Gastric Band Erosion – A Dangerous Complication with a Unique Endoscopic Method of Retrieval

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BACKGROUND

- Bariatric surgery has transitioned from open to a laparoscopic procedure
- Laparoscopic gastric banding was favored when it was first introduced in 1993
- It is minimally invasive, effective, and reversible
- An inflatable band is placed below the gastro-esophageal junction to create a smaller gastric pouch
- High complication rates of up to 40%

CASE

- HPI – 62 year old female with a laparoscopic gastric band placed ten years ago presented with dark stools
- Endorsed melena, upper abdominal pain, and three episodes of hematemesis
- Also had lightheadedness and heart burn
- No family hx of cancer, not on medications

- Physical Exam – vitals showed mild tachycardia, orthostasis, and melena on digital rectal exam without fissures or hemorrhoids
- Labs significant for Hgb of 8.3 g/dL (at baseline)

EGD:

- Esophageal ulcers, esophagitis, a Mallory Weiss tear, hiatal hernia, chronic gastritis and gastric band eroded two-thirds into lumen with the remainder in cardia wall attached by fibrous tissue, without bleeding

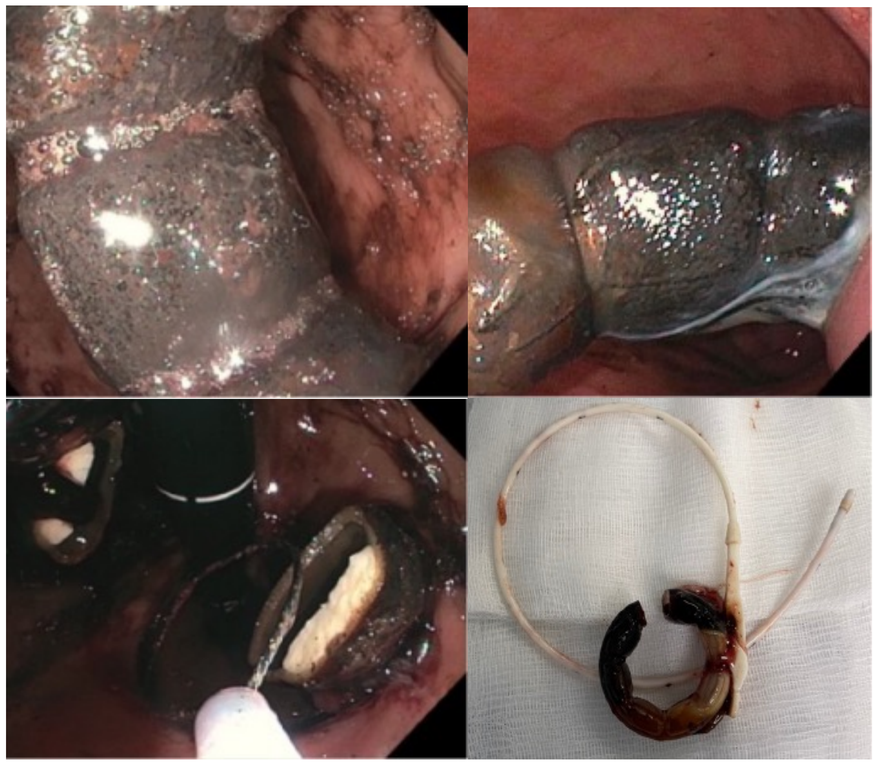

Figure 1. Top Left – Gastric band in gastric lumen; Top Right – Gastric band attached to cardia wall by fibrous tissue; Bottom Left – Severed gastric band; Bottom Right – Gastric band after removal

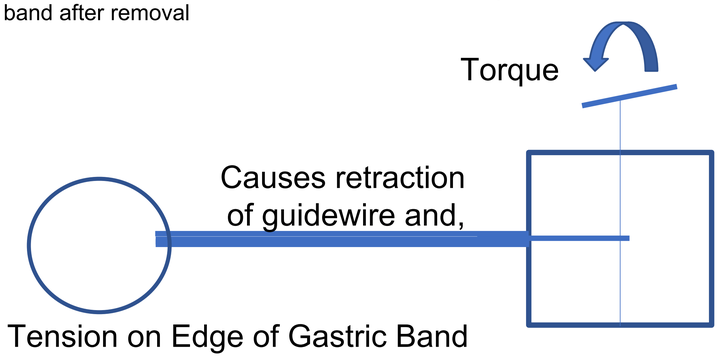

Figure 2. Diagram of the apparatus used for endoscopic retrieval of the gastric band with torque applied on mechanical lithotripter handle (right), causing retraction of the guidewire (middle), and tension on the edge of the gastric band (left) for transection.

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CASE

Removal:

- Guide wire was inserted via endoscope to traverse the gastric band
- Snare used to grab both ends of guidewire
- Lithotripter metal sheath inserted into endoscope's biopsy channel and ends of guidewire were inserted into sheath
- Sheath was cut to accommodate the guide wire which was then attached to the emergency lithotripter handle
- Torque applied on to the handle until the band was severed
- Band removed with snare without signs of bleeding or perforation

DISCUSSION

- Gastric banding rates declined from 42% in 2008 to 6% in 2015
- Complications: erosions (28%), port tubing disconnection (20%), band slippage (4-13%), gastric perforation (0.1-0.8%)
- Erosions can cause nausea, abdominal pain, hematemesis, melena, or hematochezia
- Mechanisms: chronic ischemia on gastric wall, or foreign body rejection causing fibrous tissue formation or mural erosion
- Our patient had esophagitis and a Mallory Weiss tear from her vomiting, and from irritation of the mucosa by the gastric band
- In conclusion, gastric band erosions can be dangerous and retrieval can be done endoscopically