

Role of Endoscopic Sleeve Gastroplasty (ESG) in Non-Alcoholic Fatty Liver Disease

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Endoscopic Sleeve Gastroplasty is a minimally invasive endoscopic procedure that aims to reduce the gastric volume by endoscopic suturing. An integral procedure in the field of bariatric endoscopy, in this article we review the implications of endoscopic sleeve gastroplasty (ESG) in non-alcoholic fatty liver disease (NAFLD).

NAFLD is now the most common cause of cirrhosis toppling over Hepatitis C. With a global rise in obesity, advent of western diets and sedentary lifestyle- it is more crucial than ever before to address these issues which subsequently results in NAFLD.

Weight loss is the singular extensively studied intervention that can significantly improve hepatic steatosis. Surgical options have long been the mainstay to treat patients with morbid obesity who fail medical therapy or lifestyle modifications and develop complications such as type 2 diabetes, hypertension, coronary heart disease and osteoarthritis. But the new advancements have enabled treating these patients via a minimally invasive approach to reduce any post-operative complications.

A recently published meta-analysis that included four observational studies with a total of 175 patients evaluated NAFLD and other metabolic parameters 12 months post-ESG [1]. The results showed significant reduction in the hepatic steatosis index, NAFLD fibrosis score, weight loss, body mass index and Hemoglobin A1C.

A prospective study followed 118 patients with obesity and NAFLD who underwent ESG for 2 years [2]. 84% of the patients completed their 2 year follow up. At 2 years, the mean total body weight loss was approximately 15%. Homeostasis Model Assessment of Insulin or HOMA-IR used to measure the insulin improved significantly. Hepatic steatosis index improved

decreased by about 4 points per year, NAFLD fibrosis score improved as well. The study showed a sustained improvement in all the liver and metabolic parameters. Both the studies essentially re-enforced the applicability of ESG in NAFLD to aide weight loss and improve all associated hepatic parameters.

ESG can be a great non-surgical alternative for patients who are poor surgical candidates or are unable to undergo surgery due to risk of decompensation post-operatively. In order to endorse ESG as a non-surgical alternative, we will need future prospective studies comparing ESG to the surgical modalities head to head.

References

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