

A Wandering Spleen: with a Twist

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Introduction

- Gastric volvulus is an abnormal degree of rotation of one part of the stomach around another
- It is a rare and potentially fatal cause of acute abdominal pain and potentially leads to strangulation, which may result in ischemia, necrosis, and perforation
- Wandering spleen is another rare condition characterized by excessive splenic mobility and displacement from the spleen's original position to another location caused by the abnormal laxity or absence of ligaments that would normally keep the spleen immobile Wandering spleen can also lead to ischemia and splenic sequestration Though both caused by the common abnormality of an underdeveloped dorsal mesentery, and both presenting as acute abdomen, the co- occurrence of gastric volvulus and wandering spleen is rare, with only 4 adult cases have been seen in the literature to date

Initial Abdominal X-ray with Gastric Outlet Obstruction



Procedure/Outcome

- Dual percutaneous endoscopic gastrostomy tubes (C, curved arrows) were placed for gastric fixation.
- Repeat CT one week later showed the stomach was without volvulus and the spleen (D, arrowhead) remained in the left upper quadrant with appropriate medial orientation of the hilum (D, asterisk)
- The patient was doing well and tolerating oral intake at discharge as well as 6-month follow-up

Case Presentation

- 70-year-old male with a history of developmental delay and achalasia post – esophageal pneumatic balloon dilatation • Presented to outside hospital with altered mental status with abdominal pain and vomiting; found to have evidence on xray of a closed loop gastric outlet obstruction and transferred to OHSU for continued management
- Upon arrival, abdominal computed tomography scan (CT) revealed gastric volvulus with wandering spleen, located

Serial Abdominal Computed Tomography Scans



Discussion

- It is critical to make a prompt and precise diagnosis in order to avoid the potentially fatal conditions associated with prolonged gastric volvulus or splenic torsion, such as ischemia, necrosis, of either, and perforation of the stomach.
- Radiography shows a massive distended stomach with air in supine position and a double air-fluid level in upright position. • CT is especially reliable for diagnosing acute gastric volvulus, consequent critical complications, and factors triggering the onset
- With the advanced diagnosis and management now available, the mortality rate of acute gastric volvulus has decreased to 15-20% from >50%
- Per our review, this is only the fifth report of the association of gastric volvulus with wandering spleen in adults reported to date
- Furthermore, as the standard treatment is surgical fixation by simultaneous

in the mid-abdomen (figure A, arrowhead)

- Esophagogastroduodenoscopy (EGD) was performed –revealed dilated fluid filled esophagus and distended stomach, with a 2L aspiration of thick gastric material
- A subsequent CT scan revealed gastric detorsion and return of the spleen to the left upper quadrant (figure B, arrowhead) but with unusual lateral orientation of the hilum (figure B, asterisk)
- Permanent surgical fixation by simultaneous gastropexy (stomach sutured to the abdominal wall or the diaphragm) and splenopexy (spleen wrapped in mesh and fixed to retroperitoneum) was considered, however cardiac evaluation suggested that surgical risk outweighed benefit

A) Initial CT with gastric volvulus with wandering spleen, located in the mid-abdomen (arrowhead) B) Post –EGD CT scan with gastric detorsion and return of the spleen to the left upper quadrant(arrowhead) but with unusual lateral orientation of the hilum (figure B, asterisk)

C) Placement of dual percutaneous endoscopic gastrostomy tubes (curved arrows) were placed for gastric fixation.

D) Repeat CT one week ; stomach was without volvulus and the spleen (arrowhead) remained in the left upper quadrant with appropriate medial orientation of the hilum (asterisk)

gastropexy and splenopexy, this is the first case that has been treated with endoscopic therapy alone. Though this case is rare, it does represent a promising non-surgical endoscopic intervention that could be considered in these and other, less-rare conditions including gastric volvulus alone

References

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