

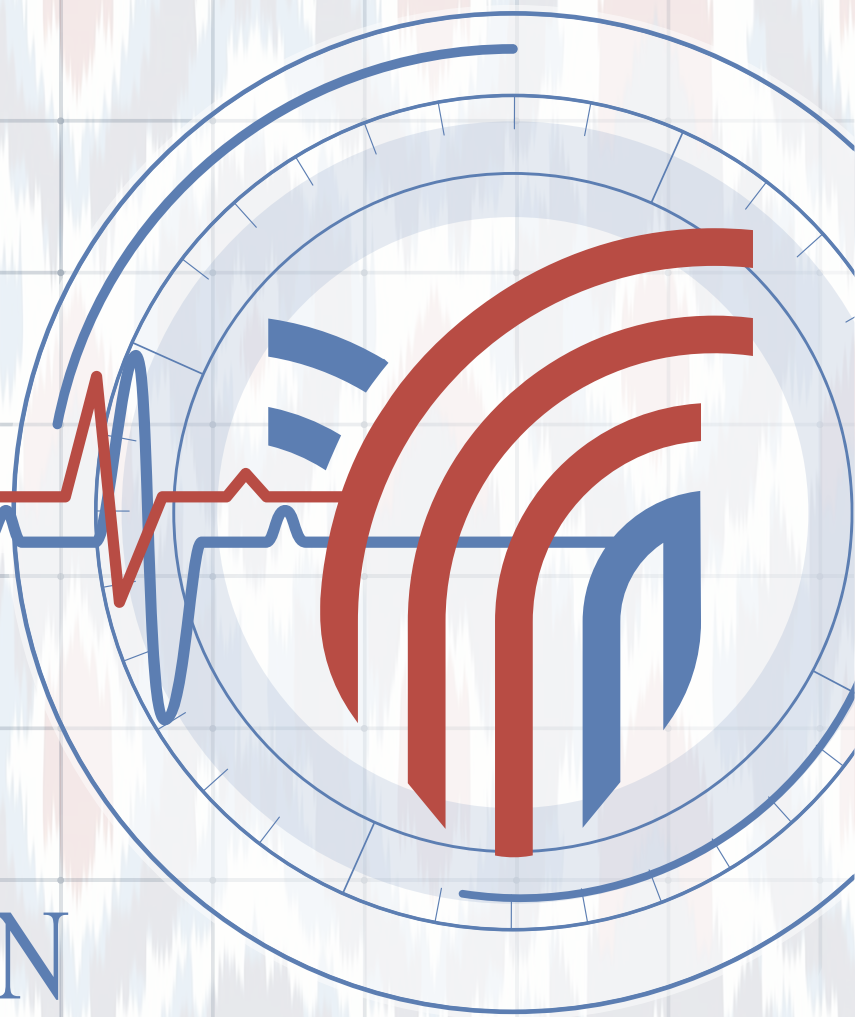


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# CARDIOLOGY OF UZBEKISTAN

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## O'ZBEKISTON KARDIOLOGIYASI



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## METABOLIC DYSREGULATION AND ITS IMPACT ON ASYMMETRIC DIMETHYLARGININE LEVELS IN CORONARY HEART DISEASE

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**Objective.** To compare the levels of asymmetric dimethylarginine (ADMA) in patients with coronary heart disease (CHD) with and without metabolic dysfunction associated steatotic liver disease (MASLD) and to assess the potential relationship between ADMA and metabolic disorders.

**Materials and methods.** The study included 50 patients diagnosed with CHD, divided into two equal groups: 25 patients with MASLD and 25 without. The diagnosis of CHD was established based on clinical data, ECG, and coronary physiography. MASLD was confirmed using liver ultrasound. ADMA levels were measured in serum using the enzyme-linked immunosorbent assay (ELISA) method. All patients provided informed consent to participate in the study.

**Results.** The study included 50 patients with CHD, divided into two groups: 25 with MASLD and 25 without. The mean age in the MASLD group was 54.2 years, while in the non-MASLD group, it was 53.8 years. The mean body mass index (BMI) was significantly higher in the MASLD group (32.8 kg/m<sup>2</sup>) compared to the non-MASLD group (27.1 kg/m<sup>2</sup>,  $p < 0.01$ ). Arterial hypertension (AH) was present in 80% of patients with MASLD and 48% of those without ( $p < 0.05$ ). Type 2 diabetes mellitus (T2DM) was diagnosed in 52% of patients with MASLD and 20% of those without ( $p < 0.05$ ). The ADMA level was significantly higher in patients

with MASLD (165.85±24.27 ng/mL) than in those without (129.44±20.22 ng/mL,  $p < 0.001$ ). Additionally, the presence of three or more metabolic criteria (such as obesity, hypertension, and diabetes) was associated with even higher ADMA levels (190±20 ng/mL). These findings highlight the impact of metabolic disorders on endothelial dysfunction development in patients with CHD and MASLD.

**Conclusion.** The study revealed that patients with CHD and concomitant MASLD have significantly higher levels of ADMA compared to those without MASLD. A positive correlation was found between the number of metabolic disorders (obesity, arterial hypertension, type 2 diabetes) and elevated ADMA levels, indicating its potential role in the pathogenesis of endothelial dysfunction and the development of cardiovascular complications. The obtained data confirm the necessity of a personalized approach in the diagnosis and treatment of CHD patients, considering concomitant metabolic disorders, and highlight the potential of ADMA levels as a biomarker for cardiovascular risk assessment.



НЕОБХОДИМОСТЬ ОЦЕНКИ ФУНКЦИИ ПОЧЕК У ПОЖИЛЫХ ПАЦИЕНТОВ С ХРОНИЧЕСКОЙ ИШЕМИЧЕСКОЙ БОЛЕЗНЬЮ СЕРДЦА	<i>Суджаева О.А., Кошлатая О.В., Попель О.Н., Колядко М.Г., Русских И.И.</i>	229
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