

Endoscopic Sleeve Gastroplasty in the Armamentarium of Bariatric Treatment in Thailand: A TAGE-TSMBS Joint Addendum Statement to TSMBS Consensus Guideline

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ABSTRACT

The Thai bariatric surgery Society of Metabolic and Bariatric Surgery (TSMBS) has recently published a consensus guideline for the treatment of obesity, which has become an emerging health crisis in Thailand. As endoscopic sleeve gastroplasty (ESG) lately became available in the country, the TSMBS and the Thai Association for Gastrointestinal Endoscopy (TAGE) then agreed to propose this addendum statement that aims to standardize the patient selection protocol, physician credentialing, and procedural data monitoring in order to safely and effectively incorporate ESG into the armamentarium of bariatric treatment of Thailand.

Keywords: Obesity; endoscopy; bariatric surgery; sleeve gastroplasty; recommendations (Siriraj Med J 2021; 73: 289-292)

INTRODUCTION

Over the past decade, the prevalence of obesity has been rising at an alarming rate and has now become an emerging health crisis in Thailand.¹⁻³ Obesity is recognized as an epidemic of a chronic, relapsing, and debilitating disease that poses significant health consequences in addition to an enormous economic burden to our healthcare system.^{1,4,5} Recently, the Thai bariatric surgery Society of Metabolic and Bariatric Surgery (TSMBS) has published a consensus guideline for the treatment of obese patients.⁶ The guideline has standardized bariatric surgery protocol in Thailand, stating that the indication for bariatric surgery includes patients with BMI between 32.5-37.5 kg/m² with co-morbidities and those whose

BMI of more than 37.5 kg/m² without co-morbidities.⁶

The efficacy of laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy for weight reduction is well-established, and they currently remain the standard of care in the Thai population.^{6,7} However, the current guideline did not include patients whose BMI are less than 37.5 kg/m² without co-morbidities as candidates for primary surgical intervention,^{4,6} underscoring a therapeutic gap for which an alternate treatment modality can be offered.³

Endoscopic sleeve gastroplasty (ESG) is one of the bariatric endoscopy techniques that offers a less invasive approach that is safe, effective, repeatable, and reversible.⁸⁻¹¹ In addition, ESG has been shown to improve

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obesity-related comorbidities, including diabetes and hypertension.¹²⁻¹⁴ The procedure entails an incisionless longitudinal full-thickness plication along the greater curvature of stomach using an overstitch device. ESG has been adopted and widely accepted as an effective endoscopic bariatric therapy according to the American Society for Gastrointestinal Endoscopy (ASGE)/ the American Society for Metabolic and Bariatric Surgery (ASMBS) thresholds of >25% excessive weight loss and <5% adverse events.^{9-11,15,16}

As the endoscopic suturing device has recently become available in Thailand, ESG is expected to soon emerge as one of the bariatric therapies being offered to patients with morbid obesity. However, the current TSMBS guideline was developed when ESG was not an available option and focused only on bariatric surgical therapies, pre-operative and post-operative management, which were in a different context compared to the endoscopic counterpart in its early phase. For example, there is no specialized formal training program on ESG in the country yet, together with limited hands-on proctorship from international colleagues due to the COVID-19 pandemic, all expert endoscopists were trained virtually. In addition, although the role of ESG is established in the international communities but there is no currently available local data on ESG to formulate a national high-level evidence guidelines yet. Thai Association

of Gastrointestinal Endoscopy (TAGE) and TSMBS recognized the importance of standardizing the patient selection protocol, training process, competency evaluation, and safety data monitoring to incorporate ESG into the armamentarium of bariatric treatment of Thailand. This joint addendum statement therefore aims to address the aforementioned issues and provide a pathway to safely and effectively bring ESG into clinical practice and improve care for our patients in an early era of ESG procedure in Thailand.

MATERIALS AND METHODS

This addendum statement was conceptualized and created using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) and the Strength of Recommendation Taxonomy (SORT) framework^{17,18} as described in Table 1.

Nominated experts from both societies convened in January 2021 in Bangkok, Thailand to discuss 4 aspects of bariatric schematic management; 1) Pre-procedural evaluation, 2) Procedural indications and patient selection, 3) Physician training and credentialing, 4) Post-procedure monitoring based on a literature review utilizing Medline, Cochrane library, and Embase databases for existing evidence. The recommendations were approved when the consensus of all experts was reached for each aspect. The summary of

TABLE 1. Classification of the quality of evidence and strength of recommendations.

