

29th International Conference on

PUBLIC MENTAL HEALTH AND NEUROSCIENCE

July 16-18, 2018 Dubai, UAE

Atherosclerosis and changed iron metabolism in chronic kidney disease**Victor Manolov**

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Chronic kidney disease (CKD) involves high number of 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. 65 patients with chronic kidney disease (stages II to V, incl on dialysis) were included; age 48.8 ± 6.9 . Their 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 ($201.8 \pm 14.7 \mu\text{g/L}$) compared to healthy controls ($20.7 \pm 1.9 \mu\text{g/L}$) and CKD with no atherosclerotic changes group ($174.4 \pm 11.8 \mu\text{g/L}$); $P < 0.005$. A positive correlation was found in CKD patients with brain disorders between IMT and serum hepcidin levels ($r = 0.838$, $P < 0.01$). Serum hepcidin correlates positively to atherosclerotic evidence changes in patients with impaired kidney function ($r = 0.810$, $P < 0.01$). 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 atherosclerosis symptoms in chronic kidney disease patients, which might be very important for better clinical diagnosis and practice.

Acknowledgements: This project is sponsored by MU-Sofia, as part of Grant Д-235/2017.

Biography:

Victor Manolov has completed his PhD at Medical University in Sofia, Bulgaria. He is working as Assist. Prof. at Department of Clinical laboratory and clinical immunology at the same University. His interests are in neurology, pediatrics, gynecology, endocrinology and clinical laboratory. He has published more than 20 papers in reputed journals.

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