Laparoscopic loop duodenaljejunal bypass with sleeve gastrectomy in type 2 diabetic patients

ABSTRACT

Background: Laparoscopic loop duodenojejunal bypass with sleeve gastrectomy (LDJB-SG) is a new metabolic procedure. Our initial data on type 2 diabetes (T2D) remission after LDJB-SG were promising. Objectives: The aim of this study was to look at our intermediate outcomes after LDJB-SG. Setting: An academic medical center. Methods: A prospective analysis of T2D patients who underwent LDJB-SG between October 2011 and October 2014 was performed. Data collected included baseline demographic, body mass index, fasting blood glucose, glycosylated hemoglobin, C-peptide, resolution of co-morbidities, and postoperative complications. Results: A total of 163 patients with minimum of follow-up >1 year were enrolled in this study (57 men and 106 women). The mean age and body mass index were 47.7 (±10.7) years and a 30.2 (±5.1) kg/m2, respectively. There were 119 patients on oral hypoglycemic agents only, 29 patients were on oral hypoglycemic agents and insulin, 3 patients were on insulin only, and the other 12 patients were not on diabetic medication. Mean operation time and length of hospital stay were 144.7 (± 45.1) minutes and 2.4 (± 1.0) days, respectively. Seven patients (3.6%) needed reoperation due to bleeding (n = 1), anastomotic leak (n = 2), sleeve strictures (n = 2), and incisional hernia (n = 2). At 2 years of follow-up, there were 56 patients. None of the patients were on insulin and only 20% of patients were on oral hypoglycemic agents. Mean body mass index significantly dropped to 22.9 (±5.6) kg/m2 at 2 years. The mean preoperative fasting blood glucose, glycosylated hemoglobin, and C-peptide levels were 174.7 mg/dL (± 61.0), 8.8% (±1.8), and 2.6 (±1.7) ng/mL, respectively. The mean fasting blood glucose, glycosylated hemoglobin, and C-peptide at 2 years were 112.5 (±60.7) mg/dL, 6.4% (±2.0), and 1.5 (±0.6) ng/mL, respectively. No patient needed revisional surgery because of dumping syndrome, marginal ulcer, or gastroesophageal reflux disease at the last follow up period. Conclusion: At 2 years, LDJB-SG is a relatively safe and effective metabolic surgery with significant weight loss and resolution of co-morbidities.

Keyword: Complication; Diabetes; Duodenojejunal bypass; Metabolic surgery; Obesity; Sleeve gastrectomy; Weight loss