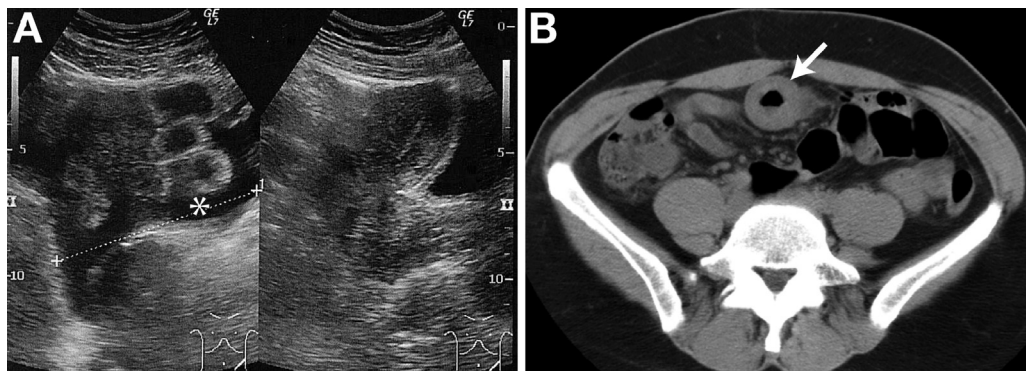


A Rare Cause of Abdominal Pain

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Question: A 47-year-old woman presented to the emergency room with acute diffuse abdominal pain and emesis. The patient's medical history included hypertension for which she started lisinopril 20 mg 3 days before. On our observation, the vital signs were normal and the abdominal examination revealed peri-

umbilical tenderness, without signs of peritonitis. Laboratory analysis was notable only for a slightly elevated C-reactive protein (6.45 mg/L). Abdominal ultrasonography (Figure A) and computed tomography (Figure B) were taken.

What is the diagnosis?

See the GASTROENTEROLOGY web site (www.gastrojournal.org) for more information on submitting your favorite image to Clinical Challenges and Images in GI.

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Answer to the Clinical Challenges and Images in GI Question: Image 6: Angiotensin-Converting Enzyme Inhibitor–Induced Visceral Angioedema

Abdominal ultrasonography revealed a small amount of ascites (Figure A, *star*) and computed tomography showed a circumferential jejunal wall thickening (Figure B, *arrow*), prominent mesenteric vessels and lymphadenopathy. Serum levels of C1 and C4 were normal. A diagnosis of isolated visceral angioedema owing to angiotensin-converting enzyme (ACE) inhibitor was made. The patient suspended lisinopril with resolution of signs and symptoms within 36 hours.

ACE inhibitors are widely used to control hypertension and >40 million patients are currently taking ACE inhibitors or angiotensin-receptor blocker.¹ Angioedema can affect 0.1%–0.7% of patients taking this medication, mostly during the first week of therapy and with peripheral manifestations (swelling of the face, tongue, and lips). It results from vasodilatation, which leads to serum accumulation in the interstitial space. Visceral angioedema presents a diagnostic challenge requiring a high level of suspicion. As with the present case, most present in women within 72 hours of commencing therapy as abdominal pain or ascites.² Small bowel wall abnormalities (thickening, dilation and straightening) are common.³

In most patients, symptoms resolved within 2–4 days of stopping the ACE inhibitor. Angioedema can recur in up to one third of patients who switch from an ACE inhibitor to an angiotensin-receptor blocker; thus, both therapies should be avoided in these cases.

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