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PATHOMORPHOLOGICAL BASICS OF HEART FAILURE IN ALCOHOLISM

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Nowadays, pathogenetic mechanisms of myocardial damage during chronic alcohol intoxication are studied quite well, however, the description of the severity of pathomorphological changes in dead suffered from chronic alcoholism is presented insufficiently up to recent years.

The aim. Determine the pathological bases of heart failure in patients with chronic alcoholism.

Materials & Methods. The study is based on 35 autopsies of patients of long-term chronic alcoholism, treated at the Zaporozhye Regional Psychoneurological Clinic and died between 38-60 years (30 men and 5 women). As a comparison group (n=15), the hearts of deceased patients suffering from IHD and hypertension were studied. In 24% cases the causes of death were acute left ventricular failure. Pieces of myocardium were taken from the apex of heart, the walls of the right and left ventricles with papillary muscles, the interventricular septum and fragments of coronary artery branches. Paraffin sections were stained with hematoxylin and eosin, picrofuchsin according to Van-Gieson and according to Masson's method. A morphometric study in a conventionally

standardized field of view of AXIOScope 1 («Carl Zeiss», Germany) was carried out using a computer system for digital image analysis KS 200 (Kontron Elektronik, Germany, № 0200299). Statistical significance was determined by calculating the reliability coefficient (Student's criterion). The differences in the groups were considered statistically significant if $P < 0.05$.

The results. According to morphometric analysis in the myocardium of deceased patients suffering from alcoholism, the number of cardiomyocytes in the state of fatty degeneration increases 4.7 times and the number of fuchsinophilic cardiomyocytes increases by 3.4 times in comparison with the control group. The number of damaged cardiomyocytes increases by 4.5 times. Sclerotic changes in stroma increase in 3.1 times; increase severity of sclerotic changes in vessels is presented to a lesser extent (1.9 times). Pathomorphological changes in the myocardium in form of reactions of the microvasculature with plasmorrhagia, capillary collapse, aggregation of erythrocytes, perivascular and intramural hemorrhages, spread foci of myocytolysis are the most significant signs for the morphological assessment of acute alcohol intoxication in deceased with alcoholic cardiomyopathy and also - morphological basis of heart failure decompensation in such patients.

Thereby, the morphogenesis of heart damage in alcoholism includes a combination of mutually potentiated processes: dystrophic, necrotic, atrophic and sclerotic changes in all compartments of heart tissue. The combination of these factors leads to increase of chronic hypoxia of heart tissue, which causes the clinical manifestations of heart failure. The identified tissue changes are important morphological criteria for retrospective diagnosis that allows pathologists to clarify the thanatogenetic mechanisms and establish the direct cause of death in such cases.