

ANATOMICAL CHANGES IN CARDIOVASCULAR DISEASES

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Annotation: This article analyzes the anatomical changes that occur in the human body as a result of cardiovascular diseases. It discusses the structure of the heart and blood vessels, their physiological functions, and the morphological changes that develop under the influence of pathological processes. Particular attention is given to conditions such as atherosclerosis, hypertension, myocardial infarction during which thickening of the heart wall, enlargement of chambers, loss of vascular elasticity, and circulatory disorders are observed.

Keywords: heart, cardiovascular system, anatomy, morphological changes, arterial hypertension, myocardial infarction, atherosclerosis, ischemic heart disease, heart failure.

The cardiovascular system is one of the most important vital systems of the human body. It ensures the continuous circulation of blood and supplies all organs and tissues with oxygen, nutrients, hormones, and other biologically active substances. At the same time, it plays an important role in removing metabolic waste products from the body.

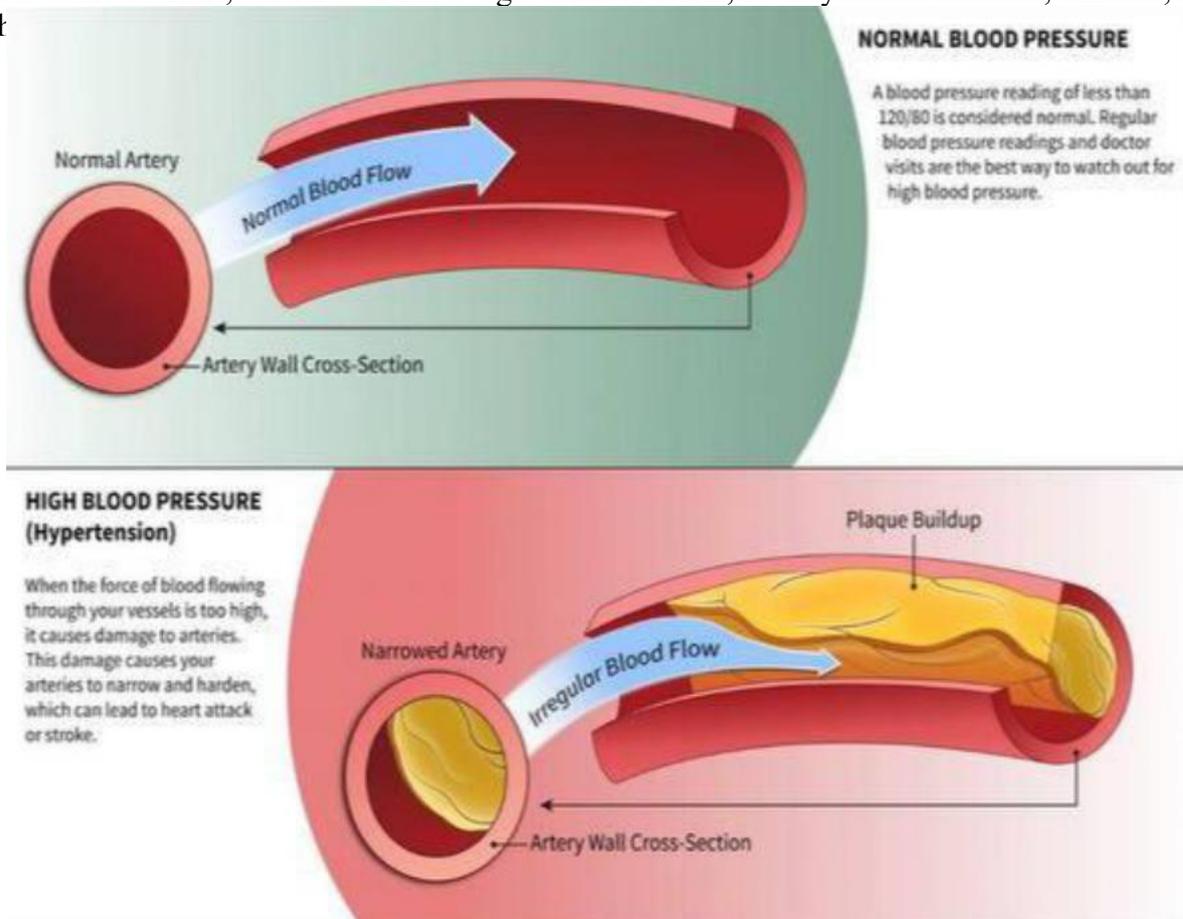
The heart is the central organ of this system and functions as a pump made of muscle tissue. It ensures the movement of blood through the vessels by rhythmic contractions. As a result of heart activity, oxygen-rich arterial blood is distributed to all tissues, while venous blood carries carbon dioxide and is purified again through the lungs. Blood vessels (arteries, veins, and capillaries) serve as transport pathways and regulate the movement of blood throughout the body. Arteries carry blood from the heart to the organs, while veins return it to the heart. Capillaries carry out substance exchange at the tissue level. The proper functioning of the cardiovascular system ensures stable body activity, tissue nutrition, and normal gas exchange. Any disturbance in its function—such as changes in blood pressure, heart rhythm disorders, or loss of vascular elasticity—negatively affects the entire body. Therefore, studying the anatomy and physiology of the cardiovascular system is important for early diagnosis, prevention, and treatment of diseases.

