Persistent Troublesome Bloating Impairs Disease Specific Quality of Life Following Laparoscopic Nissen Fundoplication

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BACKGROUND

- Laparoscopic Nissen Fundoplication (LNF) remains the gold standard surgical treatment for gastroesophageal reflux disease (GERD)
- Bloating is a common problem in the first year post-operatively, but data regarding long-term bloating are lacking
- The objective of this study was to examine the prevalence of persistent troublesome bloating and impact on quality of life following LNF
- We hypothesized that troublesome bloating is associated with impaired disease specific quality of life scores following LNF

METHODS

Study Design: Retrospective review of all patients who underwent LNF for GERD between 2009-2014 at OSUWMC (n=176). Long-term follow-up (LTFU) was available for 93 patients (52.8%) with a median interval of 72 (64-89) months.

Groups: Patients stratified into two groups based on presence (n=63) or absence (n=30) of troublesome bloating at LTFU.

Outcome measures: The primary outcome was LTFU GERD-HRQL score. Proton-pump inhibitor use(PPI), reoperation, and procedural satisfaction were secondary outcomes.

Statistical Analysis: Within and between-group comparisons were performed using Chi-square, Fisher's exact, Kruskal Wallis, Wilcoxon signed-rank, and Mann Whitney tests. Data are presented as median (IQR). A $p<0.05$ was considered statistically significant.

RESULTS

Figure 1: Laparoscopic Nissen Fundoplication

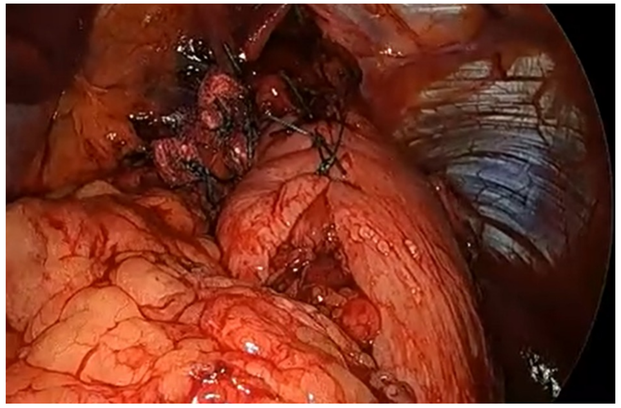
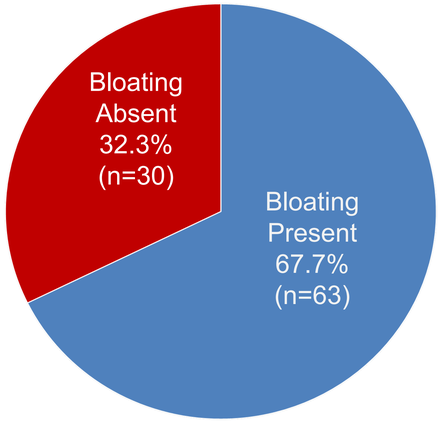


Figure 2: Prevalence of Bloating at LTFU



RESULTS

Table 1: Reported bloating preopeative

	Bloating	Absent	p value
Baseline	93%	90%	P >0.05

Table 2: GERD-HRQL at LTFU

	Bloating	Absent	p value
GERD-HRQL Score	**9 (4-20)**	**1.5 (0-8)**	**p < 0.01**

Table 3: PPI Cessation Rate at LTFU

	Bloating	Absent	p value
PPI Cessation %	58%	74%	p = 0.11

Table 4: Satisfaction with Procedure at LTFU

	Bloating	Absent	p value
Satisfaction with Procedure %	82%	89%	p = 0.28

SUMMARY

After Laparoscopic Nissen Fundoplication:

- ✓ Troublesome bloating persists in a significant proportion of patients
- ✓ Persistent troublesome bloating symptoms are associated with decreased quality of life score
- ✓ Troublesome bloating is not associated with change in PPI use or change in satisfaction with procedure at LTFU

Study Limitations:

- ✓ Retrospective design
- ✓ Single-institution

CONCLUSION

- LNF produces durable improvements in disease-specific quality of life for patients with GERD but it associated with troublesome long-term bloating in a significant proportion of patients
- Bloating symptoms are associated with decreased quality of life scores. This finding should be considered when counseling GERD patients pre-operatively

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