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IMAGE OF THE MONTH

Lower Esophageal Sphincter and Pylorus Distensibility Before and After Endoscopic Sleeve Gastroplasty

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A 37-year-old male with morbid obesity (BMI 36.7 kg/m^2) was referred for endoscopic sleeve gastroplasty (ESG) after a failed trial of conventional therapy. Prior rare episodes of solid food dysphagia triggered an evaluation with an endoscopic functional luminal imaging probe (EndoFLIP) at the time of ESG. Since EGD and EndoFLIP were normal [Figs. 1, 2, Table 1], ESG was successfully performed, after which repeat EndoFLIP revealed a mild decrease in the distensibility of lower esophageal sphincter (LES) with a more marked decrease in the distensibility of pyloric sphincter [Table 1]. At 6 months follow-up, the patient has achieved 25% total body weight loss and continued to do well with no GERD symptoms post ESG.

This case highlights for the first time the decreased distensibility of the LES and pylorus following ESG, that should protect against GERD, confirming recent reports that ESG rarely causes GERD symptoms compared with laparoscopic sleeve gastrectomy. [1, 2] The decreased pyloric distensibility could be related to the delayed gastric emptying induced by ESG. [3] Since the effect of ESG on upper gastrointestinal motility remains unclear, further studies are needed.

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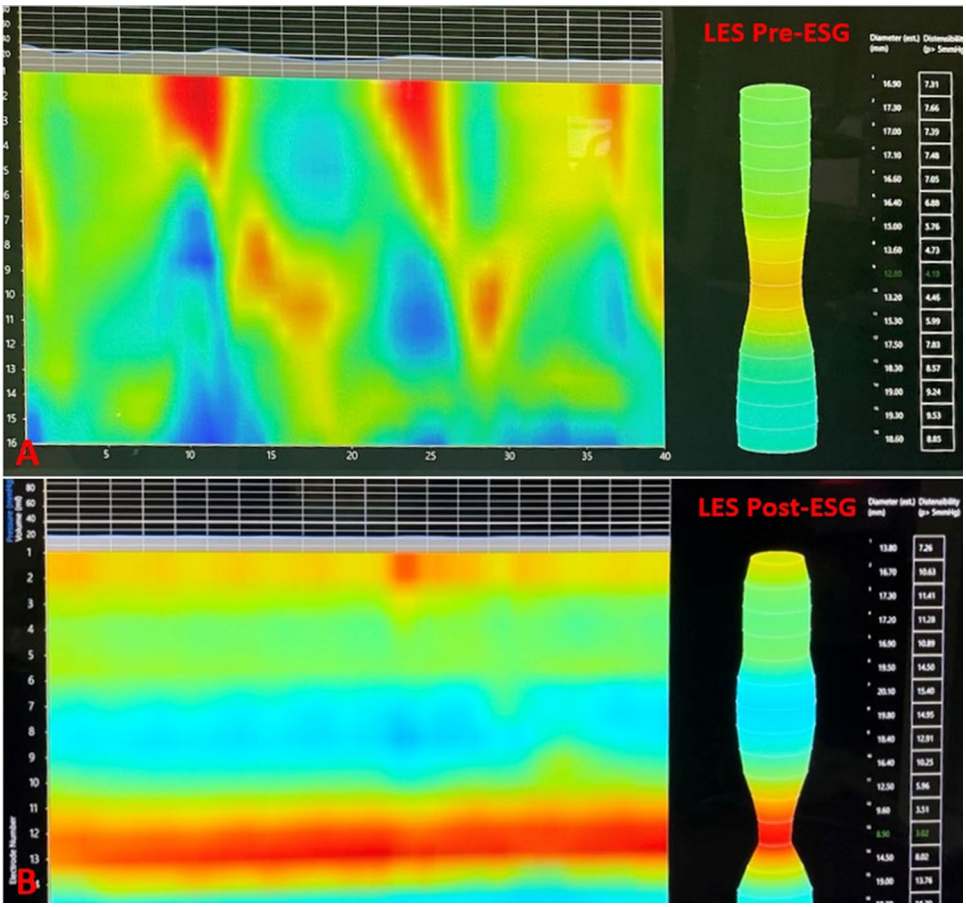

