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Guest Editorial

Endoscopic Sleeve Gastroplasty Vs Laparoscopic Gastric Sleeve: A Review of the Current Data

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The field of bariatric surgery has long been dominated by laparoscopic roux-en-y gastric bypass (LGB) and laparoscopic sleeve (LGS). These procedures have a well known risk profile as well as advantages. There has been a shift from calling all these procedures bariatric towards a split into bariatric vs metabolic surgery. While the general consensus have favoured LGB for the positive metabolic effects, there is also an increasing demand for less invasive procedures and treatment options for the BMI range 30 - 35.

The LGS has been the option for these patients. It will not help metabolic disorders or the same total weight loss as LGB but has less long term complications. The current trend leans towards patients having more say in choice of procedure, and patients will usually favour less invasive procedures if given the choice. This was shown to be true even when the patients were well informed that the less invasive procedure had a higher chance of negative outcome.

Lopez nava., *et al.* performed the procedure on 154 patients between 2013 - 2016. However only 28 where available for follow-up after 24 months. The reason for the drop off is not explained. Of the 28 that completed the 2 year follow up. The remaining 28 patients had 19.5% total body weight loss (TBWL) and 60.4% excess weight loss (EWL). This is within the recommended 25% EWL by ASGE task force on bariatric therapy [1].

Several studies have been carried out regarding the weight loss after laparoscopic sleeve gastrectomy. Although the interval between follow-up are not directly matched the timeline gives an indication of the overall weight loss [2].

	N	BMI start average	TBWL% 6 months	TBWL% 12 months	TBWL % 24 months	EWL % 12 months	EWL % 24 months	EWL % 36 months	BMI end average
Lopez-Nava., *et al.* ESG	248	38.3	NA	NA	19.5	NA	60.4	NA	30.8
Hoyuela., *et al.* LSG	156	41.5	NA	NA		82		76.6	27.2 (36 months)
Fayad., *et al.* ESG	54	43	17.1	NA	NA				
Fayad., *et al.* LSG	83	44	23.6	NA	NA				
Boza., *et al.* LSG	112	34.9	NA	NA	NA	88			
Novikov., *et al.* ESG	91			29.3					
Novikov., *et al.* LSG	120			17.6					

It's well documented that patients with lower preoperative BMI has better initial effect on EWL% compared to the superobese. Is it too early to say if the resolution of preoperative comorbidities such as T2DM and OSA are similar in LSG and ESG. Since both procedures preserve the continuity of the GI tract and are mechanically similar in concept it's reasonable to assume similar effect on comorbidities to the extent the weight loss over time is similar.

As of now there have been 2 studies comparing the 2 methods. In one case-match study comparing the 2 methods by Fayad., *et al.* [3], 54 patients underwent ESG and 83 had LSG. In this study, with only 6 month follow up %TBWL was significantly less in the ESG group at 6 months (17.1% +/- 6.5%) versus the LSG group (23.6 +/- 7.6%).

In the non-case matched comparison, by Novikov., *et al.* [4], 278 patients were included (ESG = 91 and LSG = 120). At 12 month follow up %TBWL was significantly less in the ESG group (17.6% vs 29.3%). It was noted less adverse events and shorter length of hospital stay in the ESG group.

While there is a lack of patient follow-up longer than 24 months there is seems to be clear evidence that ESG gives less %TBWL over time compared to LSG, especially in patients with BMI over 40 [3]. The future role of ESG is uncertain, but it seems to be associated with lower comorbidity and shorter LOS. In addition, there is little data yet as how ESG will be in long term with GERD, which in itself remain one of the biggest pitfalls with LSG.

Bibliography

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