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Fundoplication versus Gastropexy for Paraesophageal Hernia Repair and Impact on Reflux Symptoms

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Introduction

- Paraesophageal hernia (PEH) with accompanying gastroesophageal reflux disease (GERD) symptoms is a common disorder.
- Surgical management includes fundoplication and gastropexy.
- Fundoplication is performed by wrapping the fundus of the stomach around the lower esophageal sphincter, either completely (Nissen) or partially (Toupet, Dor).
- Gastropexy is performed by suturing the fundus at multiple points along the central tendon of the diaphragm.
- GERD health-related quality of life (GERD-HRQL) score is a useful metric for quantifying GERD symptom severity.
- This study aims to compare the relief of reflux symptoms following either fundoplication or gastropexy.

Materials and Methods

- Retrospective chart review at a single institution was used to extract demographic data, type of hernia, pre-operative GERD-HRQL score, type of surgery, post-operative GERD-HRQL scores (n=135).
- All statistic analysis was performed using SAS 9.4. Paired t-tests and Fisher's exact test were used to assess association between the different variables.

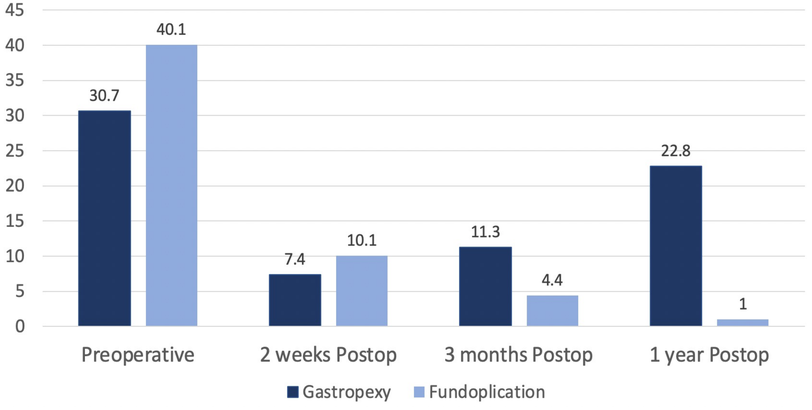
Results

Table 1: Population Characteristics

Variable	Fundoplication (n=77)/57%	Gastropexy (n=58)/43%
Age (years)	57.8	69.9
Sex (M/F)	17/41	26/51
Type 1 Hernia	39/59 (66.1%)	20/59 (33.9%)
Type 2 Hernia	5/5 (100%)	0/5 (0%)
Type 3 Hernia	31/57 (54.4%)	26/57 (45.6%)
Type 4 Hernia	2/14 (14.3%)	12/14 (85.7%)

- Pre-operative GERD-HRQL scores were available for 38 patients. Of these patients, there were post-operative scores available for 20 patients at 2 weeks, 14 at 3 months, and 6 at 1 year.

Figure 1: Mean GERD-HRQL Scores Pre- and Postoperatively



Results

Table 2: Variability of GERD-HRQL Scores in Fundoplication Patients

Post-Operative Period	Mean Difference from Preoperative Score	95% CI	P-value
2 weeks	19.9	1.48 – 38.31	0.03
3 months	29.7	8.87 – 50.46	0.01
1 year	36.5	-173.2 – 246.2	0.27

Table 3: Variability of GERD-HRQL Scores in Gastropexy Patients

Post-Operative Period	Mean Difference from Preoperative Score	95% CI	P-value
2 weeks	21.4	5.54 – 37.25	0.01
3 months	22.4	1.52 – 43.22	0.03
1 year	8.2	-12.87 – 29.37	0.30

Conclusions

- There was a statistically significant mean difference in GERD-HRQL scores for both groups at the 2 week and 3-month postoperative period.
- There is a clinically significant, although not statistically significant, decline in GERD symptoms in both groups at 1 year, more notable in the fundoplication population.
- A prospective study with GERD-HRQL scores obtained at routine intervals in a larger number of patients undergoing surgical repair is warranted to further investigate the effect of either surgery on long-term management of symptoms.