Ischemic Heart Disease in Path Anatomic Practice: Cardio Sclerosis

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Abstract: The article provides information about the state of cardiosclerosis of the heart, observed during the autopsy of corpses during post-mortem examination. Cardiosclerosis of the heart is covered in the literature review. A morphological analysis of the heart muscle in patients with cardiosclerosis was carried out.

Keywords: cardiosclerosis, autopsy, histology, diagnostics.

Relevance. Coronary heart disease (CHD), as defined by the World Health Organization and the International Society of Cardiology, is myocardial damage caused by an imbalance between coronary blood flow and myocardial oxygen demand, which can be caused by functional changes, organic damage to the coronary arteries (CA), and other causes. . In the presented definition, the term "atherosclerosis of the coronary arteries" is not mentioned, the presence of atherosclerosis is not equated with the concept of IHD, just as its absence does not exclude the presence of IHD. The domestic clinical guidelines for stable coronary artery disease (2020) state that "IHD is myocardial damage caused by impaired blood flow in the coronary artery, resulting from organic (irreversible) and functional (transient) changes." Until 2019, foreign recommendations used the terms "coronary artery diseases", "stable coronary artery disease", and in 2019 the European Society of Cardiology proposed a new term "chronic coronary syndromes". In 2020, the second consensus document was published, according to which the concept of "ischemia associated with non-obstructive lesions of the coronary arteries" is introduced [I.V. Samorodskaya, 2022]. One of the dangerous manifestations of coronary heart disease is cardiosclerosis. It is quite difficult to diagnose it on your own. Often it can be determined only by making an electrocardiogram.

Cardiosclerosis is expressed in the pathology of the heart muscle (myocardium), in which connective tissue grows. It forms scars of various sizes, replacing dying myocardial fibers, and causes deformation of the heart valve. The size of the heart muscle increases, which gradually leads to hypertrophy of the heart and a decrease in its contractility. According to the morphological principle, the following types of this disease are distinguished: focal; diffuse.

The diffuse type is characterized by the spread of connective tissue to the entire myocardium, and the focal type to separate parts of the muscle, and it is most often a complication after a heart attack or myocarditis.

For etiology or reasons, this pathology is a consequence of a number of diseases. There are the following types: postinfarction; atherosclerotic; myocarditis.

The post-infarction form is usually the result of a previous heart attack. Scars form at the site of necrotic damage, which reduces the contractility of the heart muscle. With repeated heart attacks, the amount of scar tissue increases and there is a threat of chronic aneurysm

(protrusion of the muscle wall, weakened and stretched connective tissue). An aneurysm rupture is fatal. Therefore, patients should be under the constant supervision of a doctor in the hospital, they are also recommended peace and psychological comfort.

The atherosclerotic form, as a rule, is the result of atherosclerosis of large vessels, as well as coronary heart disease. The process of development of the disease is long and occurs as a result of hypoxia of cells that do not receive the required amount of oxygen due to diseased vessels. IHD is aggravated, the amount of cholesterol increases, a diffuse form of the disease develops. Appears arrhythmia, poor exercise tolerance.

The myocardial form develops due to inflammation in the myocardium. This type of pathology often affects young patients with a history of chronic infections, allergies. In this case, the right ventricle of the heart is affected, it increases in volume, the blood supply becomes insufficient. [B.N. Vladimirovna, 2022].

Goals and objectives.

The purpose of the study was to identify the most common cardiac pathologies based on histopathological data, to determine which pathologies are more common, their consequences and preventive measures. Examine macroscopic and microscopic analyzes in the pathohistology department of the Bukhara Regional Bureau of Forensic Medical Examination. A total of 16 deceased patients underwent cardiac tissue examination.

Materials and methods.

Based on macroscopic and microscopic studies of cardiac tissue during the study, a total of 16 cardiac tissue pathogistologic studies were performed. For general morphology, 2 pieces from each heart, ie 1.5x1.5 cm from the upper and middle part, were cut and solidified in 10% neutralized formalin. After washing for 2-4 hours in running water, it was dehydrated in increased concentrations of alcohols and xylene, then paraffin was poured and the blocks were prepared. Incisions of 5–8 μm were made from paraffin blocks and stained with hematoxylin and eosin. The examination revealed the following pathologies:

Rezults and conclusions.

The results of pathohistological examinations of the heart showed that in most cases atherosclerotic (small hearth) cardiosclerosis was observed in the heart, followed by post-infarction cardiosclerosis and chronic aneurysm pathology of the heart.

Atherosclerotic (capillary) cardiosclerosis is characterized by the appearance of flowable perivascular foci and the parallel placement of these foci around the cardiomyocytes. This condition is caused by the growth of connective tissue in the myocardium. The connective tissue serves to replace cardiomyocytes in the cardiac myocardium that die as a result of hypoxia, dystrophy, and atrophy.

Post-infarction cardiosclerosis - occurs in the organizational phase of infarcted myocardial tissue, arises from the growth of connective tissue into the myocardium that is involved in the replacement of lost cardiomyocytes, and is mainly referred to as large-hearted cardiosclerosis.

