



REVIEW

Banded Sleeve Gastrectomy vs Non-banded Sleeve Gastrectomy: a Systematic review and Meta-analysis

Mehul Gupta¹ · Vitish Singla¹ · Arun Kumar¹ · Ritvik Chekuri¹ · Yellamraju Sai Kaustubh¹ · Sandeep Aggarwal¹ 

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Abstract

Banded sleeve gastrectomy (BSG) was developed to restrict progressive dilation of the gastric sleeve, which remains a commonly implicated reason for weight regain following SG. The present study attempted to perform a systematic review and meta-analysis comparing the two procedures. Literature search was performed across PubMed and Google Scholar, using the keywords “Banded Sleeve Gastrectomy”, “Sleeve gastrectomy”, “Banded”, “BSG” and “LSG”. It yielded 4267 articles, six of which have been included in this review. Better weight loss outcomes at 3 and 5 years are noted following BSG, with a margin of 6.39% and 9.97% in %TWL at respective time points. No difference in impact on co-morbidities was noted. A revision rate of 7.1% was seen after BSG, with increased regurgitation as the most common indication.

Keywords Banded sleeve gastrectomy · Non-banded sleeve gastrectomy · Systematic review · Meta-analysis

Key Points

- Over medium-term follow-up, banded sleeve gastrectomy (BSG) yields better weight loss at 3 and 5 years than SG, with a margin of 6.39% and 9.97% in %TWL (% total weight loss) at respective time points.
- A revision rate of 7.1% is noted for BSG, with increased regurgitation being reported as the most common indication.
- None of the studies reported a significant difference in impact of BSG and SG, on co-morbidities such as T2D, HTN and OSA.

✉ Sandeep Aggarwal
sandeep_aiims@yahoo.co.in

Mehul Gupta
guptamehul63@gmail.com

Vitish Singla
vitishaiims@gmail.com

Arun Kumar
drarun1612@gmail.com

Ritvik Chekuri
ritvikchekuri@gmail.com

Yellamraju Sai Kaustubh
yskaustubh@gmail.com

¹ Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi, India

Introduction

Laparoscopic sleeve gastrectomy (SG) has rapidly grown to become the most preferred bariatric surgery performed worldwide (1). Short operating time, immediate calorie restriction, technical simplicity, high safety profile and low perioperative morbidity are some of the commonly stated reasons for the growing popularity of this procedure (2,3). SG, however, does not come without its share of concerns regarding weight regain over medium-/long-term follow-up periods. In fact, a recent meta-analysis on long-term impact of SG revealed weight recidivism of almost 28%, with an overall revision rate of 19.9%, mostly for weight regain (4).

Increase in weight over mid-/long-term follow-up is particularly concerning, as not only is weight loss the most common primary aim behind seeking bariatric surgery, but it also correlates strongly with the metabolic benefits associated with these procedures (5). Though there remains a multitude of reasons that have been implicated in weight regain following SG, an increase in size of the gastric reservoir due to progressive dilation over time is often suggested as a major factor (6, 7). It thus follows that increasing restriction over the gastric tube using a band/ring may counteract the progressive dilation, a concept shown to have resulted in better results following banded RYGB procedures (8). This principle led to development of banded SG (BSG) in 2009 (9). However, 13 years later, there still remains a lack of