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INFLUENCE OF SMOKING TOBACCO ON THE BLOOD VESSELS AND MICROCIRCULATION

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ABSTRACT

The purpose of the review was to study certain aspects of the effect of tobacco smoking on the state of the cardiovascular system, microvasculature in young healthy people and patients with ischemic heart disease. Certain aspects of drug therapy for coronary heart disease in smokers are also considered. Patients and the effectiveness of the use of antianginal drugs from the group of β-blockers. States microcirculatory bed and the effect of tobacco smoking on it by biomicroscopy of the vessels of the bulbar conjunctiva is poorly understood to date.

The prevalence of tobacco smoking among the world's population, according to various studies, ranges from 40 to 60%. Increasing in Uzbekistan the number of women, children, teenagers and young people who smoke. The widespread use of tobacco makes this phenomenon is a serious medical and social problem [1, 2, 5, 7].

Diseases due to smoking annually lead to 300 thousand deaths in Russia and 4 million in the world and increase the risk of developing diseases human organs and systems [7, 14, 19, 22, 26]. The main target organs are the lungs and cardiovascular, genitourinary, digestive systems.

The most common diseases and pathological conditions of the cardiovascular system associated with tobacco smoking are coronary heart disease (CHD), including heart attack. Myocardial infarction (MI) and angina pectoris, peripheral vascular occlusion, aortic aneurysm, microcirculation disorders, atherosclerosis, blood clotting disorders. At the same time, reducing the intensity of smoking drastically reduces the prevalence of diseases. Quitting smoking before the age of 50 reduces the risk of premature 137 death from related diseases by 2 times [31]. Risk development of lung cancer decreases 10 years after quitting smoking by 30-50%, and cancer of the oral cavity and esophagus after 5 years by 2 times [7, 14, 21]. One of the most important risk factors contributing to the occurrence of coronary heart disease and myocardial infarction is smoking. tobacco. It has been found that the risk of developing

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atherosclerosis and MI when smoking increases 1.5-6 times [4, 11, 12].

Tobacco smoking is also a risk factor for atherosclerotic aortic aneurysm, which occurs in smokers 8 times more often, smokers also 2-3 times more increased mortality from abdominal aortic aneurysm rupture [11].Nicotine affects the chemoreceptors of the carotid sinus zone with reflex excitation of respiration. and an increase in blood pressure, excites H-choline-reactive structures of the adrenal glands, increasing the secretion of catecholamines and, as a rule, stimulates sympathetic ganglia [11]. An increase in the chronotropic and inotropic effect of catecholamines on the myocardium contributes to even more damage to the myocardium affected ischemic disease.

The influence of smoking on the development of MI is usually associated with the occurrence of coronary atherosclerosis, resulting in myocardial ischemia with its subsequent necrosis. Long-term smoking has place chronic hypoxemia, increased atherogenesis in the pool of coronary vessels, increased platelet aggregation, impaired fibrinolysis processes blood [4, 13, 29]. Carboxyhemoglobin formed as a result of CO inhalation increases the tendency to the occurrence of thrombosis due to an increase in platelet aggregation and stimulation of erythropoiesis, which leads to an increase in blood viscosity [4, 11].

It has been established that cigarette smoking is the cause of death from coronary artery disease in more than 81% of men under 45 and 27% men aged 45-64 years. Almost 1/4 of all cases death from coronary artery disease among people of working age is associated with smoking [4, 7, 19]. IHD is the main cause of death at a young age (up to 45 years) in the population of smokers [4].

A direct relationship was shown between the severity of peripheral vascular lesions: aorta, femoral arteries, carotid arteries - with the duration of smoking

and the number of cigarettes smoked [4]. Research also showed a direct relationship between the number of cigarettes smoked and cardiovascular mortality. This the risk is significantly increased even in groups of smokers

less than 5 cigarettes a day, increasing with more smoked cigarettes up to 25 per day, and in the group of smokers from 25 to 45 cigarettes per day, it becomes approximately the same. This indicates that the very fact smoking is more important for prognosis, than the number of cigarettes smoked per day [4].

The most sensitive segment of the vascular system to various influences is the microcirculatory bed (MCR) [6], through which, as is known, the connection between blood and tissues. There are a few works in the literature devoted to the effect of tobacco smoking on the microvasculature by the method of vascular biomicroscopy bulbar conjunctiva. Meanwhile, this method study is direct and illustrative.The impact of tobacco smoking on the ICR according to biomicroscopy of the vessels of the bulbar conjunctiva was first studied in purposeful studies by employees of the Department of Faculty Therapy FESMU in 1982 [24]. THEM. Davidovich, S.L. Zharsky noted that smoking in healthy people young age causes a heterogeneous reaction microvascular bed: most of them immediately after smoking a cigarette, there was an expansion of arterioles and a narrowing of venules, which persisted for

more 15 min, the rest had narrowing of arterioles with
multidirectional reaction of venules [10]. B.P. Shevtsov [25] found that the reaction of microvessels to smoking in IHD patients of young age was manifested by narrowing of venules and arterioles, the appearance or increase of erythrocyte sludge, slowing blood flow, a decrease in the number of functioning capillaries, which significantly aggravated microcirculation disorders.

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