

847**METABOLIC SYNDROME AND ITS FACTORS ARE RELATED WITH DECREASED RENAL FUNCTION IN SUBJECTS WITH DIFFERENT DEGREES OF GLUCOSE TOLERANCE**

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Introduction: Chronic kidney disease (CKD) is a major public health problem. It not only results in renal failure and related complications but it also has been associated with cardiovascular morbidity and mortality. Several studies have shown that metabolic syndrome (MS) is related with progressive decrease of estimated glomerular filtration rate (eGFR), and, thus, it is related with the development of CKD. **Objective:** To study how the different components of the MS and related factors are associated with renal function. **Methods:** We designed a cross-sectional study of individuals (n=190; 52.4±12.0 years, females 73.7%) from the Endocrine and Diabetes Clinic of a university hospital. Patients were submitted to an oral glucose tolerance test (OGTT) and were classified according to the American Diabetes Association criteria in different degrees of glucose tolerance (normal glucose tolerance n=60; pre-diabetes n=81 and diabetes n=49). MS was defined by using International Diabetes Federation criteria as the presence of 3 out of 5 of the following factors: hypertension, low HDL-cholesterol levels, high triglyceride levels, elevated plasma glucose and high waist circumference. Fasting and 2h-plasma glucoses, A1c, insulin, cholesterol, triglycerides, creatinine and urinary albumin excretion were measured. EGFR was estimated by the CKD-EPI equation. Correlation analyses were performed between each MS component and eGFR. **Results:** EGFR was lower in subjects with MS compared to those without MS (P=0.009). Also, eGFR decreased with the increasing number of MS criteria (mean ± SD; 0 to 2 criteria 100.8 ± 14.5 vs 3 or 4 criteria 93.5 ± 17.8 vs 5 criteria 89.1 ± 21.6 ml/min per 1.73m²; P=0.012). EGFR correlated to age (r=-0.606; p<0.001), systolic arterial blood pressure (r=-0.227; P=0.002), hemoglobin A1c (r=-0.154; P=0.043), and C-reactive protein (r=0.197; P=0.007). **Conclusion:** EGFR decreased with increasing age, systolic arterial blood pressure, hemoglobin A1c. Surprisingly, eGFR increased with increasing C-reactive protein, maybe indicating the role of inflammation in the earlier phase damage of the nephron caused by hyperglycemia. Therefore, according to our data, decreased renal function was determined mainly by aging and the hypertension criteria of metabolic syndrome, suggesting that the relationship between MS and CKD is driven mostly by abnormalities in blood pressure homeostasis. **Palavra-chave:** Síndrome metabólica; Hipertensão; Doença renal crônica. Projeto 09-194 (aprovado pelo CEP-HCPA)