

A Study of Acute Pancreatitis Secondary to Gastric Balloon Weight Loss Therapy

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Background

Gastric balloon surgery, also known as intragastric balloon placement, is a nonsurgical endoscopic weight loss therapy in which a typically silicon balloon is inserted in the stomach and inflated with saline solution. The goal of this therapy is to reduce the stomach capacity to allow a patient to feel full and more satiated with less food.

Case Description

An 18-year-old female with a past medical history remarkable for a gastric balloon placed in March 2025 in New York who presents with upper abdominal pain since earlier this morning that has been persistent, moderate to severe, sharp/ache-like in character, radiating to the back, and associated with nausea and loose/watery stool output for the past 4 days. She reports no vomiting, no chest pain or tightness, no shortness of breath, or cough and reports no alcohol use or drug use but reports starting a weight loss medication recently in a pill form, Qysmia.

A case of a 18 y.o. female with a PMH of obesity (BMI of 31) and gastric balloon placement 5 months prior presenting with multiple recurrent bouts of pancreatitis s/p placement, where the patient underwent the gastric balloon placement due to excessive BMI with the goal of weight loss.

Clinical Findings

In the Emergency Department, the patient was found to have elevated lipase levels. After a computed tomography of the abdomen and pelvis with contrast, focal uncomplicated pancreatitis involving the pancreatic tail was observed. Meanwhile, the right upper-quadrant ultrasound showed no cholelithiasis. Lipase levels were measured at 810 units per liter; triglycerides were within normal limits; the complete blood count was within normal limits; the comprehensive metabolic panel was within normal limits; and the lactate levels were also within normal limits.

Pancreatitis Etiology

Clinically, commonly observed causes of pancreatitis include the following:

- Gallstones
- Alcohol
- Hypertriglyceridemia (greater than 1000 mg/dL)
- Genetic Risk (such as Cystic Fibrosis Transmembrane Conductance Regulator)
- Medications (such as azathioprine and diuretics)
- Endoscopic Retrograde Cholangiopancreatography
- Pancreatic Duct Injury
- Infections
- Hypercalcemia

Imaging Findings

The computed tomography of the abdomen and pelvis with contrast showed acute focal pancreatitis involving the pancreatic tail with no evidence of necrosis or other complications. Additionally, an intragastric balloon was found in place.

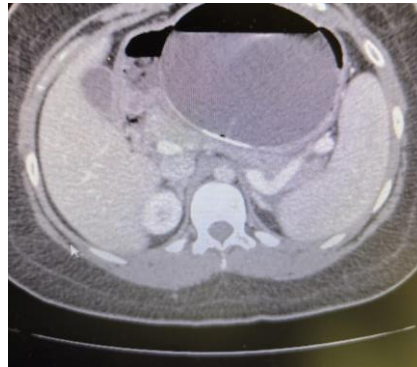


Figure 1: Imaging of the computed tomography of the patient's abdomen and pelvis.

Treatment

The patient received intravenous fluids and morphine to control for pain. A lactated Ringer's injection was administered (125 ml/hour) after a 1-liter bolus was received in the emergency department. Treatment also included ondansetron as needed for nausea. After nausea and pain were controlled, the patient was placed on a nothing-by-mouth diet. As the patient continues to tolerate the regimen and shows steady improvement, there are plans to advance the dietary plan. Within the patient's history, an *H. pylori* infection was discovered by a previous biopsy. The patient, during this treatment, was unable to tolerate oral intake to take quadruple therapy. After consultation with the gastroenterology physician, it was recommended to remove the intragastric balloon. The balloon was then removed with a resolution of symptoms shortly after.

Discussion

The gastric balloon removal led to an improvement of symptoms alongside adjunct treatment, and further episodes of pancreatitis were then resolved. This provides a clear clinical example of gastric balloon-induced pancreatitis, which demonstrates a unique radiological presentation compared to other forms of pancreatitis by manifesting as focal pancreatitis of only the tail with the corresponding gastric balloon. There is great clinical significance in this case, as it is observed that acute pancreatitis can be a relevant side effect of the intragastric balloon placement procedure. Especially in an era of increased BMI and an increased popularity of the stated intragastric balloon procedure, the side effect of acute pancreatitis is especially notable and should be considered.

Acknowledgements

Acknowledgments/References section.

1. Ashraf H, Colombo JP, Marcucci V, Rhoton J, Olowoyo O. A Clinical Overview of Acute and Chronic Pancreatitis: The Medical and Surgical Management. *Cureus*. 2021 Nov 20;13(11):e19764. doi:10.7759/cureus.19764. PMID: 34938639; PMCID: PMC8684888.