Comparison of the effects on comorbidities and the safety of gastric bypass and sleeve gastrectomy in morbid obesity patients

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INTRODUCTION

✓ Obesity is a multifactorial disease associated with numerous comorbidities. Bariatric surgery is postulated as an effective tool in weight loss and improves associated pathologies.

OBJECTIVES

✓ The aim of this study was to evaluate and compare the safety and the effects on major comorbidities associated with morbid obesity of gastric bypass (GBP) and sleeve gastrectomy (SG) 2 years after intervention.

METHODS

✓ Cohort study with intrasubject measures (before-after) in a sample of patients with morbid obesity who underwent bariatric surgery (GBP or SG). Demographic characteristics, anthropometric parameters and cardiovascular risk factors were analyzed, at baseline and two years after surgery. Surgical complications were classified into early (first month after intervention) and late (more than one month).

RESULTS

✓ 211 patients were included. The mean age was 37.9 ± 9.8 years and 157 were female (74%). The mean baseline BMI was 51.13 ± 7.11 kg/m2. Regarding the surgical techniques, 178 (84.35%) underwent BPG and 35 (16.4%) SG, without significant preoperative differences between groups.

✓ Two years after surgery, the percentage of excess weight loss was 73.06 ± 14.06% in the BPG group vs 66.61 ± 18.46% in SG (p=0.02). The resolution of hypertension, dyslipidemia and diabetes occurred in 75%, 93.96% and 86.95% respectively in the BPG group and 63.63%, 77.7% and 85.71% in the group who underwent sleeve gastrectomy. Regarding surgical complications, 15.5% had late complications in BPG group vs 3.1% in sleeve group, while the rate of early complications was 26.8% vs. 6.2% respectively (p <0.001).

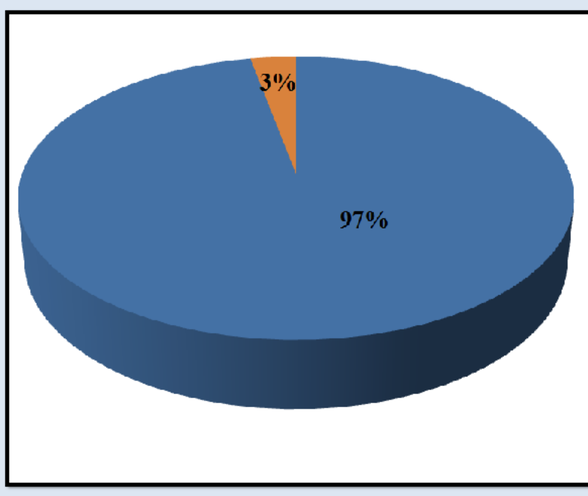
Anthropometric and analytical data two years later

Variable	Gastric bypass (n:178)	Sleeve gastrectomy (n:35)	p
Weight (Kg)	79.40 ± 13.75	89.95 ± 15.68	0.001
BMI (Kg/m2)	29.90 ± 4.61	32.58 ± 5.51	0.004
%Weight loss (PSP)	73.06 ± 14.06	66.61 ± 18.46	0.02
Glucose (mg/dl)	85.93 ± 14.08	82.10 ± 13.20	0.094
Cholesterol (mg/dl)	142.29 ± 31.39	179.55 ± 48.33	0.001
cHDL (mg/dl)	51.06 ± 12.81	54.82 ± 12.56	0.192
cLDL (mg/dl)	72.32 ± 26.01	112.72 ± 39.68	0.001
Tryglicerides (mg/dl)	85.97 ± 33.95	94.39 ± 67.38	0.882
Uric Acid (mg/dl)	4.36 ± 1.55	4.33 ± 1.3	0.951
HbA1C (%)	5.35 ± 0.76	5.16 ± 1.10	0.701
Regicor (%)	1.63 ± 1.22	1.5 ± 0.67	0.762
Framingham (%)	2.11 ± 1.91	0.24 ± 0.19	0.330
Early complications	24 (14.5%)	1 (3.1%)	0.001
Late complications	44 (26.8%)	2 (6.2%)	0.001

