AFS Bariatric Committee Statement on Combined Magnetic Sphincter Augmentation and Bariatric Surgery

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A recent review of the MBSAQIP (Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program) by authors Clapp, et al. [1] observed that magnetic sphincter augmentation (MSA) is being performed prophylactically for gastroesophageal reflux disease (GERD) at the time of primary bariatric surgery (18 in laparoscopic sleeve gastrectomy [LSG] and 6 in Roux-en-Y gastric bypass [RYGB] patients). The authors made several observations:

1. Only 29% of those who had this prophylactic procedure performed had preoperative GERD requiring medication. This was the same as the group who did not receive MSA.
2. Complications were not different in those receiving primary magnetic sphincter augmentation versus those who did not in propensity matched models.
3. There is no report in the literature about MSA during primary bariatric surgery despite it being reported to MBSAQIP.
4. They note this is off label use of the device and should be done under the oversight of an IRB.

The American Foregut Society Bariatric Committee has reviewed this paper at length and the observation is notable. The Society agrees with the comments that this is off label use and needs oversight. More importantly, the committee has several concerns about this combination from clinical and physiologic perspective; especially in the context of this limited study design.

First, foreign bodies being implanted on a fresh anastomosis is concerning and should not be advocated. Basic surgical principles raise the concern for contamination of the MSA which puts the patient at risk for potential complications including leaks, infections and erosions. Although those findings were not evident through this review of the MBSAQIP, the outcomes reported are only 30 days. Many complications such as erosions, leaks, and migrations will likely happen after 30 days and will not be captured in this database. Patients will have these devices in for life and will need ongoing monitoring. Such interventions should not be advocated and again violates basic surgical techniques.

Furthermore, alteration of esophageal physiology in the long term after bariatric surgery has been demonstrated after both LSG and RYGB. In a meta-analysis of 27 studies (LSG : 612 patients; RYGB: 470 patients), esophageal body amplitude were decreased and the risk of ineffective esophageal motility was increased after both procedures [2]. This was corroborated by a large series of 101 patients who underwent RYGB after failed fundoplication for refractory GERD, showing high incidence of new onset and worsening dysphagia after the conversion. [3] In another large cohort study of 137 patients, 97 of whom underwent high resolution manometry at a median of 5.84 years after bariatric surgery, matched to 40 preoperative bariatric surgery candidates with medically complicated obesity, a manometric pattern consistent with achalasia was identified in 7.2% postsurgical patients compared with none in the preoperative group. Furthermore, an achalasia-like pattern defined by aperistalsis and increased intragastric pressure (postobesity surgery esophageal dysfunction [POSED]) was observed in 5.2% postsurgical patients, while none seen in the control group. Therefore, the addition of MSA to bariatric surgery will need careful investigation and appropriate informed consent about the potential for long-term esophageal dysmotility and dysphagia. [4]

MSA is a key technology and innovation that has expanded the surgical management of GERD in the last several years. It should only be placed after proper clinical and gastroesophageal physiologic evaluation. It is an excellent tool for surgeons who manage foregut disease to have in their armamentarium. However, judicious use of the technology is necessary to avoid unexpected outcomes and continue safe and effective use of the device. The use of MSA at the time of primary bariatric surgery violates many basic surgical principles and is not considered judicious use by the American Foregut Society. Until prospective trials demonstrate the safety and efficacy, the concurrent use of MSA at the time of primary bariatric surgery should be considered a contraindication and should not be advocated.

References

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