgery in treating most patients with PAN
- In severe cases with evidence of tissue necrosis, surgical intervention may be necessary for management
- In this report, we describe a patient who presented with significant gastrointestinal symptoms and was found to colonic ischemia secondary to PAN

PATIENT PRESENTATION

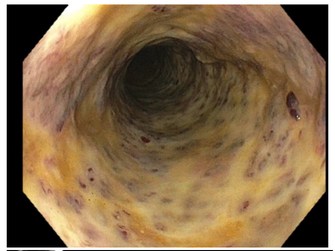
- **26-year-old female** with a past medical history of polycystic ovarian syndrome who presented with a six-week history of **increasing left lower quadrant abdominal pain**, **diarrhea** and **mucoid bloody stools**

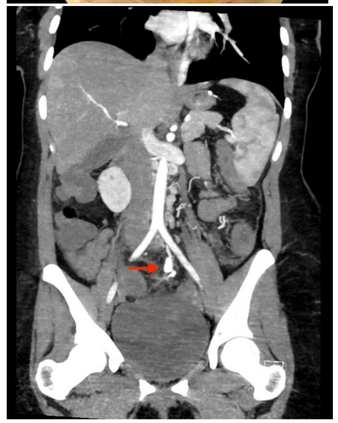
INITIAL WORKUP

- CT scan showed **left colonic thickening** and **concern for IBD**
- Tentatively started on **steroids**
- Initial laboratory workup significant for: **CRP: 27.7**, **WBC: 16,000**

COLONOSCOPY

- **Diffuse circumferential ulceration** and evidence of a **necrotic lining** from **sigmoid colon to splenic flexure**
- **Concern for ischemic-type injury** rather than inflammatory bowel disease





CTA

- **CTA:** left colonic thickening, hypoenhancement, **multiple aneurysms and irregularities of the IMA concerning for vasculitis**

LABS

- Rheumatology recommended workup: ANA, ANCA, CMV, histoplasma, treponemal, hepatitis panel → **All returned negative**
- NPO, IV fluids

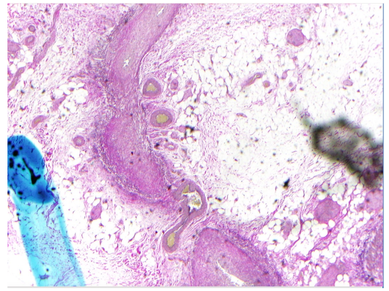
PROGRESSION TO SURGERY

- **Increasing abdominal pain**, **focal left-sided peritonitis, tachycardia, elevated WBC**
- Patient went to the operating room for **abdominal exploration**
- Intraoperatively, she was noted to have "**woody" inflamed sigmoid** and **descending colon**
- **Resection of the colon** from the **proximal descending colon to the upper rectum** with an end-colostomy

LEFT COLONIC SURGICAL PATHOLOGY

- Focal**, acute inflammation, ulceration**, and **fibropurulent exudates** with **active and healed necrotizing arteritis** with ischemic ulcer
- **Small and medium-sized vessel walls** were **thickened with necrosis** in some areas and disruption of the internal elastic lamina
- A few arteries showed mixed inflammatory infiltrates in the media

Pathology of **necrotizing arteritis** was **consistent with features of Polyarteritis Nodosa**



POST-OPERATIVE COURSE

- **Significant clinical improvement** within one day
- CTA chest did not show any abnormalities
- Patient met all postoperative goals and was **stable for discharge on postoperative day 4**
- **Maintained on 40mg prednisone** therapy and started on **mycophenolate mofetil** as chronic immunosuppressive treatment
- She was eventually **tapered off prednisone**

CONCLUSION

- Although PAN can affect the GI tract, this case is a **unique presentation of isolated large intestinal involvement** that initially resembled IBD and was treated with both **medical and surgical interventions**

1. Ebert, E. C., Hagspiel, K. D., Nagar, M., & Schlesinger, N. (2008). Gastrointestinal involvement in polyarteritis nodosa. *Clinical Gastroenterology and Hepatology*, *6*(9), 960–966.
2. Jacobs-Kosmin, M. D. (2021, October 17). *Polyarteritis nodosa*. Background, Pathophysiology, Etiology. Retrieved August 15, 2022,
3. Stanton M, Tiwari V. Polyarteritis Nodosa. 2022 Jun 21. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan–. PMID: 29489258.