ASSOCIATION OF ENDOTHELIAL NITRIC OXIDE SYNTHASE 4a/b POLYMORPHISM WITH DIABETIC CHRONIC KIDNEY DISEASE IN ROMANIAN PATIENTS

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Abstract: Some DNA markers seem to have a significant impact in predisposition for chronic kidney disease. This study aimed to estimate the association between four genetic polymorphisms and chronic kidney disease in patients with diabetes mellitus. Blood samples were collected from unrelated subjects with chronic kidney disease and T1DM (n=100) or T2DM (n=100) and from diabetic patients without clinical evidences of nephropathy (T1DMnd=100, T2DMnd=100) and healthy controls (n=200). Polymorphisms rs689, rs680, rs3767140 and eNOS 4a/b were genotyped by PCR-based methods. We found a significant association between eNOS 4b/a polymorphism and chronic kidney disease and hypertension in patients with T1DM and in T2DM. The associations with chronic kidney disease seem to be gender-specific, as significant results were detected only for men. The Multifactor Dimensional Reduction analysis reveals the important contribution of eNOS 4a/b to chronic kidney disease.

Keywords: diabetes mellitus, polymorphisms, eNOS 4b/a, chronic kidney disease