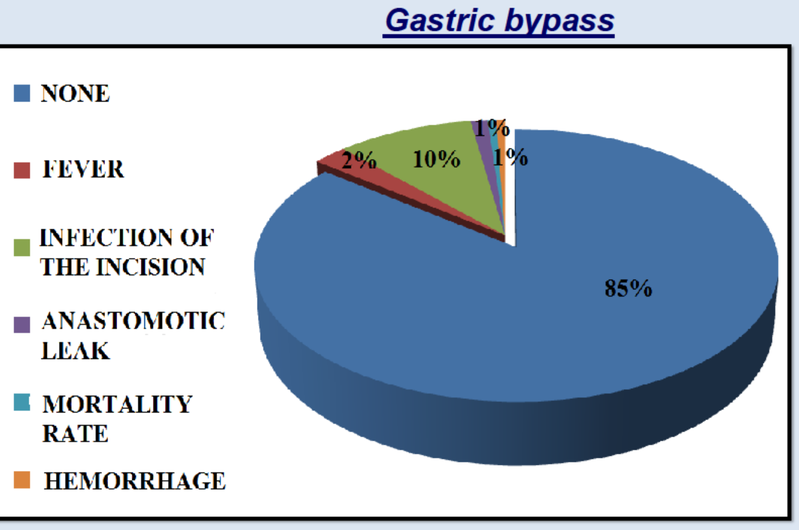
Comorbidities resolution	Gastric bypass	Sleeve gastrectomy
Hypertension	48/64 (75%)	7/11 (63.63%)
Diabetes	40/46 (86.95%)	6/7 (85.71%)
Dyslipidemia	62/66 (93.96%)	7/9 (77.7%)
Smokers	52/58 (89.65%)	4/4 (100%)
Hyperuricaemia	38/45 (84.44)	6/6 (100%)

Early complications

Sleeve gastrectomy



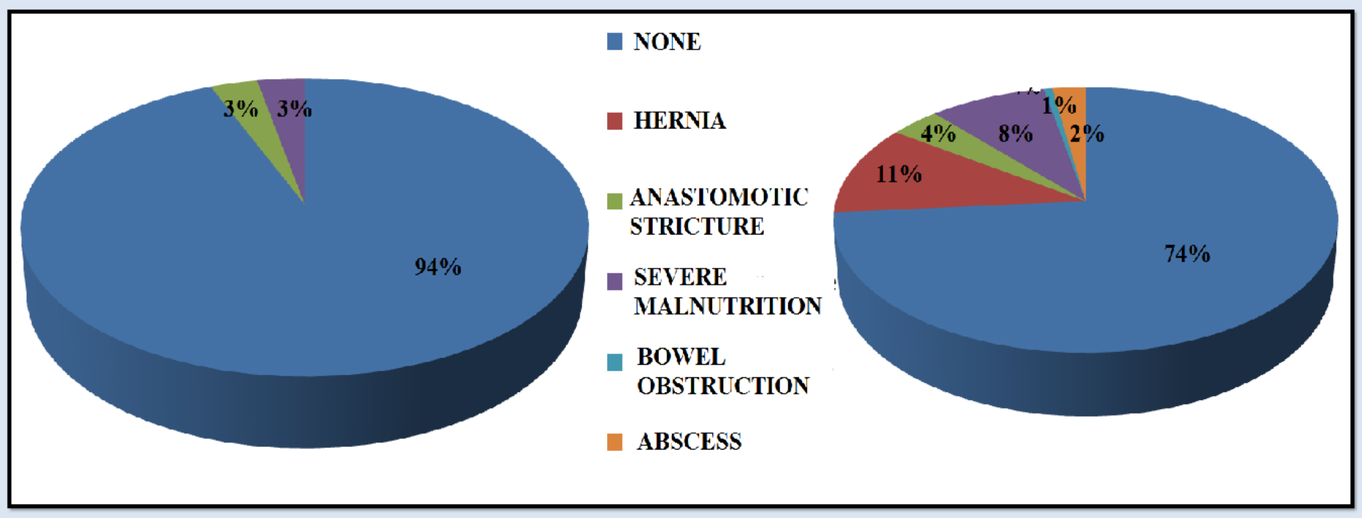
Gastric bypass



Late complications

Sleeve gastrectomy

Gastric bypass



CONCLUSIONS

In our area, BPG is more effective in weight loss and resolution of dyslipidemia at 2 years, while both techniques are equally effective in resolution of diabetes and hypertension. The rate of surgical complications is lower in patients undergoing sleeve gastrectomy. .

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