Chronic aneurysm of the heart is caused by large focal cardiosclerosis and is clinically manifested by enlargement of the heart wall.

When making a post-autopsy diagnosis, pathologists and forensic medical experts have the opportunity to cite cardiac pathologies as the main, additional, background disease, to receive practical advice on the correct completion of the death certificate.

The underlying disease is a nosological unit that causes death by itself or through

complications.

Background disease is a disease that is important in the emergence and development of the underlying disease, although it does not depend on the etiology of the underlying disease.

Concomitant (additional) disease is a nosological unit that is not etiologically and pathogenetically related to the underlying disease and its complications, does not affect its course and does not lead to death.

- These data open up the real prospect of a significant reduction in cardiac pathologies and consequent mortality, and provide the necessary information not only for pathologists, but also for all specialists involved in the diagnosis, prevention and treatment of heart disease.
- This information can help to improve the performance of medical institutions at any level

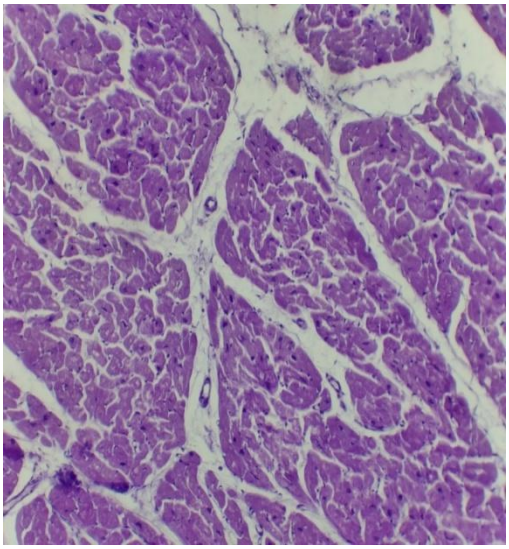

Fig.1.

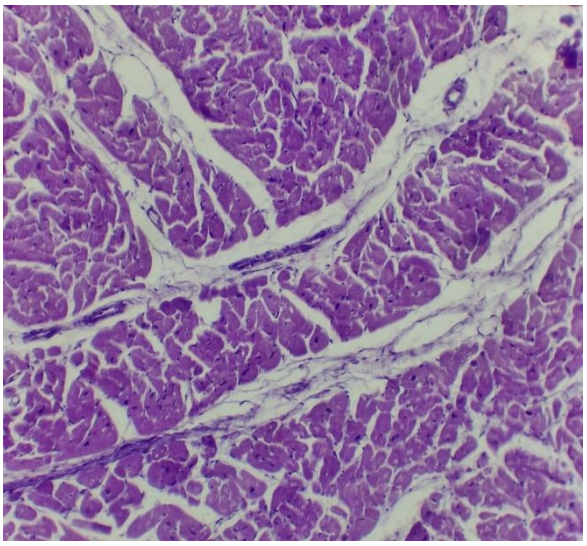

Fig. 2.

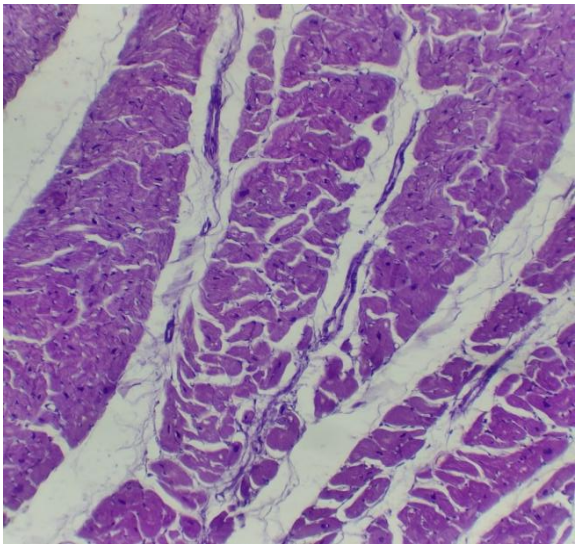

Fig.3.

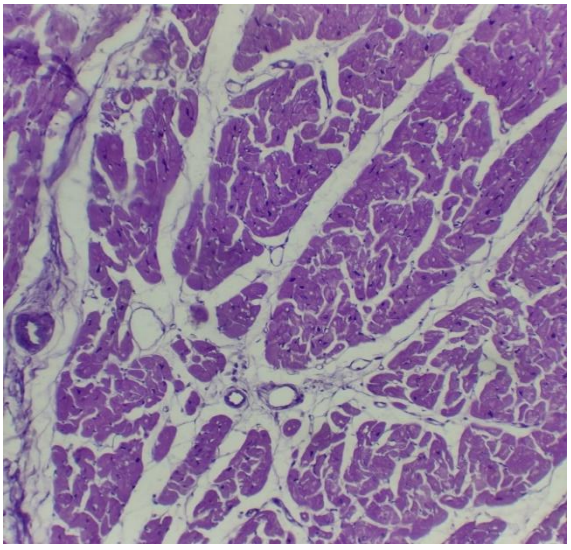

Fig.4.

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