# Comparing Postoperative Outcomes Between Patients with Preoperative Normal and Abnormal Gastric Emptying Studies After Undergoing Hiatal Hernia Repair

Sydney Korsunsky, MD[1]; Stacey L Tannenbaum, PhD[1]; Alex Trakhtenberg, MD[1]; Emily Ina, DO[1]; Megan Rodwell PA-C[3]; Mark S Shachner, MD[2,3]

1. Broward Health Medical Center; 2. Broward Health Coral Springs; 3. South Florida Reflux Center

## INTRODUCTION

- Hiatal hernia is a condition in which abdominal viscera protrude through the esophageal hiatus of the diaphragm and into the mediastinum
- Patients with hiatal hernias may present with a variety of upper gastrointestinal (GI) symptoms including heartburn, dyspepsia, nausea, vomiting, and bloating
- Many patients with these same upper GI symptoms are found to have delayed gastric emptying on scintigraphy
- Given the prevalence of patients with altered GI motility, patients with a symptomatic hiatal hernia who may benefit from surgical repair may also have evidence of altered gastric motility
- There are no established guidelines directed towards hiatal hernia repair in patients with evidence of delayed gastric emptying
- **Goal: To compare postoperative outcomes between patients with abnormal and normal gastric emptying studies (GES) following hiatal hernia repair**

## METHODS AND PROCEDURES

- Dual-center retrospective cohort study
- Inclusion criteria: Patients 18 years of age and older who underwent preoperative gastric emptying scintigraphy (GES) and subsequent hiatal hernia repair
- Exclusion criteria: Patients who had undergone previous foregut or anti-reflux surgery, patients with missing preoperative data or had no recorded postoperative data at any time-point
- Data was collected using the Registry of Outcomes from Anti-Reflux Surgery (ROARS) questionnaire
- Outcomes categorized as short-term (3-6 months) and long-term (1-3 years)
- Outcomes assessed include dysphagia, regurgitation, Health-Related Quality of Life (HRQL), vomiting, and gas-bloat
- Patients with delayed GES were matched to patients with normal GES based on age, hiatal hernia size, and body mass index (BMI)

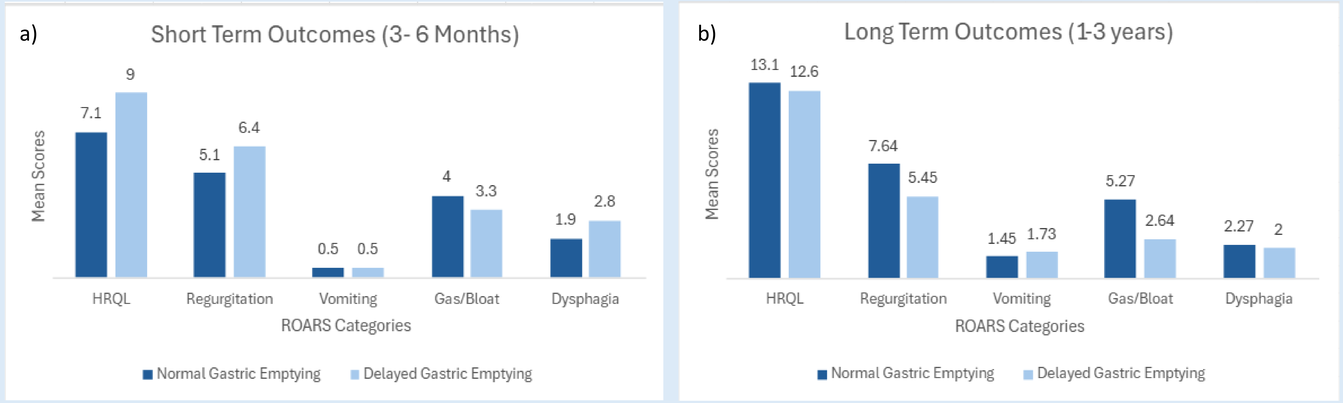


Figure 1: Normal vs. Abnormal Gastric Emptying Outcomes
Comparison of mean ROARS scores for Health-Related Quality of Life (HRQL), regurgitation, vomiting, gas/bloat, and dysphagia at a) short-term and b) long-term intervals

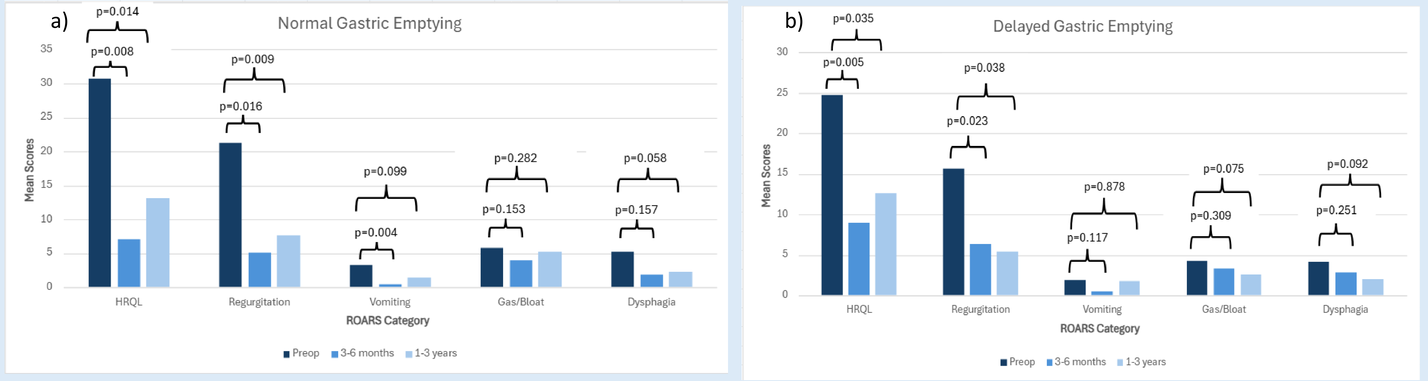


Figure 2: Trend In Outcomes Preoperatively and Postoperatively after Hiatal Hernia Repair in Patients with Normal and Abnormal Gastric Emptying
Comparison of mean ROARS scores in patients with a) normal gastric emptying and b) delayed gastric emptying from preop to short- and long-term intervals

## RESULTS

- There were no statistically significant differences in ROARS scores between patients with normal and delayed gastric emptying for any of the factors studied at either postoperative timepoint (Figure 1a-b)
- There were statistically significant differences in scores from preoperative to short-term follow-up for HRQL (p=0.008), regurgitation (p=0.016), and vomiting (p=0.004) and for preoperative to long-term follow-up for HRQL (p=0.014) and regurgitation (P=0.009). (Figure 2a) in the normal gastric emptying group.
- There were statistically significant improvements in scores from preoperative to short-term follow-up in HRQL (p=0.005) and regurgitation (p=0.023). and from preoperative to long-term follow-up in HRQL (P=0.035) and regurgitation (p=0.038) (Figure 2b) for the delayed gastric emptying group

## CONCLUSION

- Patients with preoperative evidence of delayed gastric emptying have similar outcomes after hiatal hernia repair as compared to patients with normal gastric emptying in both short and long-term time intervals.
- Patients with evidence of delayed gastric emptying prior to hiatal hernia repair experience a significant improvement in their symptoms after repair
- A larger cohort of patients is needed to potentially see differences in short and long-term outcomes between patients with normal and delayed gastric emptying