RENAL DYSFUNCTION AND LIPID PROFILE CHANGES IN PATIENTS WITH ISCHEMIC HEART DISEASE COMPLICATED BY ARRHYTHMIAS

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Ischemic heart disease (IHD) remains one of the leading causes of morbidity and mortality worldwide, particularly among elderly patients. In recent years, increasing attention has been paid to the interaction between cardiac and renal dysfunction, known as cardiorenal syndrome, especially in patients with arrhythmias.

Objective: To evaluate the characteristics of renal function and lipid profile in patients with IHD, depending on the presence of arrhythmias.

Materials and Methods: The study included 125 elderly patients (mean age 66.0±4.4 years) with IHD, divided into two groups: Group 1 (n=65) – IHD with arrhythmias, and Group 2 (n=60) – IHD without arrhythmias. Diagnosis was established according to ESC (2019) guidelines. Clinical, biochemical, and instrumental assessments were performed, including ECG, echocardiography, ambulatory blood pressure monitoring, and renal Doppler ultrasound. Serum creatinine, urea, lipid profile, HbA1c, and C-reactive protein were measured, and glomerular filtration rate (GFR) was calculated using the CKD-EPI formula. Statistical analysis was conducted using Student's t-test, Mann–Whitney U test, and χ^2 test ($p<0.05$).

Results: Patients with arrhythmias demonstrated significantly higher levels of creatinine (135.0±12 µmol/L vs 110±8 µmol/L), urea (10.5±1.5 mmol/L vs 7.5±1.2 mmol/L), and microalbuminuria (30.0±4.0 mg/day vs 20.0±3.5 mg/day), along with reduced GFR (55.0±4.8 vs 72.0±4.3 mL/min) compared to patients without arrhythmias ($p<0.01$). A moderate positive correlation was found between total cholesterol and creatinine ($r=+0.41$), as well as between LDL cholesterol and microalbuminuria ($r=+0.46$). Conversely, HDL cholesterol showed a negative correlation with renal markers ($r\approx-0.36$ to -0.40). Echocardiographic findings revealed decreased left ventricular ejection fraction and increased myocardial mass index in patients with arrhythmias.

Conclusion: Patients with IHD and arrhythmias exhibit more pronounced renal dysfunction and lipid metabolism disorders, indicating the progression of cardiorenal

syndrome. Early detection and комплекс assessment of these changes are essential for improving clinical outcomes.