30375

HYPERTENSION IS THE MAIN DETERMINANT BEHIND THE ASSOCIATION BETWEEN METABOLIC SYNDROME AND CHRONIC KIDNEY DISEASE IN SUBJECTS WITH DIFFERENT DEGREES OF GLUCOSE TOLERANCE

Bárbara Limberger Nedel, Vanessa Piccoli, Rafaela Brugalli Zandavalli, Tássia Cividanes Pazinato, Luciana Pavan Antoniolli, Lucas Eduardo Gatelli, Fernando Gerchman. **Orientador:** Jorge Luiz Gross

Unidade/Serviço: Serviço de Endocrinologia (bolsista IC-PROBIC/HCPA-CNPq)

Background: Chronic kidney disease (CKD) is a major public health problem. It not only results in renal failure and related complications but also has been associated with increased cardiovascular morbidity and mortality. Several studies have shown that metabolic syndrome (MS) is related with progressive decrease of glomerular filtration rate (GFR), and, thus, it is related with the development of CKD. Objective: To study how the different components of the MS are related with GFR. Methods: Cross-sectional study of individuals who were submitted to an oral glucose tolerance test (OGTT; n=184; 52.2±12.2 years, females 75.1%), from the Endocrine clinic of Hospital de Clínicas de Porto Alegre. Patients were classified based on the OGTT and according to the American Diabetes Association in different degrees of glucose tolerance (normal n=56; prediabetes n=80; diabetes n=48). MS was defined by using recommended International Diabetes Federation criteria, as the presence of 3 out of 5 of the following factors: hypertension, low HDL-cholesterol, 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. GFR was estimated by the CKD-EPI equation ((141 X min (Scr／k, 1)α X max (Scr／k, 1)-1.209 X 0.993age X 1.018 (if female) X

1.159 (if black)). Correlation analyses were performed between each MS components and GFR. Results: GFR was lower in subjects with MS compared to those without MS (P=0.007). GFR decreased with the increasing number of MS criteria (mean ± SD; 0 or 1 criteria 104.93 ± 15.8 vs 2 criteria 101.4 ± 14.5 vs 3 criteria 93.4 ± 19.1 vs 4 criteria 92.6 ±

17.0 vs 5 criteria 90.1 ± 21.0 ml/min per 1.73m2 ; P=0.042). Only systolic arterial blood pressure was related to GFR (r=-

0.245; P=0.001). Conclusion: According to our data, the previously described association between MS and decreased renal function was confirmed, mostly determined by the hypertension criteria. This data suggests that the relationship between MS and CKD is driven mostly by abnormalities in blood pressure homeostasis. Projeto nº 09-194 – CEP HCPA.