Is Magnetic Sphincter Augmentation During Bariatric Surgery Safe in the Short Term: Trends Over Time from a National Database

BACKGROUND

- Sleeve gastrectomy (SG) is commonly performed and associated with *de novo* or exacerbation of GERD
- The traditional treatment for reflux in these patients is conversion of SG to Roux-en-Y gastric bypass (RYGB)
- Magnetic sphincter augmentation (MSA) received initial FDA approval in 2012 for the management of GERD
- In 2023, MSA was approved for the management of GERD after SG, with long-term efficacy reported
- MSA during primary bariatric surgery is less established

METHODS

MBSAQIP
METABOLIC AND BARIATRIC SURGERY ACCREDITATION AND QUALITY IMPROVEMENT PROGRAM

The MBSAQIP was queried for MSA and all bariatric procedures between 2017-2020

Short-term outcomes and patient characteristics in MSA and non-MSA groups were compared using Chi-squared or Fisher's exact test and Wilcoxon rank-sum tests, with subsequent multivariate logistic regression

Short-term outcomes between MSA in SG vs. RYGB groups were similarly compared, after exclusion of revisional procedures (n=68)

RESULTS

Total of 779,461 patients underwent metabolic or bariatric surgery between 2017-2020, with 300 undergoing MSA

MSA patients had higher rates of GERD (47.7% vs. 23.8%, *p<0.001*)

MSA patients had fewer obesity-related comorbidities

Diabetes



15.3% vs. 23.8% (*p<0.001*)

Hyperlipidemia



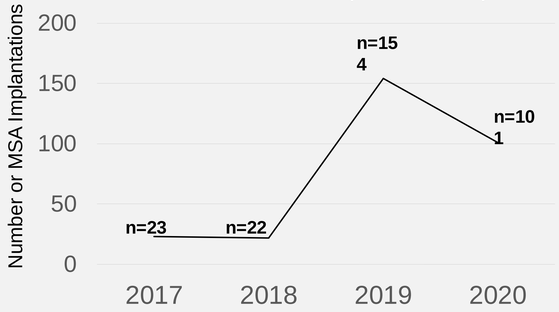
17.3% vs. 22.4% (*p=0.034*)

Sleep apnea



27.3% vs. 35.8% (*p=0.002*)

MSA became more common overtime, and was most common in 2019-2020 (n=255, 85%)



MSA patients had twice the likelihood of 30-day readmission as compared to those who did not undergo MSA (OR=2.06; CI=1.21-3.50; *p=0.007*)

No difference in 30-day outcomes in MSA during SG vs. MSA during RYGB

	MSA during SG (n=149)	MSA during RYGB (n=83)	
			
Readmission	8 (5.4%)	8 (5.4%)	*p=0.068*
Reoperation	1 (0.7%)	1 (0.7%)	*p=0.260*
Re-intervention	0 (0.0%)	0 (0.0%)	*p=0.057*
Mortality	0 (0.0%)	0 (0.0%)	*p=0.360*

CONCLUSIONS

MSA of the LES during primary bariatric surgery is becoming more common

Short-term outcomes are relatively similar, though readmission rates are higher with MSA placement during index bariatric surgery

While this practice is increasing in popularity, further study is needed to establish the safety of MSA during primary bariatric surgery

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