Polyarteritis Nodosa Presenting With Abdominal Pain and Mesenteric Stenosis

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Introduction: Polyarteritis nodosa (PAN) is a rare medium-vessel vasculitis that occurs in about 0.003% in the United States annually (1). Mesenteric vasculitis due to PAN presents as an atypical but life-threatening cause of bowel ischemia and acute abdomen (2). We present a unique case of PAN with several complications and unusual findings on imaging.

Case Presentation: Our patient is a 43-year-old female who presented to the emergency department with abdominal pain. She had persistently elevated blood pressures in the range of 200/100. Computerized tomography (CT) of the abdomen demonstrated segmental occlusion of the proximal celiac artery, small intimal dissection flap of the superior mesenteric artery (SMA), a 6mm focal pseudoaneurysm that had enlarged in size over 3 months, high-grade luminal narrowing of the SMA, right hepatic artery occlusion, right renal artery occlusion, and a small infrarenal aortic dissection. Laboratory workup was negative for antineutrophilic cytoplasmic antibody. In addition, she had an elevated C-reactive protein of 2.8 (units), an erythrocyte sedimentation rate of 50 (units), and proteinuria of 0.5 grams daily. PET CT scan confirmed metabolic activity in the vasculature described above. She was started on a prednisone taper at 20 mg for 15 days for concerns of PAN with reduction in her pain that was previously refractory to opioids. The patient was treated successfully with a tapering dose of dexamethasone starting at 6 mg twice daily and azathioprine 150 mg daily.

Conclusions: Treated PAN has a five-year survival of 80%, while untreated PAN has a survival of 13% (3), making the workup and diagnosis of PAN urgent to reduce mortality (4). Life-threatening complications and poor indicators of prognosis for untreated PAN include ischemia, dissection, or pseudoaneurysm of multiple arteries, as well as hypertensive urgency and proteinuria (5). Early detection and treatment for PAN is essential to improve health outcomes, reduce complications, and improve mortality.

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