Peer Review File

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Reviewer A

Thank you very much for your kind words and important suggestions. We appreciate your work, and we are trying to make a point-by-point answer, improving the quality of the manuscript to be acceptable in this important periodic.

Comment: - Considering the topic, I believe the extreme prevalences of GERD should be mentioned, and if possible to check antrum, bougie, and hiatal hernia (HH) sizes.

We have added the prevalence of GERD after SG. The antrum size is related to the distance between the distal stapling and the pylorus, as well as the bougie size. That information is written in the original article. We don´t have the answer to the HH size before the SG. The changes in the original article are highlighted.

Reply: The literature is controversial about the incidence of GERD after SG, and surprisingly it can vary from 9 to 60% [9-11].

For that reason, the SG should be the widest at the antrum (5-6cm from the pylorus) and the narrowest at the cardia. A retrospective study on 120 SG patients showed that using a 42-Fr bougie has a positive impact on the prevalence of GERD after surgery when compared with a 32-Fr bougie. For the group with a 42-Fr bougie, around 80% of patients reported postoperative improvement of GERD symptoms, compared with 60% of patients in the 32-Fr group. Further, GERD symptoms decreased postoperatively in 3% and 10% of the patients, respectively [25]. Garay et al. had shown that the preservation of the antrum accelerates gastric emptying, reducing GERD by decreasing the intragastric pressure [26]. Nevertheless, Hanssen et al. concluded that there is a relation between the gastric pouch volume and weight loss, seeming that SG tube $\geq$ 100 ml at 6 months is associated with poor weight loss [27].

Comment: The authors recommended to fix HH to prevent GERD. Obesity is a risk factor for HH recurrence after repairing. How about recurrence after repairing? Do we have data supporting this recommendation?

Reply: Braghetto et. al, could demonstrate a hiatal hernia incidence of 5% after SG in patients without HH previously. Although there is insuficient evidence in the literature, and weight loss should be a protect factor to hiatal hernia recurrence, a panel of specialists agreed that it is important to fix the HH when performing SG.

Comment: it is important to comment how GERD was defined (LYON's criteria?, esophagitis or only defined by symptoms) in studies that support your recommendations.

We strongly agree with your statement. However, there is a lack of standardization and methodology in the literature about how to define GERD after SG. This may be one of the responsible for the discrepancy of the prevalence of GERD after SG.

Could the authors comment about strategies to be added to avoid GERD: Fundoplication (Nocca and kawahara …), cardioplication (Santoro), Teres ligament (Vilallonga…).

We don´t believe that those strategies could avoid GERD after SG, because there is no physiological logic in those techniques. Besides, there is a lack of methodology and data to support them.

the major problem in LSG is weight regain. Wider bougies reduces intraluminal pressure, however it might be related to weight regain (WR) in late postop. Is WR associated to GERD and hiatal hernia (de novo or recurrence) after LSG? If yes, wider bougies may be associated

We don´t have evidence in the literature to associate WR to GERD or recurrence of HH after SG. However, it is well known that there is a correlation between obesity and GERD plus HH. We have described this topic in our original article.

Reply: For the group with a 42-Fr bougie, around 80% of patients reported postoperative improvement of GERD symptoms, compared with 60% of patients in the 32-Fr group. Further, GERD symptoms decreased postoperatively in 3% and 10% of the patients, respectively [25].

Weight loss and abdominal pressure: It is estimated that 50-60% of excessive weight loss is achieved after 1-2 years of SG [7,8]. Weight loss is associated with decreasing in the abdominal pressure which could improve GERD symptoms thus to the reduction in the trans-diaphragmatic pressure [13]. Thus, a narrow gastric tube, calibrated by a 32-36 Fr bougie, with a volume no more than 100 ml is essential to provide a satisfactory weight loss [27], and consequently a decrease in the abdominal pressure.

Reviewer B

Comment: Thank you for your kind review. We have considered you suggestion and added the manuscript written by Chhabra et al.

Reply: Chhabra et al, have demonstrated an important variation in SG key technical points when surgical SG videos were evaluated by peers, and could find a relation between the technique adopted and early complications [30].