Often Reported, Rarely Considered: A Case of ACEI-Induced Mesenteric Angioedema

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Introduction

Angiotensin converting enzyme inhibitors (ACEi) are commonly used in the treatment of cardiovascular and renal diseases. Angioedema is a well-known side effect of ACE inhibitors, but isolated visceral angioedema is a rare and under-recognized phenomenon. We present a case of a patient who underwent years of unnecessary and invasive testing to ultimately be diagnosed with ACEi induced mesenteric angioedema.

Case Description

A 49 year old male with history of type 1 diabetes mellitus and hypertension presented with 5 years of intermittent abdominal pain, nausea, vomiting and diarrhea. Labs were unremarkable including fecal calprotectin, fecal fat, Helicobacter pylori, and tissue transglutaminase IgA (normal total IgA). Multiple endoscopies were normal with negative biopsies. Trials of low FODMAP and lactose free diets as well as fiber, cholestyramine, dicyclomine, doxepin, steroids, mesalamine and antibiotics were all ineffective. Capsule endoscopy showed subtle and superficial erosion in the jejunum. Several computed tomography (CT) scans (image 1 and 2) including CT enterography showed multifocal jejunal wall thickening without evidence of stricture and diffuse mesenteric edema with intermittent small volume of free fluid. Gastric emptying study was normal. HIDA scan revealed reduced gallbladder ejection fraction. During this time patient underwent two surgeries: an exploratory laparotomy showed mild changes of creeping fat in the jejunum, but no definitive evidence of Crohn's disease and cholecystectomy which failed to relieve symptoms. Extensive chart review led to a trial of holding the patient's lisinopril. At this time the patient has had no further abdominal symptoms.

Procedure	National Average Cost
HIDA Scan	$1,434
CT Abdomen/pelvis with Contrast	$1,348
Capsule Endoscopy	$2,728
Colonoscopy with EGD	$6,945
Diagnostic Laparoscopy	$17,382

Source: https://www.mdsave.com/procedures?s=89

Check the medication list!

Discussion

Visceral angioedema due to ACEi therapy is often overlooked and can pose a diagnostic challenge. Symptoms are non-specific and include abdominal pain, nausea, vomiting, diarrhea and ascites. Onset can occur days to years after starting an ACEi. Imaging may show segmental small bowel thickening, elongation of bowel loops, or mesenteric edema with no vascular compromise or adenopathy as well as abdominal free fluid without gross ascites. ACEi discontinuation typically leads to resolution of symptoms within 48 hours.

This phenomenon occurs more often in females and African Americans. This was a case of a Caucasian male who had an extensive workup, including exploratory surgery, before the ACEi was held. Although this diagnosis is well reported, it is rare, and must be considered to avoid unnecessary tests and procedures.

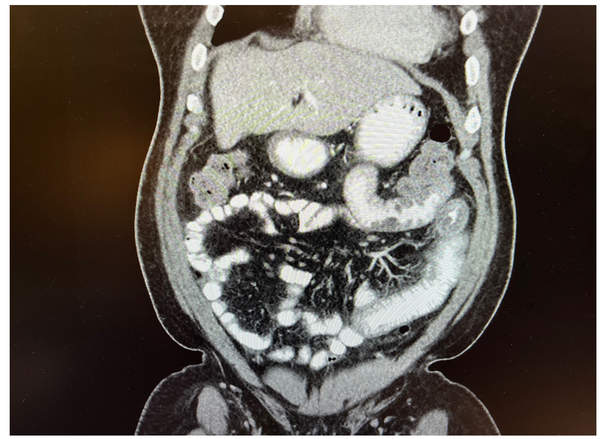

Image 1: CT Abdomen/Pelvis with contrast obtained prior to discontinuing ACEi, emphasizing jejunal wall thickening.

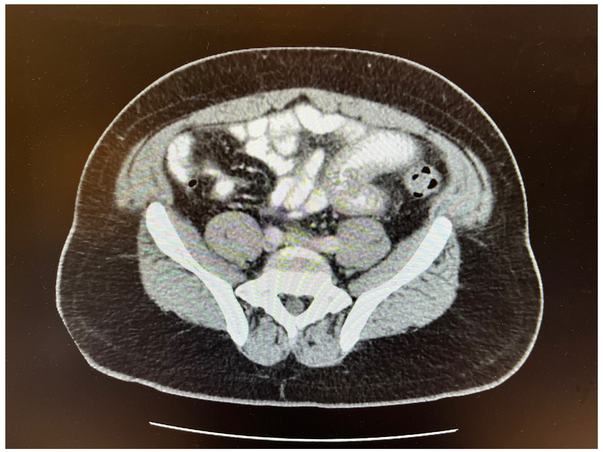

Image 2: CT Abdomen/Pelvis with contrast obtained prior to discontinuing ACEi, emphasizing jejunal wall thickening