TEMPORARY DUODENAL JEJUNAL EXCLUSION ENDOSCOPIC DEVICE FOR WEIGHT LOSS AND CONTROL OF TYPE 2 DIABETES

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INTRODUCTION/OBJECTIVES: The duodenal-jejunal bypass liner (DJBL, GI Dynamics, Inc., Lexington, MA) is an endoscopic implant that mimics the intestinal bypass component of the Roux-en-Y gastric bypass. Previously reported studies have shown promising improvements in type 2 diabetes (T2D) and weight loss for up to 6 months. This report describes improvements in T2D and metabolic changes in subjects with T2D who were implanted with the DJBL for one year.

METHODS: This is a prospective, non-randomized, open label study with 22 enrolled. Inclusion criteria: Age ≥ 18 years and ≤ a 65 years, BMI ≥ 35 kg/m² and type 2 diabetes with or without other co-morbidities, unsuccessful history with nonsurgical weight reduction methods, candidates to bariatric surgery.

RESULTS: At one year, observed absolute weight loss of 20.2 kg (p<0.0001), excess weight percentage loss of 39.0% (p<0.0001), body mass index of 7.0 kg/m² (p<0.0001) and waist circumference of 11.7 cm (p<0.0001) was observed. Likewise, glucose levels decreased from 174.9 to 137.8 mg/dL (p<0.0001) and glycosilated hemoglobin from 8.9 to 6.6% (p<0.0001). The use of diabetic medications, except metformin was reduced and 19.2% of patients no longer required any anti-diabetic drugs. Insulin, C-peptide, cholesterol, LDL, and triglycerides levels were normalized at 1 year.

CONCLUSION: The endoscopic DJBL has a durable effect on weight loss and metabolic function for one year, suggesting this new device may be a candidate for the primary therapy of T2D and obesity.