Quality of evidence	
A	(strong) Strongly confident in the effect of estimate.
B	(moderate) Moderately confident in the effect of estimate.
C	(weak) Confidence in the effect of estimate is limited.
D	(very weak) Almost no confidence in the effect of estimate.
Strength of the recommendation	
Level 1	Recommendation based on consistent and good-quality patient-oriented evidence.
Level 2	Recommendation based on inconsistent or limited-quality patient-oriented evidence.
Level 3	Recommendation based on consensus, usual practice, opinion, disease-oriented evidence, or case series for studies of diagnosis, treatment, prevention, or screening studies

TAGE and TSMBS Obesity Task Force recommends the following:**Pre-procedural evaluation**

1. The patient should be evaluated in a multi-disciplinary team approach focusing on behavioral eating habit, endocrinopathies, and other obesity-related comorbidities. (Quality of evidence A; Recommendation level 1)
2. Patients with any uncontrolled maladaptive eating disorder should be excluded. (Quality of evidence C; Recommendation level 3)
3. For the patient to be considered for any bariatric therapies, he/she should have undergone a maximum effort to his/her capacity with adequate assistance from the multi-disciplinary team for weight reduction. (Quality of evidence D; Recommendation level 3)
4. Although weight loss is always encouraged, the rapid 5-10% weight reduction typically required for bariatric surgery is not necessary for ESG procedure. (Quality of evidence C; Recommendation level 2)
5. All bariatric treatment options should be thoroughly explained to the patients. The physician's credential should also be declared that ESG will be performed by a highly experienced physician in advanced endoscopy and/or minimally invasive surgery after a formal training for ESG. (Quality of evidence D; Recommendation level 3)

Procedural indication and Patient selection

6. The committee agrees that a lower BMI cut-off than the international standard for Caucasians should be used due to the higher risk of obesity-related morbidities at a lower BMI value.¹⁹⁻²¹ (Quality of evidence B; Recommendation level 2)
7. For patients with a BMI of more than 37.5 kg/m² regardless of co-morbidities, surgery should be the primary treatment. (Quality of evidence C; Recommendation level 3)
8. For patients whose BMI is between 32.5-37.5 kg/m² with co-morbidities, surgery should be the primary treatment with ESG as an alternate option. (Quality of evidence C; Recommendation level 3)
9. ESG should be considered a primary treatment for obesity in patients whose BMI is between 32.5-37.5 kg/m² without co-morbidities. (Quality of evidence C; Recommendation level 3)
10. The role of ESG in patients whose BMI is between 27.5-32.5 kg/m² is yet to be clearly defined and should be reevaluated once the local data becomes more available. (Quality of evidence D; Recommendation level 3)

Physician training and credentialing

11. ESG should be performed in tertiary care hospital where a collaborative multi-disciplinary team comprising of endocrinologists, nutritionists, bariatric surgeons, and gastroenterologists is available. (Quality of evidence C; Recommendation level 3)
12. ESG should initially be performed by expert endoscopists, defined as physicians who have been formally trained in advanced endoscopy or minimally invasive surgery, have performed ESG procedure under a formal proctorship by an expert bariatric endoscopist, and have been approved by the TAGE-TSMBS committee. (Quality of evidence D; Recommendation level 3)
13. Safety and efficacy data should commence periodically post-procedure for credentialing purposes. (Quality of evidence D; Recommendation level 3)

Post-procedure monitoring

14. All procedures should be registered in a National Registry on Safety and Efficacy of Bariatric Endoscopy. (Quality of evidence D; Recommendation level 3)
15. Patients who have undergone ESG should have a regular follow-up with the multi-disciplinary team to assess nutrition status, continued lifestyle modification, and weight reduction efficacy. (Quality of evidence B; Recommendation level 1)

CONCLUSION

The obesity crisis in Thailand continues to rise and threaten the well-being of our population. TAGE and TSMBS recognize an urgent need to optimize and standardize available therapeutic modalities for patients with this chronic, relapsing, debilitating disease. This addendum statement aims to clarify the indication for ESG to be primarily for patients with BMI between 32.5-37.5 kg/m² without co-morbidities and emphasizes the importance of post-procedural care with a multi-disciplinary team approach. It is intended to serve as a general recommendation to safely and effectively incorporate ESG into the bariatric treatment armamentarium. As the field is still evolving, TAGE and TSMBS are committed to periodic updates on these recommendations when more local data becomes available.

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