



## WEIGHT LOSS AND EVOLUTION OF COMORBIDITIES (HIGH BLOOD PRESSURE, TYPE 2 DIABETES MELLITUS AND DYSLIPIDEMIA) IN A SERIES OF PATIENTS WITH OBESITY WHO UNDERGOING GASTROJEJUNAL BYPASS SURGERY



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### INTRODUCTION

Obesity (excess body fat) is associated with a wide variety of pathological conditions that increase the individual's cardiovascular risk. Among these comorbidities, high blood pressure (HBP), type 2 diabetes mellitus and dyslipidemia stand out for their great importance. These comorbidities can improve and even disappear in individuals with obesity when they lose weight, regardless of the therapeutic measures taken to achieve weight loss.

### OBJETIVES

The present study was designed with the objective of knowing weight loss as well as the evolution of HBP, type 2 diabetes mellitus and dyslipidemia in a group of patients with morbid obesity (body mass index > 40.00 kg/m<sup>2</sup>) who underwent gastrojejunal bypass surgery.

### RESULTS

After surgery, the weight loss percentages were: 19.33±6.68; 27.06±9.24; 35.12±9.11; 34.87±9.85, 32.35±10.62 and 29.17±10.21 % (at 3, 6, 12, 24, 36 and 48 months after the surgery). Table 2

In parallel, a progressive decrease was evident in the number of patients diagnosed of comorbidities associated with obesity. After surgery, the number of patients diagnosed with HBP was of 14, 12, 11, 10, 7 and 8; type 2 diabetes mellitus of 5, 4, 3, 2, 2 and 2; dyslipidemia of 10, 6, 5, 3, 2 and 2 (at 3, 6, 12, 24, 36 and 48 months after the intervention). Figure 1 y Table 2

	Basal	3 months	6 months	12 months	24 months	36 months	48 months
weight loss %		19.33±6.67	27.06±9.24	35.12±9.11	34.87±9.85	32.35±10.62	29.17±10.21
HBP (n)	17	14	12	11	10	7	8
Diabetes Mellitus (n)	10	5	4	3	2	2	2
Dyslipidemia (n)	12	10	6	5	3	2	2

**Table 2:** Evolution of weight and variables (HBP, DM 2 and dyslipidemia) after surgery.

### CONCLUSIONS

These results show that comorbidities (HBP, type 2 diabetes mellitus and dyslipidemia) are potentially reversible in individuals with morbid obesity, especially type 2 diabetes mellitus and dyslipidemia.

The weight loss achieved after performing a gastrojejunal bypass is clearly associated with an improvement in the cardiovascular health in these individuals.

The presence of HBP, type 2 diabetes mellitus and dyslipidemia should be considered in the preoperative evaluation of patients with morbid obesity, since in addition to the weight loss associated with surgery, the diagnoses of HBP, type 2 diabetes mellitus and dyslipidemia may disappear and therefore achieve an evident improvement in the cardiovascular health of this population group.

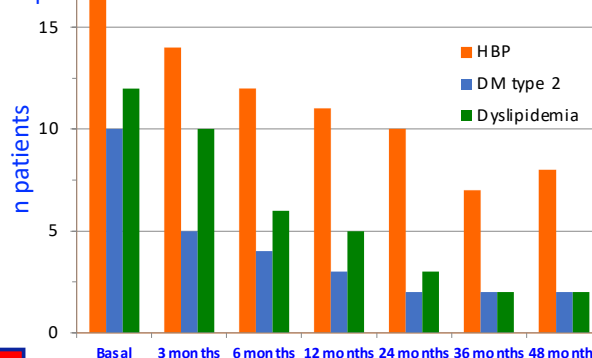
### MATERIAL AND METHODS

21 patients (14 males and 7 females) with a mean age of 50.76±6.67 years were included in the study. The weight before surgery was 131.18±24.01 kg (BMI: 46.19±5.84 kg/m<sup>2</sup>). All of them had been diagnosed and were following pharmacological treatment (prior to surgery) for HBP (n: 17), type 2 diabetes mellitus (n: 10) and/or dyslipidemia (n: 12). Table 1

N patients	21 (14 m / 7 f)
Age (years)	50,8±6,7
Weight pre-Qx (Kg)	131,2±24,0
BMI pre-Qx (Kg/m <sup>2</sup> )	46,2±5,8
HBP (yes/no)	17 / 4
DM type 2 (yes/no)	10 / 11
Dyslipidemia (yes/no)	12 / 9

**Table 1:** Descriptive data of the sample studied.

The percentages of weight loss and the persistence of the diagnoses of HBP, type 2 diabetes mellitus and dyslipidemia at 3, 6, 12, 24, 36 and 48 months after the intervention were recorded. The criterion used to consider that an individual no longer had a diagnosis of HBP, type 2 diabetes mellitus or dyslipidemia was the discontinuation of specific pharmacological treatment for this condition by medical prescription.



**Figure 1:** Evolution of variables (HBP, DM 2 and dyslipidemia) after surgery.