Relevance of the topic and research objective: Today, cardiovascular diseases are among the most common and leading causes of death worldwide. According to the World Health Organization, cardiovascular diseases account for approximately 30% of global deaths. This situation requires a deep study of the structure of the heart and blood vessels and the anatomical changes caused by diseases.

Morphological changes in the cardiovascular system determine the course of diseases, clinical signs, and treatment effectiveness. Therefore, the role of anatomy in analyzing changes in the cardiovascular system is extremely important. This knowledge helps doctors to diagnose diseases early, prevent them, and develop effective treatment methods. The aim of the study is to investigate anatomical changes caused by cardiovascular diseases, analyze their impact on body function, and determine the importance of anatomy in clinical medicine.

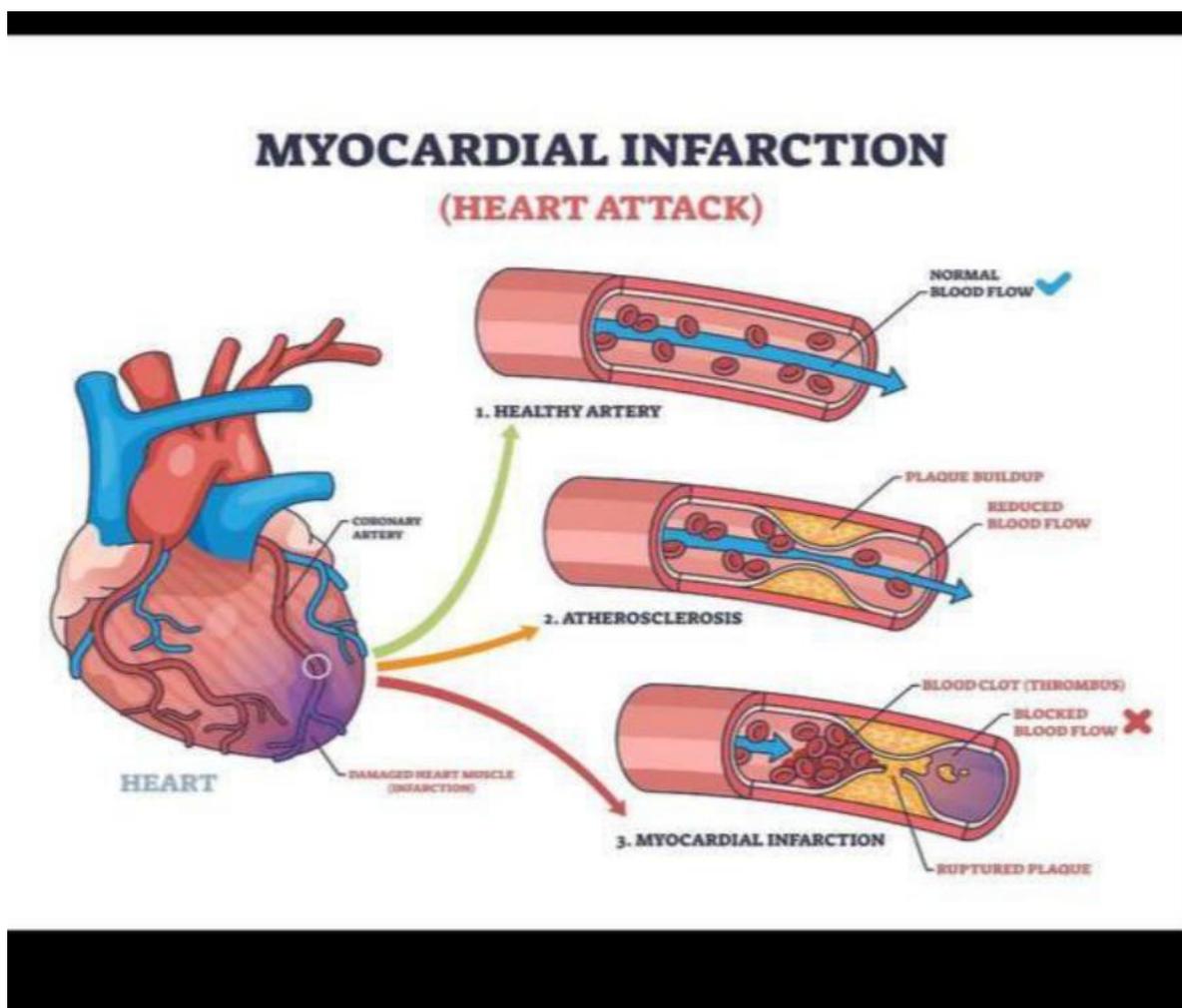


Arterial hypertension is a chronic disease characterized by a persistent increase in blood pressure to 140/90 mmHg or higher. It is one of the most common cardiovascular diseases and is often called a “silent killer.” Causes include genetic predisposition, stress, poor diet, physical inactivity, kidney diseases, endocrine disorders, and others. Clinical signs are often absent, but may include headache, dizziness, rapid



Myocardial infarction is a condition in which part of the heart muscle is damaged or dies due to insufficient blood supply. It usually occurs due to blockage of the coronary artery supplying the heart. Treatment includes restoring blood flow, relieving pain, thinning the blood, and providing oxygen. Atherosclerosis is a disease in which fats and cholesterol accumulate in the vessel walls forming plaques.





Atherosclerosis is a disease in which fats and cholesterol accumulate in the vessel walls forming plaques. As a result, the vessels narrow and blood flow worsens. In conclusion, anatomical changes in cardiovascular diseases play an important role in disease progression.

References

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