Fig. 1 Endoscopic functional luminal imaging of the lower esophageal sphincter before (panel A) and after (panel B) endoscopic sleeve gastroplasty

Table 1 Endoscopic functional luminal imaging results before and after endoscopic sleeve gastroplasty

	Before ESG				After ESG			
Balloon volume (mL)	40	50	60	70	40	50	60	70
Lower Esophageal Sphincter								
Balloon diameter (mm)	9	11.5	13.4	15.5	8.3	9.8	13.3	14.4
Distensibility index (mm^2/mmHg)	3.0	4.1	4.2	4.2	2.5	2.7	3.8	3.0
Pylorus								
Balloon diameter (mm)	13.5	18.2	18.5	18.5	10	9.5	13.1	14.7
Distensibility index (mm^2/mmHg)	5.2	12.6	10.7	7.2	2	3.7	4.5	3.6

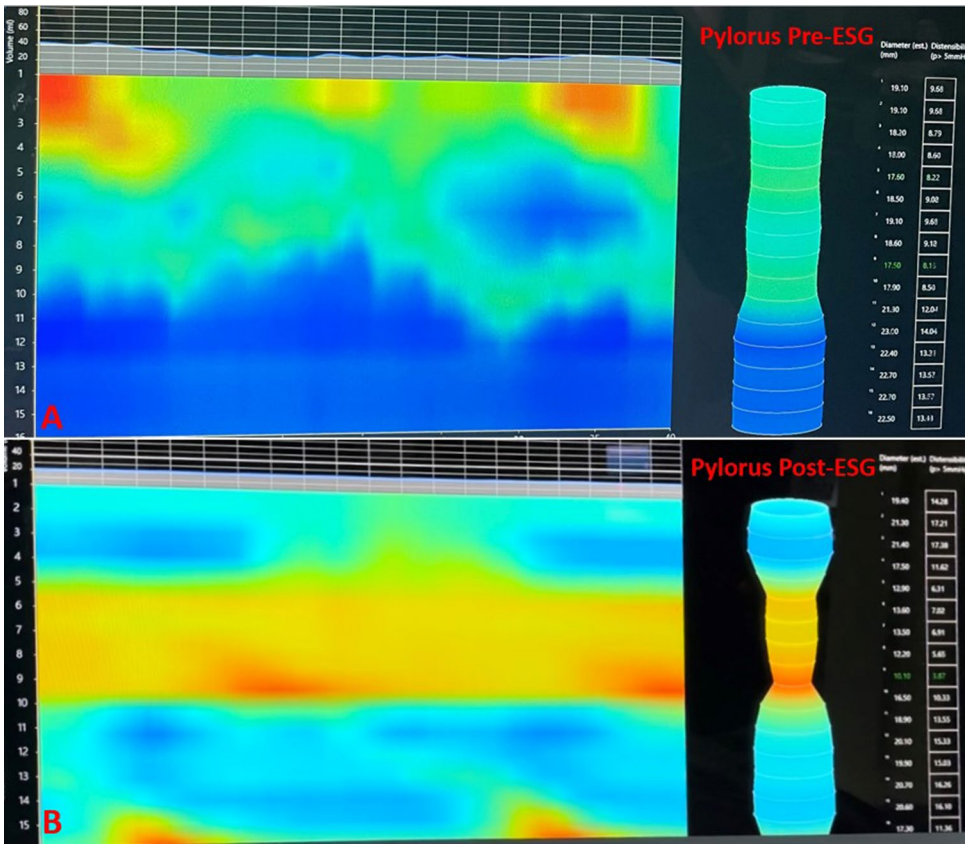

Fig. 2 Endoscopic functional luminal imaging of the pylorus before (panel A) and after (panel B) endoscopic sleeve gastroplasty

Author's contribution FB: chart review and wrote the manuscript. SS & PK: contributed to manuscript writing and creation the figures. DI: conceived the project, helped create the figures, and critically revised the manuscript. All authors have approved the final draft.

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Declarations

Conflict of interest None.

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