How to manage severe bile reflux after gastric bypass

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Definition of a Bile Reflux after RYGB

- ANSA-en-Y” was described by the Swiss surgeon, Cesar Roux, in the late 19th century. He developed this operation as a way to prevent bile reflux that was commonly seen after standard loop gastroenterostomy.
- Bile reflux is a late complication after RYGB that is due to an abnormally short (anatomically or functionally) alimentary limb.
Symptoms

- Postprandial (>30 min) epigastric pain
- Bilious vomiting
- The effect of bile salts on gastric mucosa is comparable to that seen after chronic NSAID use
Diagnosis by Symptoms

- The diagnosis is based on the combination of several subjective and objective arguments:
  - a long history of gastric symptoms (i.e., nausea, epigastric pain, and/or bilious vomiting) poorly responsive to proton-pump inhibitors
  - gastritis on EGD, presence of a bilious gastric lake at > 1 upper GI endoscopy, pathologic 24-h intragastric bile monitoring with the Bilitec device
  - Cholescintigraphy
Diagnosis by Endoscopy

- Gastritis on EGD, presence of a bilious gastric lake at > 1 upper GI endoscopy
- Pathologic 24-h intragastric bile monitoring with the Bilitec device
Diagnosis by Radiologic Imaging

- Cholescintigraphy
Review of the Literature

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Original article

Bile reflux after Roux-en-Y gastric bypass: an unrecognized cause of postoperative pain

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Daniel E. Swartz, M.D. · , Elijah Mobley, M.D., Edward L. Felix, M.D.
Review of the Literature

- 16 RYGB patients underwent laparoscopic revisional alimentary limb lengthening for bile reflux (prevalence 0.7%).
- Of the 16 patients, 10 had had a retrocolic approach (9 antegastric and 1 retrogastric) and 6, an antecolic approach.
- The original RYGB operative reports were available for 13 patients, with 12 documenting a 75-cm alimentary limb and 1 documenting a 100-cm limb.
10/16 (63%) had experienced 13 complications after RYGB and before revisional surgery for bile reflux: internal hernia with or without small bowel obstruction in 5, marginal ulcer in 4, of whom 2 had perforated marginal ulcers, anastomotic stenosis in 3, and cholecystitis/gallstone pancreatitis in 2.

All 16 patients presented with abdominal pain; 13 (81.3%) also had regurgitative vomiting, and 7 (43.8%) had noted dysphagia.
The mean duration between RYGB and symptom onset was 58.3 ± 22.2 months.

Gastroscopy was performed in all patients before revision, and all patients had bile present in the gastric pouch. Gastritis was noted in 8 patients (50.0%), and marginal ulcers were present in 5 (31.2%). When the jejunojejunostomy was identified on endoscopy, the mean alimentary limb length was 39.8 cm.
Review of the Literature

- Revisional alimentary limb-lengthening surgery was performed an average of 69.3 months after RYGB and 11.0 months after the onset of symptoms.
- All procedures were performed laparoscopically, and no complications occurred.
- At a median follow-up of 13.5 months, all patients had complete or near-complete relief of their preoperative symptoms.
- Of the 16 patients, 8 (50%) underwent endoscopy after revisional surgery, and no evidence of bile reflux or gastritis was identified.
Video: Lengthening of Roux Limb to prevent bile reflux after RYGB