Preoperative Gastroesophageal Reflux Disease and Concomitant Hiatal Hernia Repair are Associated with Increased Postoperative Infusion Therapy after Bariatric Surgery

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Background

- Dehydration is a well-known potential complication after metabolic and bariatric surgery.
- We examined risk factors for patients who required multiple postoperative outpatient infusions after laparoscopic sleeve gastrectomy (LSG) and Roux-en-Y gastric bypass (RYGB).

Methods

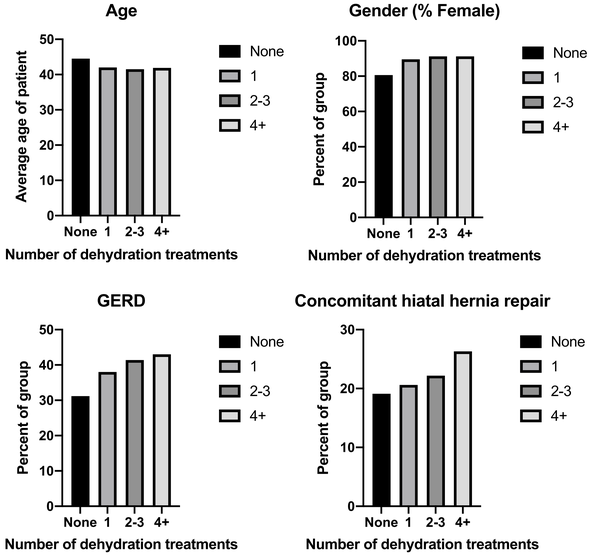
- We queried primary LSG and RYGB in the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program Database (MBSAQIP-PUF) from 2018-2021.
- Patients were grouped by number of 30-day infusions (0, 1, 2-3, 4+).
- Preoperative co-morbidities and operative characteristics were analyzed with univariate modeling, and multinomial logistic regression was used to patient characteristics for increased treatment (relative risk ratio [95% confidence interval]).

Results

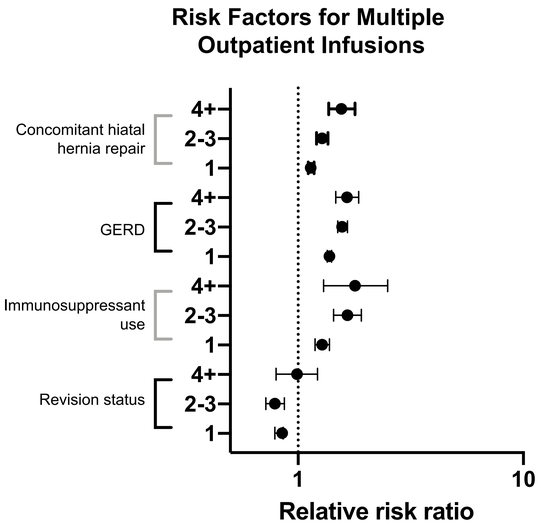
- Of 992,627 patients, 32,113 had one treatment, 7,116 had two to three treatments, and 1,271 had four or more treatments.
- Patients who received multiple treatments tended to be:
  - Younger (0: 44.5 years, 1: 42 years, 2-3: 41.5 years, 4+: 41.9 years)
  - Female (0: 80.6%, 1: 89.5%, 2-3: 91.2%, 4+: 91.2%)
  - Have GERD (0: 31.2%, 1: 38%, 2-3: 41.4%, 4+: 43%)
  - Have concomitant hiatal hernia repair (0: 19%, 1: 20.6%, 2-3: 22.2%, 4+: 26.3%).
- GERD and hiatal hernia repair were associated with significantly increased risk for multiple infusions:
  - GERD: 2-3: 1.6[1.5-1.6], 4+: 1.6[1.4-1.8]
  - Hiatal hernia repair: 2-3: 1.2[1.1-1.6], 4+: 1.5[1.3-1.7]).

Figures and Table

1. Univariate modeling of risk factors



2. Multinomial regression



Conclusions

- Maintaining hydration is essential after bariatric and metabolic surgery.
- Patients with preoperative GERD and concomitant hiatal hernia repair are at higher risk for requiring postoperative hydration therapy and may benefit from additional preoperative education or perioperative optimization prior to discharge.