

Single Anastomosis Duodeno-ileal Bypass with Sleeve Gastrectomy (SADI-S): Safety, Feasibility and Preliminary Short-term Outcomes from a Single Institution Prospective Cohort Study.

Philippe Bouchard MD,¹ Alexandre Bougie MD,¹ Zvi Perry MD PhD,¹ Mohammed Al Abri MD,¹ Sebastian Demyttenaere MD, MSc,¹ Olivier Court MD,¹ Amin Andalib MD, MSc¹

¹ Center for Bariatric Surgery, Division of General Surgery, Department of Surgery, McGill University, Montreal, QC, Canada

Introduction: Biliopancreatic diversion with duodenal switch (BPD-DS) is shown to be associated with the most long-term weight loss and is highly effective in treating obesity-related comorbidities. Moreover, BPD-DS is an ideal second-stage metabolic procedure after a failed sleeve gastrectomy (SG) which is the most commonly performed bariatric procedure. However, BPD-DS comprises less than 5% of the metabolic procedures performed likely due to fear of malnutrition, longer operative times, and technical challenges. The single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is a modification of the conventional BPD-DS directed at addressing most concerns while keeping the benefits. Safety and outcomes of SADI-S need to be further evaluated.

Methods: This is a preliminary report from a single institution prospective cohort study to evaluate safety and outcomes of SADI-S especially as it compares to conventional BPD-DS (ClinicalTrials.gov identifier: NCT02792166). Short-term outcomes of the patients who underwent SADI-S is presented. 30 patients were eligible for the study since June 01, 2016. 20 were planned to undergo SADI-S. In 3 patients only SG was performed as SADI-S could not be completed as a one-stage. Data is depicted as percentage and median (interquartile range).

Results: Seventeen patients underwent SADI-S. There were 9 (53%) females with a median age and BMI of 46 (13) and 48.2 (3.1), respectively. At baseline, 10 (59%) patients were diabetic with median glycated hemoglobin A_{1C} (HbA_{1C}) 6.95% (1.6%). Median operative time was 198 (73) minutes and the length of stay was 2 (0). In terms of postoperative morbidity, one patient underwent a negative diagnostic laparoscopy on postoperative day 1 and another required a short readmission on day 30 to undergo an endoscopic dilation of the anastomotic stricture. There were no mortality or conversion to laparotomy. At a median follow-up of 3.1 (3.3) months, the

percent excess weight loss was 50% (19). Median HbA_{1C} decreased to 5.6% (0.8) and only 2 out of 10 patients remained diabetic medications.

Conclusions: These preliminary results indicate that SADI-S is feasible and a safe procedure with acceptable short-term morbidity. The short-term outcomes are very encouraging. Long-term follow-up is required to assess the effectiveness and side effects of SADI-S especially as it compares to conventional BPD-DS.