

Pathophysiology of Cardiovascular System

Akhmedov Ilkhom Ibrokhimovich

Doctoral student of Bukhara State Medical Institute

Narzullayeva Mehriniso Zayniddinovna, Karimova Oyjamol Sadridinovna

Afshona is a teacher of vocational science at Technical
College of Public Health named after Abu Ali Ibn Sina

Abstract: Cardiovascular diseases. Symptoms of diseases of the cardiovascular system. Causes of diseases of the cardiovascular system. Measures to prevent diseases of the cardiovascular system.

Keywords: angina pectoris, heart attack, myocardial infarction, atherosclerosis, ischemia, arterial blood pressure, hypertension, hypotension, tachycardia, rheumatism, stroke, prevention strategy, high risk strategy.

Current at the time heart is blood veins system diseases the world scale the most wide spread out be, never _ _ no exaggeration _ an epidemic tunisi received _ According to the experts of the World Health Organization, one death occurs every 32 seconds due to diseases of the cardiovascular system. Ischemic heart disease (which primarily includes heart attack, angina pectoris, and myocardial infarction) is the most deadly among diseases of the cardiovascular system. If we consider 100% of deaths due to diseases of the cardiovascular system, 52.5% of them occur as a result of heart attack, angina pectoris, and infarction. More and more deaths are observed in middle-aged people. Heart attacks occur "unexpectedly" and in most cases can lead to sudden death. More than half of the deaths due to myocardial infarction occur in the first hours of the attack, when patients do not even have time to seek medical help. Other fatal diseases of the cardiovascular system include: rheumatic heart lesions, angina pectoris, hypertension, congenital and acquired heart defects, etc. Diseases of the cardiovascular system - diseases of the heart, arteries and veins. They are many and varied. Some of these diseases (rheumatism, myocarditis, etc.) damage the heart, some damage arteries (atherosclerosis) or veins (for example, thrombophlebitis), others damage the entire cardiovascular system (hypertension). Ischemic heart disease is caused by insufficient blood supply to the heart muscles. Basically, it is caused by atherosclerotic changes of the coronary arteries, spasm, as well as blood clots (thrombosis) in their cavity, etc. Arterial blood pressure Since the time of pressure decrease in diastole is longer than the time of rise in systole, the average pressure value is closer to diastolic pressure. An increase in arterial pressure is called arterial hypertension, and a decrease in arterial pressure is called arterial hypotension. There are two ways to determine arterial pressure: with blood or direct, and there are indirect methods without blood. In 1733, S. Hales determined arterial pressure in horses using the blood method. Later, the German scientist K. Ludwig improved this method and recorded a unique curve by connecting it to recording devices. In animals, a glass cannula or catheter is inserted into the arteries, and its end is connected to a manometer with a rigid glass container. The catheter and the glass container are filled with an anticoagulant solution to prevent blood from clotting, and the arterial blood

pressure curve is recorded. Arterial hypertension is the most common cardiovascular disease. is the most common and is more common among older people. It is the main pathogenetic factor that often causes death or disability, such as myocardial infarction, stroke, heart failure. Figure 1. Carotid, wrist, finger artery sphygmogram recorded simultaneously. Arterial hypotonia (hypotonia disease) is relatively rare. It is observed in many diseases of the cardiovascular system (myocardial infarction, cardiomyopathy, myocarditis), neuroses, hypothyroidism, stroke, in the form of arterial hypotonia syndrome. In clinical practice, heart muscle inflammation - myocarditis and non-inflammatory damage - myocardiodystrophy are observed more often. Endocarditis (inflammation of the lining of the heart) is caused by rheumatism and other acquired heart defects. Leerycarditis is rare. As a result of ischemic heart disease, myocarditis and myocardiodystrophy, as well as neurotic conditions, cardiac arrhythmias and heart block can occur. Cardiac arrhythmias are acceleration (tachycardia) or slowing (bradycardia) of heart contractions (beating), abnormal additional heart contractions (extrasystole); sudden acceleration of heart rate (paroxysmal tachycardia); it is manifested in incorrect contraction of the heart at different time intervals (oscillating arrhythmia) and others. Heart block is a violation of the transmission of nerve impulses in the conduction system of the heart (for example, interruption of the impulse transmission from the chambers to the ventricles or to the bundles of the bundle of His). When the activity of the nervous system of the heart is disturbed due to neuroses, along with arrhythmias, there are also sensations of throbbing, stabbing, throbbing pain in the heart. Atherosclerosis and hypertension are common diseases of arterial vessels, and most of them go together. Atherosclerosis affects not only the coronary vessels, but also the aorta and its large branches, including the renal artery, cerebral vessels (stroke), and the peripheral vessels of the arm. Inflammation of arterial vessels — arteritis is more often caused by infectious (eg, wound, sepsis) and allergic (see Serum sickness) and collagen diseases. The clinical form obliterating endarteritis, aortic panarteritis, etc. Varicose veins and thrombophlebitis are common diseases of venous vessels. Heart failure is manifested by pathological signs (bruising of the skin, shortness of breath, swelling of the legs, etc.) indicating that the heart cannot perform the full functional load imposed on it ; shortness of breath while doing something is a pathological symptom. Acute heart failure is very dangerous but rare. He has an attack of sudden or unexpected shortness of breath and suffocation (cardiac asthma). Thrombosis is blood clotting in blood vessels during life. Formed clots - thrombi are firmly attached to the inner wall of the blood vessel and disrupt blood circulation. A thrombus is composed of blood plasma clotted fibrin, blood platelets, erythrocytes and leukocytes. The appearance of a thrombus varies. When it forms rapidly, it is mainly composed of red blood cells and has a red color. If the thrombus is formed very slowly, its composition mainly includes fibrin, leukocytes, blood platelets, and it is white in color. A thrombus with alternating white and red areas is called a mixed thrombus. In a person, the thrombus begins only in the part bounded by the blood vessel wall, and then the formation of the thrombus proceeds in such a way that its tail floats freely between the blood vessels. Such tails of thrombi easily break off in the veins and flow away with the blood stream. Through the heart, they enter the pulmonary artery and can block it, often resulting in sudden death. Thrombus is physiological and pathological. Physiological thrombosis is a very important protective adaptation process. It occurs when the integrity and integrity of blood vessels is broken, it closes the inside of the damaged vessel and protects the body from blood loss. The symptoms caused by diseases of the cardiovascular system are different in different diseases. Symptoms of myocardial infarction: The main symptom of the disease is severe pain. Myocardial infarction pain is located behind the chest, it is expressed by a burning sensation and sensations like a dagger, some patients describe the pain as "like breaking". The pain can spread to the left arm, lower jaw, between the shoulder blades. The development of this condition does not always come after physical exertion, often the pain syndrome occurs at rest or in the evening. Symptoms of a heart attack: Difficulty breathing, shortness of breath, cough, nausea, vomiting, dizziness, weakness, loss of consciousness, cold sweat, tremors, pallor, palpitations, heart failure, emotional distress. irritation, fear. Note : Approximately 25% of myocardial infarctions occur without any symptoms. Stroke symptoms: Sudden weakness of one arm or leg; Numbness on one side of the

