Abstract

Background: Obesity and insulin resistance are associated with cardiovascular risk factors, including adipocytokines. The aim of the present study was to explore the relation of circulating adipocytokines with cardiovascular risk and anthropometric parameters in morbid obese patients. Subjects: A population of 65 morbid obese patients was analyzed in a prospective way. A biochemical, anthropometric and dietary evaluation was realized. Results: In the multivariate analysis with resistin as dependent variable, the BMI remained in the model (F = 16.6; p < 0.05), with an increase of 0.23 (CI 95%: 0.06-0.41) ng/ml with each point of BMI. In a second model with adiponectin as dependent variable, the age remained in the model (F = 4.46; p < 0.05), with an increase of 3.62 (CI 95%: 0.05-7.21) ng/ml with each year. In the third model with interleukin 6 as dependent variable, the HOMA, CRP and weight remained in the model (F = 8.8; p < 0.01), with an increase of 0.26 (CI 95%: 0.10-0.76) pg/ml with each point of HOMA, an increase of 0.43 (CI 95%: 0.10-0.76) pg/ml with each 1 mg/dl of CRP and an increase of 0.13 (CI 95%: 0.05-0.21) pg/ml with each kg of weight. In the fourth model with TNF-alpha as dependent variable, resistin, IL-6 and weight remained in the model (F = 5.2; p < 0.01), with an increase of 1.49 (CI 95%: 0.46-2.53) pg/ml with each point of resistin, an increase of 1.20 (CI 95%: 0.38-2.10) pg/ml with each 1 pg/dl of IL-6 and an increase of 0.27 (CI 95%: 0.04-0.51) pg/ml with each kg of weight. In the fifth model with leptin as dependent variable, BMI and TNF-alpha remained in the model (F = 4.1; p < 0.01), with an increase of 10.35 (CI 95%: 4.10-21.12) ng/ml with each point of BMI and a decrease of 10.16 (CI 95%: -20.37-0.76) pg/ml with each 1 pg/dl of TNF-alpha. Conclusion: Circulating adipocytokine concentrations are associated with different cardiovascular risk factors and anthropometric variables in morbid obese patients.

Keywords

Adipocytokines, Anthropometry, Cardiovascular risk factors, Morbid obesity.