J Kidney 2018, Volume 4
DOI: 10.4172/2472-1220-C1-006



# Quantification of serum hepcidin in chronic kidney disease patients with atherosclerotic changes in arteria carotis

**Victor Manolov**
Medical University Sofia, Bulgaria

Chronic kidney disease (CKD) involves a high number of the population worldwide, which on its way increases brain-vascular diseases risk. Among the main reasons for increased brain disorders evidence in patients with CKD is iron homeostasis dysregulation. Impairment of brain cognitive function is an early sign of atherosclerosis development. 59 patients with chronic kidney disease (stages II to V) were included; age 51.7±7.8. The established results were compared to sex and age-matched healthy control and with CKD patients with no atherosclerotic changes. Routine blood analyses as CBC, serum iron, ferritin, hsCRP, and specific hepcidin were measured in the included groups. IMT, MMSE, CERAD tests were used for atherosclerotic changes evaluation. We found increased serum hepcidin levels in CKD patients with IMT, MMSE, CERAD changes (187.9±19.1μg/L) compared to healthy controls (20.1±1.9μg/L) and CKD with no atherosclerotic changes group (139.9±10.4μg/L); $P<0.005$. A positive correlation was found in CKD patients with brain disorders between IMT and serum hepcidin levels ($r=0.809$, $P<0.05$). Serum hepcidin correlates positively with atherosclerotic evidence changes in patients with impaired kidney function ($r=0.814$, $P<0.01$). Brain-vascular disease risk factors are connected to chronic kidney function impairment. Dysregulation of iron homeostasis is one of the main risk atherogenesis factors. Early hepcidin quantification might predict cognitive disturbances as an atherosclerosis symptom in chronic kidney disease patients, which might be very important for better clinical diagnosis and practice.

victhedoc4@abv.bg