

Outcomes Among Magnetic Sphincter Augmentation and Fundoplication Patients in ROARS Registry

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Introduction

Magnetic Sphincter Augmentation (MSA) is a recognized alternative to Laparoscopic Fundoplication (LF) in appropriately selected patients undergoing laparoscopic antireflux surgery (LARS). Smaller series comparative evaluation of clinical outcomes of the two procedures has demonstrated potential benefit of MSA compared to LF regarding gas and bloating. This study examines long-term outcomes in refractory GERD patients with MSA or LF using the multicenter Registry of Outcomes from AntiReflux Surgery (ROARS).

Methods

Analysis of a prospective, multicenter registry of patients undergoing LARS used preference analysis to confirm an equipoise cohort of patients having surgery primarily for GERD (vs. hiatal hernia). Evaluated outcomes are detailed in results. Medians are reported with interquartile range (IQR) unless stated otherwise. Non-parametric and Chi-square contingency tables were used to compare outcomes of LF and MSA patients.

Results

Fourteen centers contributed data to the registry between 3/1/2016 and 3/1/2020. Of 959 patients meeting initial inclusion criteria, 687 (72%) had > 6-month follow-up and comprise the analyzed cohort.

Median follow-up was 698 days (364-1098). Baseline median age 65 [53-71], BMI 28 [25-31.5], Daily acid suppressing medication (ASM) use (97%) as well as GERD-HRQL (25, IQR 4-33), and Regurgitation (12, IQR 4-20) scores were similar. LF had more females (67.5%) than MSA (52.5%), $p=0.002$.

Table 1 summarizes postoperative outcomes. Dysphagia and bloating scores are derived from portions of the GERD-HRQL.

Outcomes	N	GERD-HRQL (0-50)	Regurgitation (0-30)	Dysphagia PO (0-10)	Bloating (0-5)	Able to Belch	Able to Vomit	No Daily ASM Use	Reoperation	Dilation
LF	251	4 (4-11)	0 (0-1)	1 (0-2)	1 (0-2)	80%	58%	82%	8 (3.2%)	5%
MSA	436	4 (4-9)	0 (0-3)	1 (0-3)	0 (0-2)	95%	87%	87%	13 (3.0%)	9%
<i>p-value</i>		NS	NS	NS	<0.001	<0.0001	<0.0001	NS	NS	0.037

Conclusions

LF and MSA resulted in equivalent outcomes assessed by GERD-HRQL, daily ASM use, dysphagia, and reoperation rates. MSA patients underwent slightly more postoperative dilations, while reporting significantly greater ability to belch and vomit and less abdominal bloating than LF.

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