face or limb on one side; Facial asymmetry; Sudden speech disorder; Confusion or loss of consciousness; Sudden loss of vision in one or both eyes; The causes of acute severe headache for unknown reasons, diseases of the cardiovascular system are different in different organisms.

References:

1. Ibrokhimovich, A. I., & Kizi, J. M. M. (2023). 1-Type Kandli Diabetes Bilan Kasallangan Bolalarda Caries Kasalligini Organish, Davolash Va Prevention Samaradorligini Oshirish. *AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI*, 2 (4), 165–171. Retrieved from <https://sciencebox.uz/index.php/amalibbiyot/article/view/6735>
2. Ibrokhimovich, A. I., & Kizi, J. M. M. (2023). Improving the Effectiveness of Research, Treatment and Prevention of Caries in Children with Type 1 Diabetes. *Scholastic: Journal of Natural and Medical Education*, 2(4), 182-187.
3. FR Kamalova, OO Yarieva, II Akhmedov (2021). Risk factors for oral diseases in children with diabetes mellitus *Scholastic: Journal of Natural remedies*, 1 (1), 57-63
4. Орзижоновна, Н. У., & Миродил Қизи, Ж. М. (2023). Профилактика Гастродуоденальных Кровотечений При Эрозивной Язве У Больных Ишемической Болезнью Сердца. *AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI*, 2(4), 16–23. Retrieved from <https://sciencebox.uz/index.php/amaltibbiyot/article/view/6517>
5. Navruzova Ugilkhon Orzizjon Kizi, Saidov Jumamurod Zaynievich, & Narzullaeva Mekhriniso Zayniddinova. (2023). Histological Findings in Endoscopically Detected Gastritis. *American Journal of Pediatric Medicine and Health Sciences (2993-2149)*, 1(9), 306–309. Retrieved from <https://grnjournal.us/index.php/AJPMHS/article/view/1596>
6. Orzizjon Kizi, N. U. ., Botyrovna, R. M. ., & Boltayevich, A. S.. (2023). Study and Prevention of Caries in Type 1 Diabetes. *AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI*, 2(2), 20–23. Retrieved from <https://www.sciencebox.uz/index.php/amaltibbiyot/article/view/5592>
7. Kizi, N. U. O., Fazliddinova, E. G., & Najmiddinova, A. N. (2022). Coronavirus Complications, Post Illness Medicines and Vitamin Therapy. *Central Asian Journal of Medical and Natural Science*, 3(6), 551-556. <https://doi.org/10.17605/OSF.IO/HQ4YZ>
8. Наврўзова Ўғилхон Орзижоновна, Файзиева Зарина Алпомишовна, Толибова Муниса Уйғуновна, ЎТКИР ЮРАК -ТОЖ ТОМИР ЁТИШМОВЧИЛИГИ КЛИНИК БЕЛГИЛАРИНИ ЎРТА ЁШЛИ БОЛАЛАРДА КЕЧИШИ, BARQARORLIK VA YETAKSNI TADQIQOTLAR ONLAYN ILMIIY JURNALI: Vol. 2 No. 9 (2022): BARQARORLIK VA ETAKCHI TADQIQOTLAR ONLAYN ILMIIY JURNALI
9. Иброхимович, А. И. ., & Қизи, Ж. М. М.. (2023). 1-Тип Қандли Диабет Билан Касалланган Болаларда Кариес Касаллигини Ўрганиш, Даволаш Ва Профилактика Самарадорлигини Ошириш. *AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI*, 2(4), 165–171. Retrieved from <https://www.sciencebox.uz/index.php/amaltibbiyot/article/view/6735>
10. Akhmedov Ikhom Ibrokhimovich, & Navruzova Ugilkhan Orzizjon Kizi. (2023). Or Pathogenesis of Periodontal Disease in I and II Levels of Obesity. *Central Asian Journal of Medical and Natural Science*, 4(6), 1007-1010. Retrieved from <https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/2178>
11. Наврузова У.О., Особенности пародонтита при нарушении обмена веществ // Биология и Интегративная Медицина 2019 №3. С.28-40 .
12. Наврузова У.О., Современные аспекты этиопатогенеза генерализованного пародонтита (обзор литературы) //Биология и интегративная медицина.2019 №2. С-62-89