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Original Research

Mid to long term outcomes of Laparoscopic Sleeve Gastrectomy in Indian population: 3–7 year results – A retrospective cohort study

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ABSTRACT

Introduction: Few studies have addressed the mid to long term impact of Laparoscopic Sleeve Gastrectomy (LSG) on weight loss and obesity associated co-morbidities, particularly in Indian population. The aim of this study is to assess the efficacy of LSG in morbid obesity over 3–7 years follow up.

Materials and methods: Data of all patients who underwent LSG between January 2008 and March 2015 and completed their at least 1 year follow up till March 2016 was retrospectively reviewed using a prospectively collected database.

Results: 424 patients undergoing primary LSG were included. The mean age (± 2SD) was 39.8 ± 22.5 years and the mean Body Mass Index (BMI) (± 2SD) was 46.67 ± 15.8 kg/m^2. 124 patients (29.2%) were super-obese (BMI > 50 kg/m^2). The percentage follow-up at 1 year, 3 years, 5 years and 7 years was 78.3%, 66.7%, 42.3% and 38.4% respectively. The mean percentage Excess weight Loss (%EWL) (± 2SD) at 1year, 3years, 5years, and 7years was 71.8 (± 50.5%), 64.95% (± 41.8%), 61.7% (± 46.2%) and 57.15% (± 50.2%) respectively. The preoperative BMI significantly correlated with %EWL at 5 year (r^2 = 0.107, p = 0.018). The overall complication rate was 5.8%. Early complications included staple line leak (1.2%), bleeding (1.2%), deep venous thrombosis (0.4%) and 30-day mortality (0.21%). Late complications included stricture formation (0.21%) and new onset Gastro-esophageal Reflux Disease (GERD) (2.8%).At 5 years, 83.3% of diabetic patients showed remission while rest showed improvement in glycemic control with decrease in dosage. 69.3% patients showed improvement in hypertension, 100% patients showed improvement in Obstructive Sleep Apnea Syndrome, 75% patients showed improvement in hypothyroidism after surgery. GERD resolved in 62.8% patients while worsened in 11.4% patients.

Conclusions: LSG has durable weight loss at 5 year with %EWL of 61% and significant resolution of obesity associated co-morbidities.

1. Introduction

Laparoscopic Sleeve Gastrectomy (LSG) was introduced as a first step procedure to minimize surgical risk in high risk patients followed by either Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) or Bilio-Pancreatic Diversion with Duodenal Switch (BPD-DS) [1]. With increasing experience, LSG has been able to carve out its own niche in management of morbid obesity and its associated co-morbidities [2]. It is becoming the most popular bariatric procedure worldwide. Global trends from 2003 to 2011 indicate a decrease in LRYGB, BPD-DS and Adjustable Gastric Banding (AGB) and a marked increase in LSG [3]. The popularity of the procedure may be due to technical ease coupled with good results. Short and mid-term results have shown consistent efficacy of the procedure [4]. However, results regarding its mid to long term efficacy on weight loss and co-morbidities are still scarce, particularly from Asian population [5–7].

This study is among the first few studies in Asian and particularly Indian population, to assess long term efficacy of LSG on obesity and its associated co-morbidities over 3 to 7- year follow-up.

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