

IMPACT OF SLEEVE-DJB (DUODENOJEJUNAL BYPASS) WITH LONG BILIOPANCREATIC LIMB ON WEIGHT LOSS AND GLYCEMIC CONTROL IN OBESE DIABETIC PATIENTS: A CASE MATCHED STUDY

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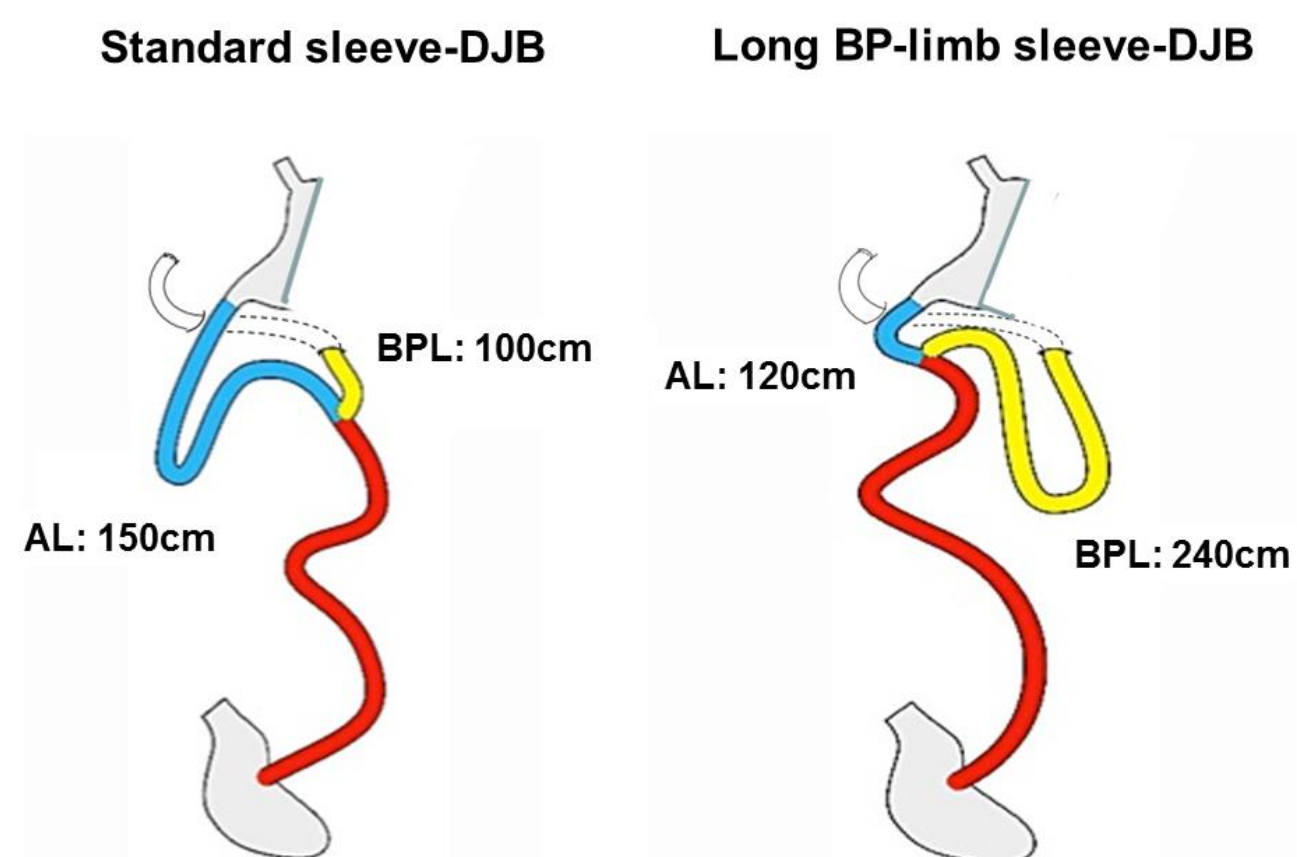
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Background and Aims:

Bariatric surgery is effective in treating obesity and T2DM. However, the impact of limb length is controversial. Recently, an animal experiment using diabetic rats undergoing DJB showed BP-limb plays an important role in the control of weight, glucose tolerance, and bile acids and gut microbiota may be involved in these processes (Miyachi T, et al. Surgery 2016). The aim of this study is to evaluate the impact of sleeve-DJB with long BP-limb on weight loss and glycemic control in obese diabetic patients.

Methods:

Consecutive 21 obese diabetic Japanese patients undergoing sleeve-DJB with long BP-limb (mean limb length: 240cm) were enrolled in the analysis. The 1-year postoperative outcomes regarding weight loss and glycemic control were compared with those in the 21 matched controls for age, BMI, fasting C-peptide, duration of diabetes and insulin usage who underwent our standard sleeve-DJB with a 100cm BP-limb.



Results:

	Standard (n=21)	Long BP (n=21)
Body weight (kg)	75.6 ± 12.0	73.7 ± 15.5
BMI (kg/m ²)	26.8 ± 4.0	27.6 ± 5.4
%TWL	27.6 ± 8.2	27.2 ± 7.3
%EWL	94.0 ± 31.6	94.7 ± 39.3
A1c (%)	6.1 ± 1.0	6.1 ± 0.8
Fasting glucose (mg/dL)	107.1 ± 19.4	106.7 ± 33.6
Pts treated with insulin (n, %)	0/21=0%	1/21=5%
Pts with GLP-1 (n, %)	0/21=0%	0/21=0%
Pts with OHA (n, %)	5/21=24%	1/21=5%

	Standard (n=21)	Long BP (n=21)
Gender (F/M)	11/10	12/9
Age <i>*matched</i>	46.5 ± 9.1	43.7 ± 9.9
Body weight (kg)	105.0 ± 19.1	101.6 ± 17.1
BMI (kg/m ²) <i>*matched</i>	37.5 ± 6.8	38.1 ± 6.1
Waist (cm)	122 ± 16	122 ± 14
Hip (cm)	121 ± 14	120 ± 15
Visceral fat area (cm ²)	215 ± 88	197 ± 63
Subcutaneous fat area (cm ²)	467 ± 165	478 ± 186
HbA1c (%)	8.7 ± 1.2	8.8 ± 1.3
Fasting glucose (mg/dL)	178 ± 66	174 ± 58
Fasting C-peptide (ng/mL) <i>*matched</i>	3.1 ± 1.9	2.9 ± 1.0
DM duration (yr) <i>*matched</i>	9.1 ± 4.3	10.0 ± 5.4
Pts treated with insulin (n, %) <i>*matched</i>	9/21=43%	10/21=48%
Pts with GLP-1 (n, %)	3/21=14%	8/21=38%
Pts with metformin (n, %)	15/21=71%	13/21=62%
Pts with DPP-IV inhibitor (n, %)	6/21=29%	4/21=19%
Number of OHA	1.8 ± 0.9	1.7 ± 1/3

Glycemic control@1yr

	Standard (n=21)	Long BP (n=21)
A1c <6% without meds (n, %)	7/21=33%	11/21=52%
6% ≤ A1c <6.5% without meds (n, %)	6/21=29%	5/21=24%
A1c <6.5% without meds (n, %)	13/21=62%	16/21=76%
A1c <7% (n, %)	19/21=90%	17/21=81%
8% ≤ A1c (n, %)	1/21=5%	0/21=0%

Conclusions:

Sleeve-DJB with long BP-limb appears to result in a distinctive anti-diabetic effect without additional weight loss that could be beneficial for the metabolic outcomes of the surgery.