



Study of risk factors of coronary arterial disease in patients with hyperuricemia

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Relevance: Coronary arterial disease (CAD) is one of the common cardiovascular diseases in the world. Comparing to the known causative factors such as lipids and glucose in CAD prevention, little attention and investigation have been put on hyperuricemia in cardiovascular diseases. There is also evidence that hyperuricemia is inextricably linked to traditional risk factors for CAD, which may have jointly contributed to the onset and development of CAD. Hyperuricemia may be involved in the atherosclerotic process due to endothelial dysfunction and facilitation of smooth muscle cell proliferation.

In addition, according to epidemiological studies and meta-analysis, hyperuricemia is associated with hypertension, ischemic heart disease, and chronic heart failure. In addition high level of uric acid is one of the main risk of cardiovascular disease, and, in turn, myocardial infarction and death. Thus, timely monitoring of purine metabolism, lipid and carbohydrate metabolism in patients with or hyperuricemia can prevent cardiovascular complications. It should be noted that in recent decades, hyperuricemia an increasing trend is observed.

Purpose of research: Identifying the frequency of occurrence of the main risk factors in patients have CHD and Hyperuricemia .

Materials and research methods: The trials included 60 patients hospitalized in the Multidisciplinary clinic of the Tashkent Medical Academy. Clinical-demographic, laboratory and instrumental indicators, outcomes and associated factors were studied.

Average age group of is from 55 to 75 men and women . 1- group (n=30) Patients with CHD and hyperuricemia. 76,6%of patients from 1- examined group have hypertension. Average age is 65±1,7, 25 of them is men, 5 of them is women. 2- controlled group (n=30) patients with only CHD. 83,3% of patients from 2- group have hypertension .Average age is 58 ±1,2 and 18 of them is men, 12 of them is women. Diagnostic investigation: Biochemical blood analysis (with assessment of uric acid level), lipid spectrum (XS, TG, LDL, HDLP), ECG , Echo , BP, BMI. Research results: the study of blood pressure stages in percentage patients with CHD and hyperuricemia 3,3% of them normal stage , 3,3%of them elevated stage, 13,3% of them 1st stage , 70% of them 2nd stage, 10 % of them 3th stage. However, compare to second group shoved that 0% of them normal stage , 3,3% of them elevated stage, 36,6% of them first stage , 50% of them 2nd stage, 10 % of them 3th stage .

Evaluation of Body Mass Index (BMI) in both group. It was noted that a significant deterioration in the course of evaluation of Body Mass Index (BMI) in both group. 10 (33,3%)of patients from 1st group have Obese class II, only 1 patient (3,3%) of them have normal range of BMI.

By contrast 2nd controlled group, 6 (20 %) of them have Obese class II and the normal range of BMI is 3 (10%). Evaluation of Blood Cholesterol Levels shoved that the average level of Verylow LDL and total cholesterolare higher in the first group (214,8 ±0,1mg/dl) than 2nd group patients(207,9 ±0,1 mg/dl) (p<0,01).The level of uric acid in the patient who have hyperuricemia and CHD is increased about 8,4±0,05 meanwhile, 2nd group patients of uric acid average level is 5,19 ±0,05 (p<0,05) . The ejection fraction of first group patients is 65,5 %, by contrast 2nd group patients is 64,4 %.(p<0,01)

Conclusion. Hyperuricemia is one of important risk factor of CAD. Higher uric level can enhance coronary atherosclerosis formation. We assume that early investigation of high level of uric acid can effectively reduce the incidence of CAD. This has led to the need to strengthen education on the prevention and treatment of hyperuricemia in CAD patients, to clarify the pathophysiological link between uric acid and CAD, and to conduct more comprehensive drug studies to find the best therapeutic targets and prevention measures. The potential causal mechanisms of these associations require further exploration, including casual inference modelling in future studies.

	First group	Second group	
Total cholesterol	214,8±0,1	180,1±0,1	P<0,01
Triglyceride	179,7±0,2	170±0,05	p<0,05
HDL	48,9±0,1	48,8±7,2	P=0,05
Verylow LDL	31±0,1	32±0,9	p>0,05
LDL	128,5±0,1	128,1±0,02	p>0,05
Urid Acid	8,4±0,1	5,19±0,1	p<0,05