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The Impact of Bariatric Surgery on Diabetes and Other Cardiovascular Risk Factors

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Abstract

Introduction: Nowadays, obesity is a major worldwide health problem due to its serious consequences and toits' increasing prevalence. Bariatric surgery has demonstrated a sustained weight loss and an efficient long-term control of the co-morbidities associated with obesity. The objective of our study was to compare cardiovascular risk factors before and after bariatric surgery.

Material and Method: We have retrospectively studied 59 consecutive patients scheduled for bariatric surgery (gastric sleeve) in Ponderas Academic Hospital between January and March 2016, excluding the ones that didn't commit to respect the follow-up terms. The preoperative, 6 and 12 postoperative months blood tests and anthropometric measurements were comparatively analyzed.

Results: BMI, waist circumference and total body weight decreased by 38%, 31%, and 41%; Glycemia, triglycerides and LDL cholesterol decreased by 16%, 37% and 9% respectively; HDL cholesterol increased by 18%. The decline was statistically significant for all variables ($P<0.001$) except for LDL cholesterol. The need for antihypertensive treatment was reduced by 60% and for lipid lowering treatment diminished by 21%. In diabetic patients glycated hemoglobin (HbA1c) decreased by 28% and the necessity for antidiabetic medical treatment dropped by 69%.

Conclusions: Weight loss obtained by bariatric surgery in this study, improved the metabolic syndrome in all its components, obesity, hyperglycemia/type 2 diabetes, hypertension, and dyslipidemia, thus reducing the cardiovascular risk.

Key words: bariatric surgery, cardiovascular risk factors, diabetes, metabolic syndrome