Transoral Gastric Outlet Reduction used to Successfully manage a case of Refractory Dumping Syndrome presenting with recurrent admission for falls and seizures

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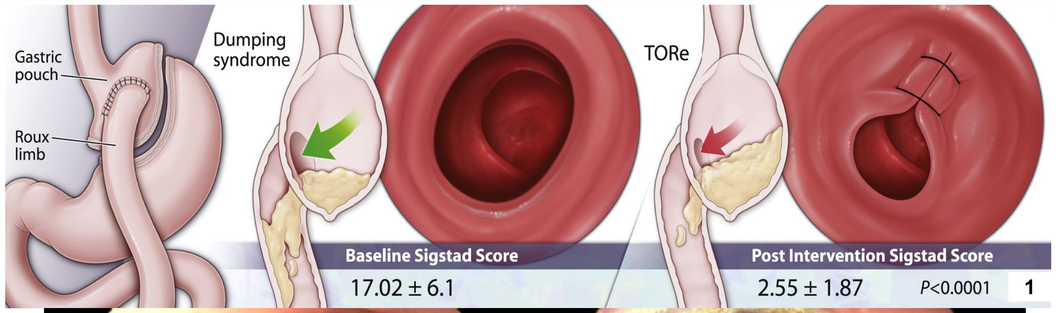
Introduction

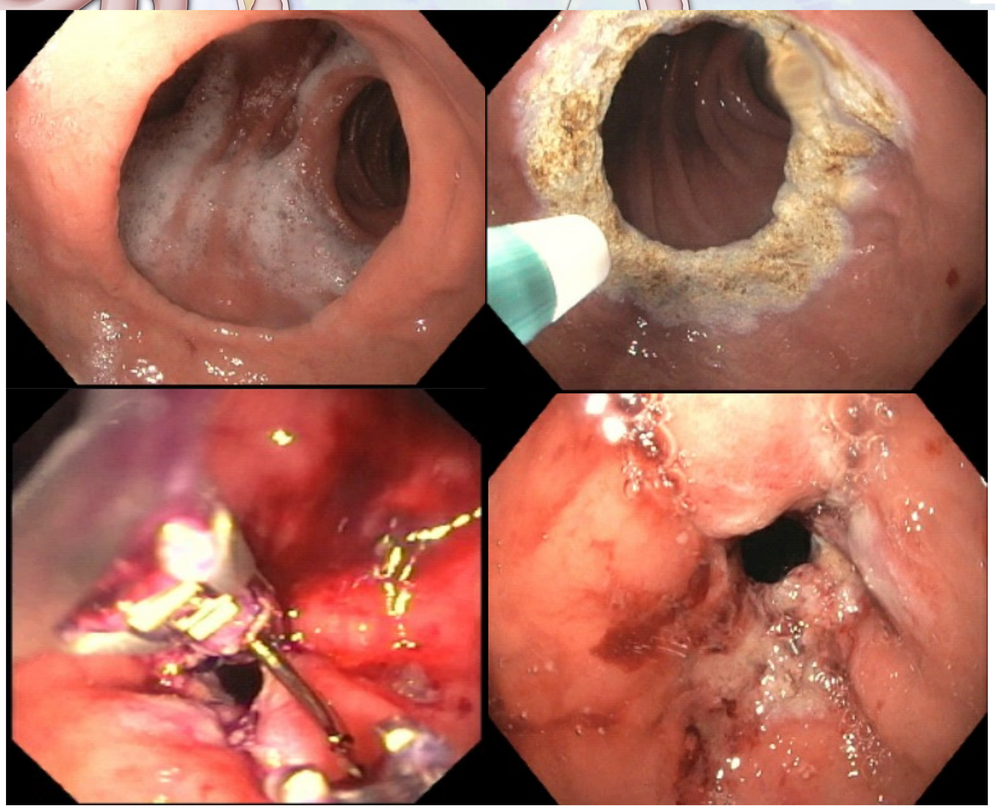
- Surgical management of obesity through Roux-en-Y gastric bypass (RNYGB) has been proven to be a successful treatment for obesity and obesity-related comorbidities.
- Common adverse events following RNYGB include dumping syndrome, weight regain, vitamin deficiency, and marginal ulceration.
- Dumping syndrome is a postprandial state where rapid gastric emptying and delivery to the small intestine results in a pattern of GI symptoms including fatigue, tachycardia, and syncope, which can lead to seizures and shock secondary to profound hypoglycemia.
- Initial treatments include dietary modification and administration of glucagon and octreotide.
- Treatment for refractory cases previously included surgical revision, but data suggesting endoscopic treatment is promising.
- We present a report of a patient with RNYGB who developed dumping syndrome treated successfully with transoral gastric outlet reduction (eTOR).

Background

- 47-year-old female with a history of RYGB 10 years prior with complicated by post-prandial hypoglycemia managed with daily octreotide and as needed glucagon.
- Patient ran out of home octreotide 10 days prior to ED arrival.
- Admitted to the medicine team after a fall with seizure-like activity.
- Hospital Course
  - Day of admission, patient hypoglycemic requiring administration of D50 & Glucagon
  - Home octreotide regimen was restarted
  - Patient developed refractory hypoglycemia requiring further glucagon
  - Endocrine recommended GI consult for possible eTOR due to concerns for Dumping Syndrome
  - GI consulted on day 3 of hospital stay for eTOR procedure
  - Preop Sigstad: 13

Results





eTOR Procedure

MOA: eTOR delays pouch emptying similarly to octreotide but by anatomic manipulation of the anastomosis.

1. The gastric pouch was inspected and Gastrojejunal anastomosis was noted to be dilated to at least 30mm in diameter.
2. Argon plasma coagulation was applied in a circumferential pattern around the outlet.
   - Promotes healing which leads to tissue fusion following the procedure.
   - Reduces bleeding.
3. Full thickness suturing device was used to place sutures in purse string pattern around the GJ anastomosis.

Post procedure

- Post-procedure recovery was uneventful. The patient was discharged home several days later following improvement in blood sugar levels.
- Sigstad score: 1
- At her outpatient follow up, blood sugar levels continued to be normal. Octreotide, and Glucagon were tapered and discontinued
- She has not had any additional falls or ED visits

Discussion

- Patients with dumping syndrome were previously managed by surgical revision, which fell out of favor due to high adverse event rates.
- This case highlights the ability to use endoscopic full-thickness suturing devices to treat this significant complication of bariatric surgery.

1. Vargas, Gastrointestinal Endoscopy, 2020