AMSER Case of the Month
October 2024

46-year-old female presenting with abdominal pain with nausea and vomiting

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Patient Presentation

- HPI: 46 y.o. female presented with 2 days of uncontrollable epigastric pain with intractable emesis
- PMHx: None
- PSHx: Reports having gastric balloon procedure 2 days ago in Tijuana, Mexico for weight loss, Hysterectomy
- ROS: +Abdominal pain, HA, N/V, decreased appetite. Denies fever, chest pain, SOB, dysuria, diarrhea, bilious emesis
- Vital Signs: T 98.7F, HR 65, RR 18, BP 127/79, SpO2 99%, W 171 lbs
- Physical Exams: appears uncomfortable, generalized abdominal discomfort to palpation, normoactive bowel sounds, moderate tenderness to palpation in epigastric region
- Labs:
  - Lipase 269
  - AST/ALT 17/16, Tot Bili 0.6, Alk Phos 54, Creat 0.7, BUN 15, Glu 103
  - Hgb13.3, WBC 11.58

What imaging should we order?

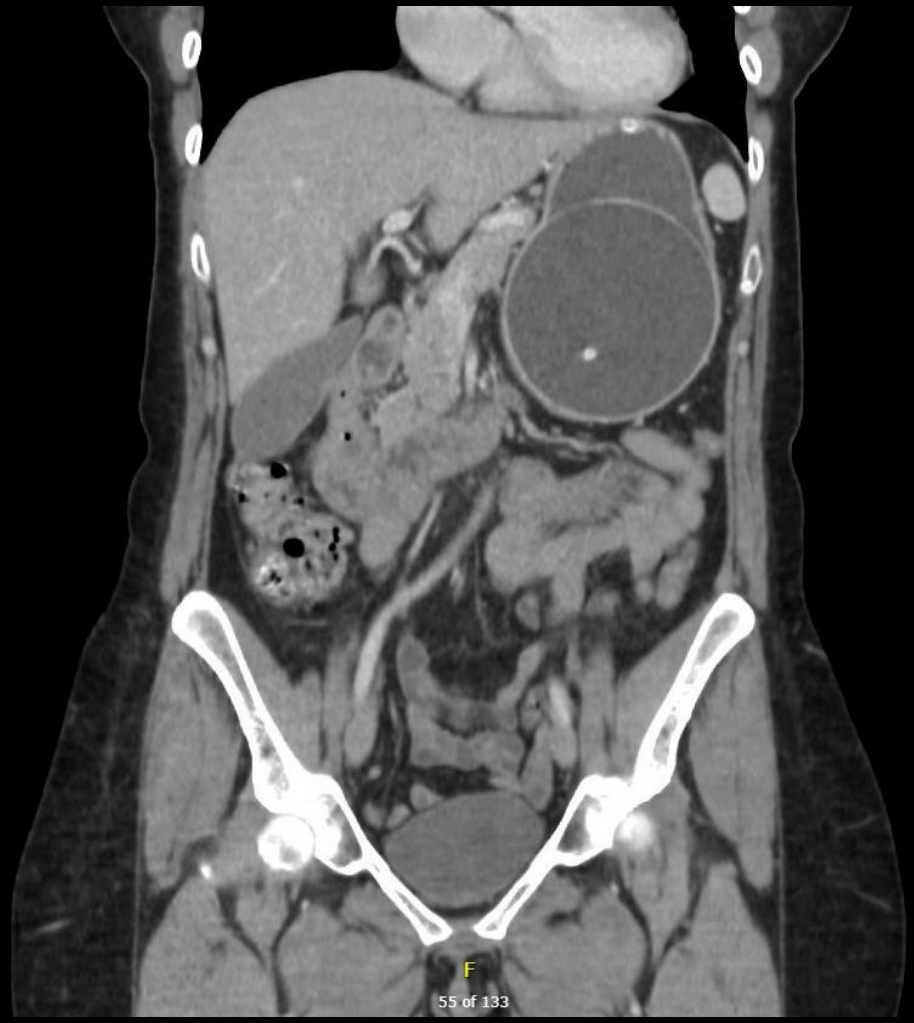
ACR Appropriateness Criteria

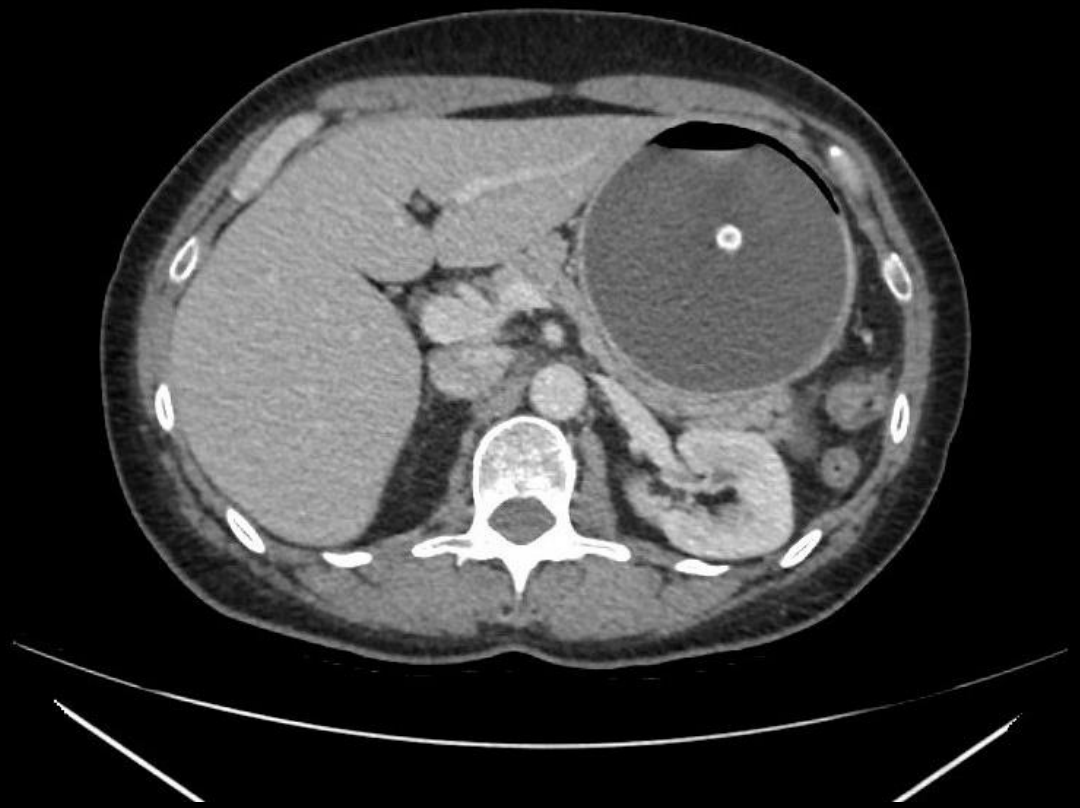
Variant 4: **Acute nonlocalized abdominal pain. Not otherwise specified. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
CT abdomen and pelvis without IV contrast	Usually Appropriate	☢☢☢
MRI abdomen and pelvis without and with IV contrast	Usually Appropriate	O
US abdomen	May Be Appropriate	O
MRI abdomen and pelvis without IV contrast	May Be Appropriate	O
CT abdomen and pelvis without and with IV contrast	May Be Appropriate	☢☢☢☢
Radiography abdomen	May Be Appropriate	☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢
Nuclear medicine scan gallbladder	Usually Not Appropriate	☢☢
Fluoroscopy upper GI series with small bowel follow-through	Usually Not Appropriate	☢☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢

CT abdomen and pelvis w/ contrast was ordered after initial abdominal X-ray showed normal findings.

