Abstract

Background: Obesity has long been associated with an increased risk of cardiovascular disease (CVD). The aim of this study was to evaluate the impact of substantial weight loss induced by bariatric surgery on carotid intima media thickness (C-IMT) (surrogate marker of early atherosclerosis) and classic factors of cardiovascular risk (CVRFs). Methods: thirty-one obesity patients were evaluated for bariatric surgery. Twenty-seven were undergone surgery, 14 Roux-en-Y gastric bypass surgery (GBS) and 13 sleeve gastrectomy. The four obese patients who did not undergo surgery, were performed the same evaluations. Measurements: Body weight, BMI, blood pressure, total cholesterol, TC levels, LDL-C, HDL-C, TG, fasting plasma glucose and insulin, HOMA IR, and US B-mode C-IMT was measured. Results: After 354 ± 92 days follow up, 27 patients that underwent bariatric surgery evidenced a mean body mass index decrease from 38 to 27 k/m2 (p < 0.001), simultaneously was observed improvement in CVRFs, 10 years Framingham risk and a significant reduction of therapeutic requirements. C-IMT diminished from a mean of 0.58 ± 0.14 mm to 0.49 ± 0.09 mm (p = 0.0001). Four patients that did not undergo surgery increased C-IMT from 0.52 ± 0.12 to 0.58 ± 0.13 mm (p = 0.03) with no significant changes in CVRFs. Conclusion: Weight loss, one year after bariatric surgery, GBS and sleeve gastrectomy, decreases C-IMT; improve CVRFs and 10 years Framingham risk.

Keywords