

# Magnetic Sphincter Augmentation is Safe and Effective in Obese Patients

Taylor J. James<sup>1</sup>, Jennifer Pan<sup>1</sup>, Jordan Wlodarczyk<sup>1</sup>, Jocelyn F. Burke<sup>2</sup>, Nikolai A. Bildzukewicz<sup>1</sup>, Luke R. Putnam<sup>1</sup>, Reginald Bell<sup>2</sup>, John C. Lipham<sup>1</sup>

<sup>1</sup>University of Southern California, Los Angeles, CA

<sup>2</sup>Institute of Esophageal and Reflux Surgery, Englewood, CO

## Introduction

Magnetic sphincter augmentation (MSA) is an effective treatment for gastroesophageal reflux disease (GERD). However, there are few data to support its use in obese patients. The objective of this study was to evaluate GERD control in patients with body mass index (BMI) > 35 compared to a similar cohort of patients with BMI ≤ 35 who underwent MSA.

## Methods

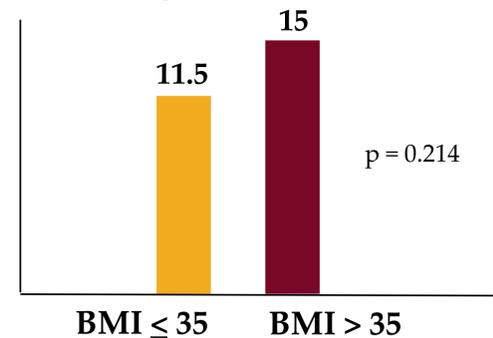
A retrospective cohort study was performed of patients who underwent MSA between 2012 and 2019 at three institutions. Patients were grouped by preoperative BMI (≤ 35 vs > 35). All patients with pre- and post-operative GERD health-related quality of life (GERD-HRQL) surveys were included. Recurrent hiatal hernia (> 2cm) at one year was determined by upper endoscopy or video esophagram.

## Results

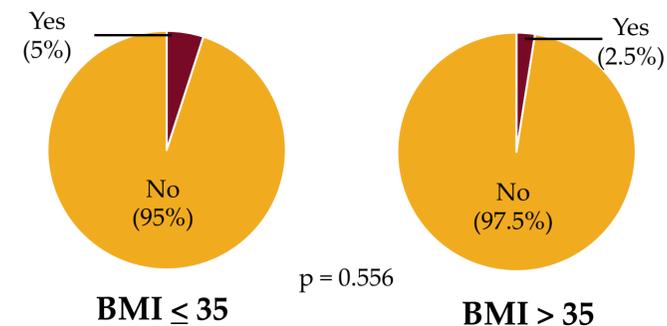
Preoperative characteristics	BMI ≤ 35 (n=40)	BMI > 35 (n=40)	p value
Age	50.72 ± 14.99	51.21 ± 12.95	0.102
Sex, male	21 (52.5%)	14 (35%)	0.115
BMI	26.76 ± 4.33	37.97 ± 2.84	<0.0001
Preop GERD-HRQL score	23.35 ± 11.82	21.63 ± 12.18	0.522
Preop DeMeester score	48.57 ± 31.35	43.63 ± 20.71	0.542
Preop hiatal hernia > 2cm	20 (50%)	34 (85%)	0.001

## Postoperative outcomes

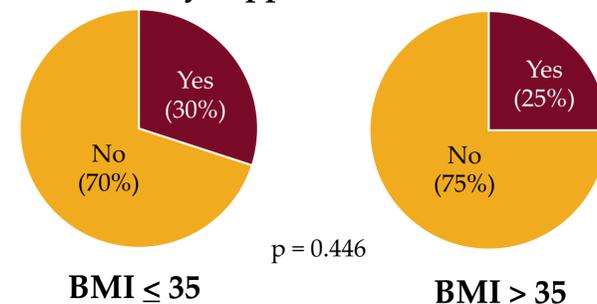
### Mean change in GERD-HRQL score



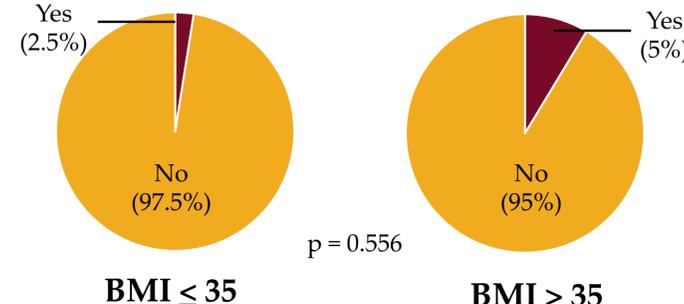
### Symptomatic HH recurrence at 1 year



### Any supplemental ASM



### Device removal



## Summary of Results

- No patients in either group experienced operative or post-operative complications
- GERD control as measured by discontinuation of daily acid suppressive medication (ASM) and mean change in GERD-HRQL score did not differ significantly between the two groups
- Two patients in the BMI ≤ 35 group and one patient in the BMI > 35 group experienced symptomatic hiatal hernia recurrence at one year
- One patient in the BMI ≤ 35 group and two patients in the BMI > 35 group required device removal

## Conclusion

Our study demonstrates that MSA is safe and effective in obese patients. Concerns about MSA in this population should be reconsidered.