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INFLUENCE OF OBESITY AND OVERWEIGHT ON TGF-B1, OXIDATIVE AND CARDIOMETABOLIC PARAMETERS

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Área: Ciência da Vida

Resumo:

Objective: Obesity is associated with the development of metabolic disorders through inflammatory and oxidative biomarkers. This study evaluated obesity and overweight influence on serum concentrations of vitamins C, E, TGF-B1 and cardio metabolic. Methods: A cross-sectional study was conducted involving 169 subjects (24 normal weight, 16 overweight and 129 obese). The anthropometric measures and the concentrations of vitamin C, E, TBARS, TGF-B1, lipid profile, glycated hemoglobin, glucose and insulin were determined, as well as calculations of HOMA and insulin sensitivity (IS). Results: Obese and overweight volunteers showed significantly higher levels of TGF-B1, Vitamin E, insulin, HbA1c, glucose, cholesterol, LDL-c, triglycerides, HOMA, and TBARS compared to normal weight patients associated with a significant reduction of IS, HDL-c, and vitamin C. Conclusion: Obesity and overweight could predispose significant changes in TGF-B1, biochemical and oxidative markers. The increase in TGF-B1 may promote inflammation and interfere with IS. The reduction of vitamin C concentrations and the increasing of TBARS takes a redox imbalance in obese and overweight patients and have suggested that vitamin E is not a promising biomarker oxidative since it is lipophilic and its concentration is influenced by body fat. These results may help determine the oxidative and inflammatory pathways related to obesity and its comorbidities.

Palavras-chave: Obesity. Vitamins. Antioxidant. Metabolism. TGF-B1

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