

Transient Pneumobilia and Gastric Pneumatosis Associated With Tirzepatide: A Case Report

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Abstract

Background: Pneumobilia and gastric pneumatosis are uncommon radiographic findings that may signify benign processes or life-threatening gastrointestinal pathology depending on the clinical context. Gastric pneumatosis encompasses both gastric emphysema and emphysematous gastritis, entities with markedly different prognoses. Glucagon-like peptide-1 (GLP-1) receptor agonists are increasingly prescribed for diabetes management and have known effects on gastric motility, though rare ischemic complications are not well characterized.

Case Presentation: A 59-year-old female with a history of type 2 diabetes mellitus, hypertension, and Guillain-Barré syndrome presented with two days of weakness and altered mental status following recent initiation of tirzepatide. Initial evaluation revealed acute kidney injury and imaging findings of pneumobilia with possible early pancreatitis. Repeat computed tomography demonstrated resolution of pneumobilia but new gastric pneumatosis concerning for early gastric ischemia. CT abdomen pelvis showed no evidence of atherosclerotic disease making chronic mesenteric ischemia unlikely. The patient was managed conservatively with intravenous fluids, nasogastric decompression, antibiotics, and glycemic control, resulting in resolution of acute kidney injury and clinical improvement.

Conclusion: This case highlights a rare presentation of transient pneumobilia and gastric pneumatosis temporally associated with tirzepatide use. Delayed gastric emptying and altered intraluminal pressures related to GLP-1 receptor agonist therapy, compounded by dehydration and hypoperfusion, may contribute to reversible gastric ischemia in susceptible patients. Clinicians should maintain vigilance for serious gastrointestinal complications in patients presenting with abdominal symptoms after initiation of GLP-1–based therapies.