CLINICAL PRACTICE

Clinical Images

Small Bowel Angioedema Associated with Angiotensin Converting Enzyme Inhibitor Use

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A 45-year-old African American female presented with a four-day history of nausea, vomiting, abdominal pain and diarrhea. She had recently been started on an angiotensin converting enzyme inhibitor (ACE-I) - lisinopril, for hypertension. On examination, she had diffuse abdominal tenderness but no swelling of the lips or tongue. Laboratory tests showed mild leucocytosis and lactic acidosis. A computed tomography (CT) scan of the abdomen and pelvis showed circumferential small bowel wall edema and fold thickening with hyperenhancing mucosa and edematous submucosa resulting in mural stratification (solid arrows, Fig. 1a), intraluminal fluid accumulation (dotted arrow, Fig. 1b) as well as mesenteric vascular engorgement and ascites (dashed arrow, Fig. 1b). Lisinopril was discontinued with complete resolution of symptoms within next 48 hours.

A follow-up CT scan obtained four days later, showed complete resolution of bowel wall thickening, and the associated peri-enteric inflammatory changes and ascites.

ACE-I have been reported to cause peripheral angioedema in 0.1% to 0.2% of patients, with visceral angioedema reported to occur even less commonly¹. The differential diagnosis of bowel wall thickening includes ischemic bowel, shock bowel, vasculitis (e.g. Henoch-Schönlein purpura), intramural hematoma (e.g. trauma or anticoagulation therapy), infectious enteritis, medications (esp ACE-I) and inflammatory bowel disease². Usually angioedema presents as swelling of tongue, lips or upper airways. It can present with GI symptoms without involvement of upper airway, as in this patient³. Having a

Figure 1. a: Axial images from CT scan of the abdomen and pelvis with oral and IV contrast shows circumferential duodenal and small-bowel wall and fold thickening (solid arrows) with hyperenhancing mucosa and edematous submucosa resulting in mural stratification. b: Coronal reformatted image from CT abdomen and pelvis in the same patient. Note the intraluminal fluid accumulation (dotted arrow) as well as mesenteric vascular engorgement and ascites (dashed arrow).

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high index of suspicion can help make the diagnosis of angioedema secondary to ACE-I and avoid the cost and morbidity associated with unnecessary interventions⁴.

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