

The Nutritional Status and the Kidney Function in Older Patients

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Abstract : Background: Obesity, particularly abdominal type, lead to accelerated progress of atherosclerosis and thus affects the functioning of various human organs. Non-HDL cholesterol includes residual risk of the cardiovascular diseases which persists in patients after achieved recommended level of LDL cholesterol. The maintenance of normal body mass index plays a particularly important role in both the prevention and treatment of chronic diseases. Materials and Methods: The study covered 96 patients (55 females, 42 males, age 66,9 +/-10,2 years). The nutritional status was determined with the Waist to Height Ratio (WHtR) and the Waist to Hip Ratio (WHR). A function of the kidney was evaluated by calculating the estimated glomerular filtration rate (eGFR) using the MDRD formula. Non-high-density lipoprotein cholesterol (non-HDL) is simply the difference between the total cholesterol concentration and the HDL cholesterol concentration. Results: The higher was level of non-HDL cholesterol, the lower eGFR had studied subjects ($p < 0.001$). Significant correlation was found between higher WHtR and lower the eGFR ($p = 0.002$). Also underweight (30% of patient) led to obtaining lower values of eGFR in subjects over 65 years old. The poorer nutrition the lower was glomerular filtration rate. Conclusions: Nutritional statuses of patients have a significant impact on the level of kidney function. Not only accumulated excess fat in the abdominal area, but also its deficiency affects the deterioration in renal filtration. Higher level of non-HDL not only raises the residual risk of the heart disease but also influences on kidney by worsening eGFR. Proper diet in connection with physical activity should lead to achieving good nutrition in these patients and protect their kidney function.

Keywords : nutrition, non-HDL cholesterol, glomerular filtration rate, lifestyle

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