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SURGERY FOR OBESITY  
AND RELATED DISEASES

## Editorial comment

## Comment on: The effect of laparoscopic sleeve gastrectomy with or without hiatal hernia repair on gastroesophageal reflux disease in obese patients

Santonicola et al. [1] presented the effect of laparoscopic sleeve gastrectomy (SG) on gastroesophageal reflux disease (GERD) symptoms in 102 patients without hiatal hernia (HH) and compared it with the results of SG + HH repair in 78 patients in whom a sliding HH was found during the operation. The rate of typical GERD symptoms was similar in both groups preoperatively. After at least 6 months follow-up, the GERD symptoms prevalence in the SG + HHR group did not show any significant change (38.4% reduced to 30.8%), while there was a significant decrease in the prevalence of typical GERD symptoms in the SG only group (39.2% reduced to 19.6%,  $P = .003$ ). They also used a “heartburn and regurgitation intensity-frequency score” and showed a significant decrease of the score in the SG group but no improvement within the SG+HHR group.

The authors concluded that SG was beneficial for relieving GERD symptoms and, conversely, that SG + HHR did not produce any improvement. However, it should be noted that this study compared 2 different procedures in 2 different populations (SG + HHR in patients with HH versus SG in patients without HH). In this study, there were no data on the percentage of GERD symptoms if SG (without HHR) was performed in morbidly obese patients who have HH. It is possible that SG causes GERD in a considerable percentage of patients in the postoperative period if HH is not repaired. Therefore, a study is required to compare outcomes of SG alone versus SG+HHR in similar groups of patients to evaluate the efficacy of HHR in preventing GERD after SG.

Chiu et al. [2] performed a systematic review on the effect of SG on GERD. They presented differing outcomes in 15 studies and discussed the multiple factors affecting GERD

after SG. They included alterations in gastric emptying, lower esophageal sphincter pressure, gastric compliance and pressure, acid production, anatomy of the angle of His, and weight loss after surgery. This review not only showed the need for more studies in this field but also emphasized the need for randomized trials, considering the numerous factors involved in the pathophysiology of GERD. In addition, GERD prevalence after SG seems to be variable in long-term follow-up. Himpens et al. [3] showed the prevalence of GERD in 22% of patients 1 year after SG, but prevalence declined to 3% at 3-years. Although the study by Santonicola et al. [1] is invaluable and adds new data to one of the challenging outcomes of SG, the results should be interpreted cautiously, considering study methodology, patient population, and the time frame of follow-up.

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