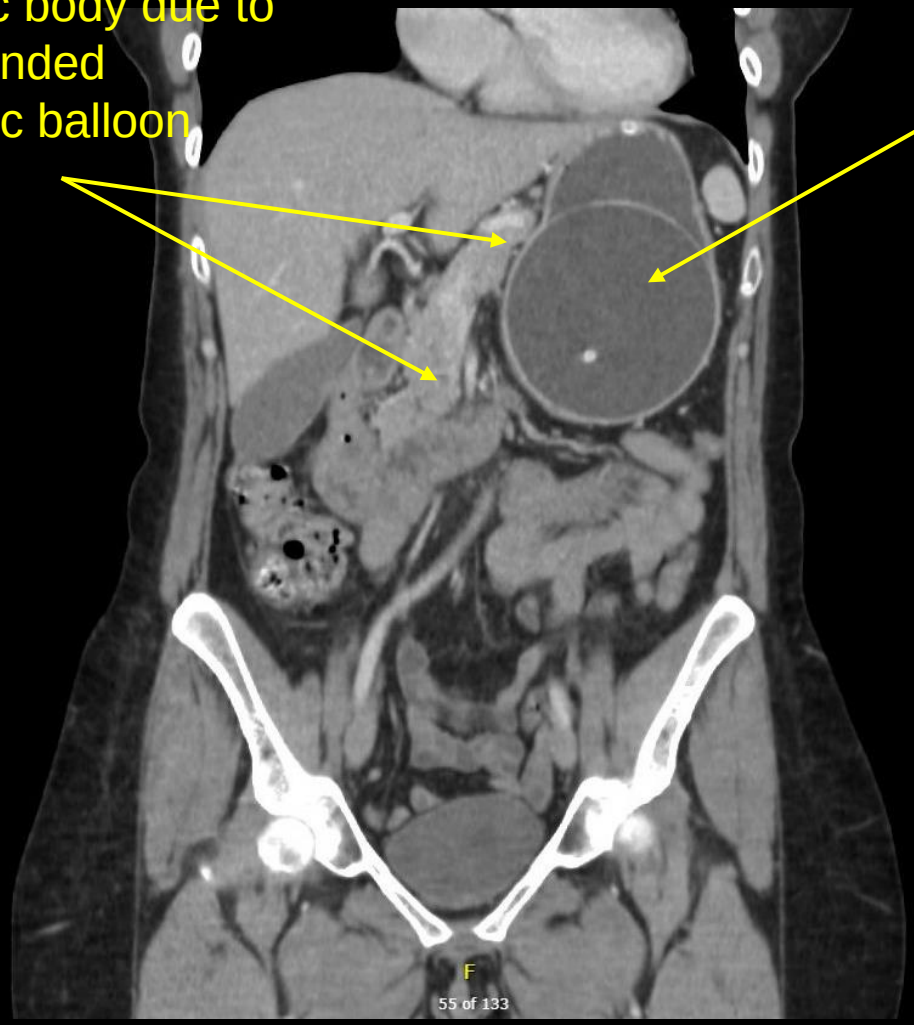
Findings (unlabeled)





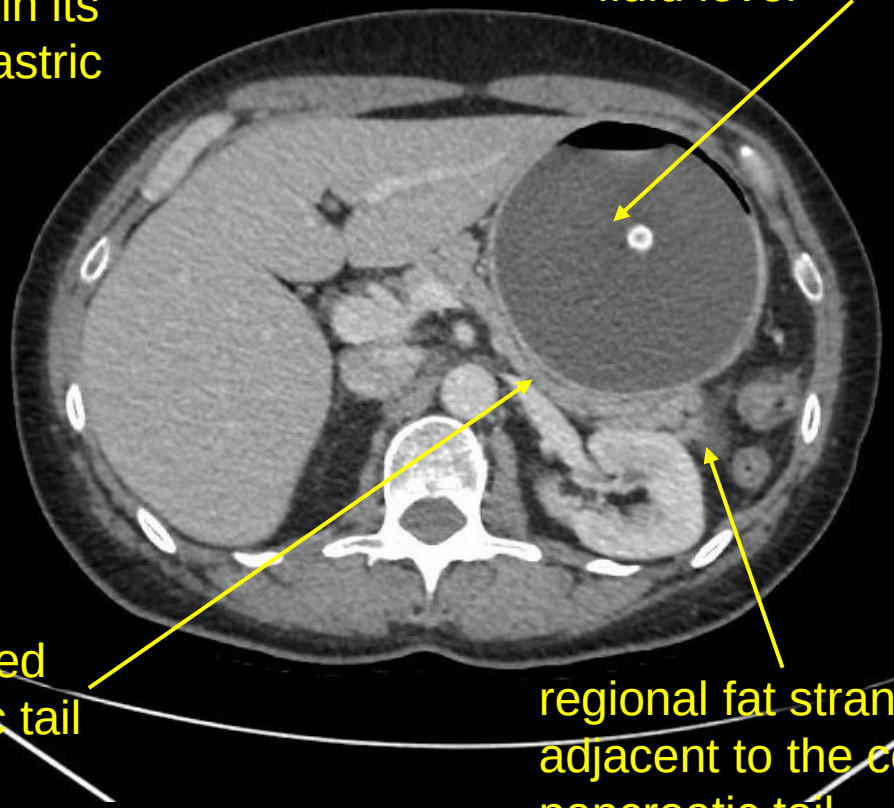
Findings (labeled)

caudal extension of the pancreatic body due to over-distended intragastric balloon



over-distended intragastric balloon with fluid in its correct gastric location

over-distended intragastric balloon with fluid and containing air fluid level



compressed pancreatic tail

regional fat stranding adjacent to the compressed pancreatic tail

Final Dx:

