

An Unusual Complication: ACE Inhibitor–Induced Small-Bowel Angioedema

Some patients who take angiotensin-converting–enzyme inhibitors present with acute abdominal pain and have characteristic computed tomography findings.

Angiotensin-converting–enzyme (ACE) inhibitors are widely recognized to cause oral and facial angioedema. Case reports suggest that ACE inhibitors also cause small-bowel angioedema on rare occasions. In this retrospective study, researchers describe 20 patients with presumed ACE inhibitor–induced small-bowel angioedema; all patients underwent contrast-enhanced abdominal computed tomography (CT) scanning. Cases were collected from two institutions during 15 years.

Patients presented with acute severe abdominal pain; most also experienced nausea and vomiting. The authors imply that no patients had concomitant oral or facial swelling. CT findings included long segments of jejunum and ileum with mild dilation, straightening, wall thickening, and "target signs" (enhanced mucosa and serosa, with hypodense edematous submucosa in between) but no obstruction. All patients had ascites. Symptoms resolved spontaneously within several days.

Duration of ACE-inhibitor therapy varied greatly (from 2 days to 10 years). In several cases, episodes were preceded by recent increases in dose. Several patients had recurrent episodes after the drug was stopped and restarted.

Comment: Until reading this report, I was unaware that ACE inhibitors can cause small-bowel angioedema. Although cause-and-effect is not certain in every reported case, the connection is plausible: Small-bowel angioedema is common with hereditary angioedema, and both hereditary and ACE inhibitor–induced angioedema share a presumed pathogenesis (vasodilation from excess bradykinin). We should keep this diagnosis in mind when patients who take ACE inhibitors develop unexplained acute abdominal pain.

— [Allan S. Brett, MD](#)

Published in [Journal Watch General Medicine](#) August 23, 2011