

## CLINICAL AND IMMUNOLOGICAL ASSESSMENT OF THE COMORBID COURSE OF ARTERIAL HYPERTENSION AND STABLE ANGINA

**Kamilova Shakhzoda Rakhmatovna**

**Bukhara State Medical Institute, Republic of Uzbekistan, Bukhara**

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### **Introduction.**

According to the results of the Framingham study, in patients with stable angina, the risk of developing nonfatal myocardial infarction and death from coronary heart disease within 2 years is, respectively, 14.3 and 5.5% in men and 6.1 and 3.8% in women.

In the main cohort observation programs, or registers, of various levels and purposes, little attention is paid to cardiospecific changes in the immune system when developing prognostic scales of short-term and/or long-term risks of acute coronary syndrome development.

The case is limited mainly to assessing the level of C-reactive peptid and pro-inflammatory cytokines - IL-1, IL-6 and TNFa. However, taking into account the above results, the prognostic potential of cardiospecific changes in the immune system in various clinical outcomes of stable angina is quite obvious.

**The purpose of the study:** to determine informative immunological indicators of coronary heart disease and hypertension.

### **Materials and methods of research:**

The study included 234 middle-aged patients with an average age of  $52.4 \pm 1.27$  years.

Arterial hypertension (AH) was verified according to the requirements of the World Health Organization (WHO), classified according to the International Classification of Diseases (ICD-10).

At the same time, they adhered to the ACC/AHA Hypertension Guidelines classification (2017).

The inclusion criteria were patients aged 45 to 59 years with a diagnosis of hypertension (HD), coronary heart disease, stable angina pectoris (SAP) confirmed by clinical and laboratory-instrumental methods, hospitalized in a hospital.

The patients of the study groups were comparable in age, gender, and the presence of CVD risk factors.

### **Results and their discussion.**

As a result, the frequency of certain factors and the odds ratio (OR) of the risk of heart remodeling in patients with cardiovascular diseases were established.

The development and implementation of a risk stratification program for cardiac remodeling into cardiological and terpavetic practice contributes to increasing efficiency in choosing management tactics for patients with CVD and helps to reduce the risk of complications and disabilities.

Based on the calculation of the OR of the studied risk factors, the absence of a link between overweight and changes in the balance of progesterones and testosterone in the blood serum with the development of cardiac remodeling, the OR of which is 0.123 and 1.1, respectively, was established.

Sedentary lifestyle as a risk factor occurs in patients with coronary heart disease: SSN +AH in 42 (24.2%), and in the control group - in 11 (18.3%) cases, which shows the relationship of this factor with an increase in the chance of developing cardiac remodeling by 1.42 times.

Thus, when studying the influence of risk factors on the development of cardiac remodeling in CHD and GB in patients, it was found that with an increase in the level of creatinine in the blood of patients with CHD, the chance of cardiac remodeling increases by 23.0 times, when a high R wave in leads V5-6, a deep S wave in ECG in obese patients is detected leads V1-2 by 16.0 times; under stress and /or mental stress by 16.0 times, with a shift of peripheral blood leukocytes  $<4.0$  and  $>9.0$  g /l by 11.0 times.

It is important to indicate the effect of changes in the blood lipid spectrum on the formation of cardiac remodeling, in particular in patients with coronary heart disease, an increase in TG  $>1.3$  mmol/ l increases the chance of cardiac remodeling by 10.7 times. At the same time, peripheral blood leukocytes act as an indicator of inflammation in coronary heart disease, a decrease of which  $< 4.0$  and / or an increase of  $> 9.0$  thousand per ml indicates an increase in the chances of remodeling development by 12 times.

Hypersthenic body type, which is an unmodifiable risk factor, was observed in 64 (36.8%) in the main group, and in 18 (30%) in the control group. This factor had an almost similar frequency among patients and healthy with OR = 1.4.

Alcohol consumption was observed in 48 (27.6%) patients in the main group and 14 (23.3%) in the control group, which indicates a high prevalence of bad habits, both among patients and among healthy (OR=1.25). This phenomenon indicates that it is impossible to identify the harmful effects of alcohol by one survey, it is also necessary to assess the frequency and duration of the factor's effects.

### **Conclusion**

It was found that with an increase in the level of creatinine in the blood of patients with coronary heart disease, the relative chance (OR) of heart remodeling is 23.0, with obesity and the presence of a high R wave in leads V5-6, a deep S wave in leads V1-2, the chance of remodeling increases 16-fold; with stress and/or mental stress OR is equal to 14.0, with a shift of peripheral blood leukocytes  $<4.0$  and  $>9.0$  g / l, OR is equal to 11.0, with an increase in blood triglycerides  $> 1.3$  mmol / l, the chance of cardiac remodeling increases by 10.7 times.

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