AN IMPORTANT PATHOPHYSIOLOGICAL RELATIONSHIP AMONG HYPERTRIGLYCERIDEMIC WAIST PHENOTYPE, HYPERURICEMIA AND CARDIOVASCULAR DEATH RISK IN NON-DIABETIC MEN FROM THE NORTHEAST OF BRAZIL

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Abdominal adipose tissue is metabolically active and may promote hypertriglyceridemia, constituting the hypertriglyceridemic waist (HTGW) phenotype, but little is known about the effect of HTGW in hyperuricemia, that may contribute significantly to the development of cardiovascular diseases, especially in men, independent of insulin resistance, diabetes and other metabolic disturbances. Thus, this study aimed to investigate the relationship between HTGW and hyperuricemia in 3,620 non-diabetic men from Northeast of Brazil, and also got to identify cutoffs of waist circumference (WC) values and serum levels of triglycerides (TG) more related to hyperuricemia, by Receiver Operating Characteristics curve, and to analyze the influence of disturbance on the cardiovascular death risk in 10 years by Framingham Risk Score (FRS). For this, uric acid and triglycerides were enzymatically determined; and for exclude other disturbances and to compose the FRS, other lipids and glucose were accessed by specific enzymatic methods, insulinnemia by microparticle enzyme immunoassay, blood pressure, tabagism. Abdominal obesity was identified by WC, and HTGW phenotype was defined when WC≥90cm and TG≥2.0mmol/L, besides the specific cutoff points. Logistic regression model with odds ratio (OR), and correlation (r) test were analyzed. Hyperuricemia presented a prevalence of 11.1%, and HTGW of 22.1%. It was found high and significants OR of HTGW for hyperuricemia: 4.3 when used cut-offs previously recommended, and 7.3 when used the own cut-offs. The ROC curves showed that the best cut-offs for identification of hyperuricemia were WC=91cm and TG=1.73mmol/L. Hyperuricemia had OR=3.5 for cardiovascular death in 10 years. Acid uric levels of subjects with FRS>20% showed strong positive correlations with TG (r=0.414, p<0.0001) and WC (r=0.328, p<0.0001). Therefore, these metabolic disorders present an important pathophysiological relationship with the development of hyperuricemia in non-diabetic men in the Northeast of Brazil, which could even increase the risk of development of cardiovascular death in 10 years in this population.

Keywords: Hypertriglyceridemic Waist Phenotype, Hyperuricemia, Cardiovascular Death Risk.

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