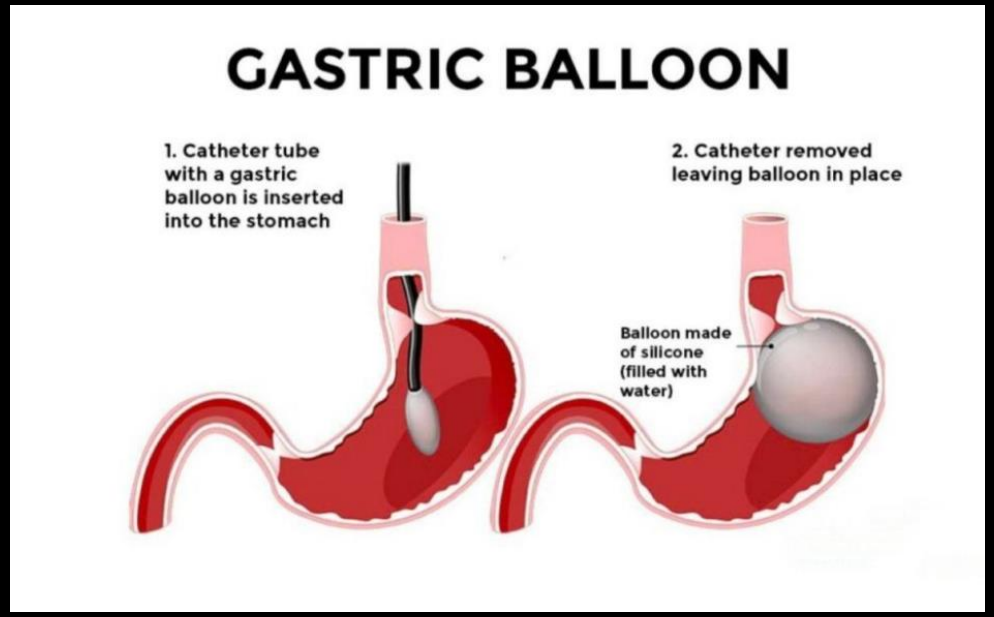
Acute Pancreatitis secondary to overinflated Intragastric Balloon.

Patient Case Discussion

- Acute Pancreatitis:
  - Sudden inflammation of the pancreas caused by the activation of pancreatic enzymes that begin to digest the pancreas itself which can range from mild discomfort to a life-threatening illness.
  - Causes include gallstones and chronic, heavy alcohol use, hypertriglyceridemia, certain medications, and infections
  - Clinical presentation often includes severe abdominal pain, nausea, vomiting, and elevated serum lipase and amylase

Patient Case Discussion

- Intragastric Balloon:
  - Use of IGB is a minimally invasive procedure that has become an increasingly popular option for weight loss prior to bariatric surgery over the last three decades
  - Acute Pancreatitis is a rare complication caused by direct compression on the pancreas by the intragastric balloon



Patient Case Discussion

- Diagnosis/Imaging
  - Laboratory tests should be supplemented with radiologic imaging for accurate diagnosis of AP and to determine the severity and etiology of AP
  - Ultrasonography is recommended as a first and basic imaging test performed in patients
    - increased pancreatic volume with a marked decrease in echogenicity
    - displacement of the adjacent transverse colon and/or stomach secondary to pancreatic volume expansion
  - CT and MRI are useful in diagnosing local complications and discovering the necrosis of the pancreas or in assessing the severity of the AP
    - focal or diffuse parenchymal enlargement
    - changes in density because of edema
    - indistinct pancreatic margins owing to inflammation
    - surrounding retroperitoneal fat stranding

Patient Case Discussion

- Management
  - AP is generally managed conservatively with supportive care
  - Aggressive fluid resuscitation, pain control, and assessment of organ function, continuous vital signs monitoring
  - Etiology of acute pancreatitis should be determined on admission and should be addressed with appropriate therapeutic action
  - GI consult for a EGD with intragastric balloon removal for our patient

References

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