Research article

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THE ROLE OF CARDIOTROPHIN-1 AND ANNEXIN V IN MYOCARDIAL REMODELLING OF SPONTANEOUS HYPERTENSIVE RATS WITH EXPERIMENTAL DIABETES MELLITUS

Key words: cardiotrophin-1, annexin V, myocardium, experimental diabetes mellitus, spontaneous hypertensive rats.

ABSTRACT. Background. Cardiotrophin-1 is thought to be one of the key regulator of cardiac hypertrophy and hyperplasia, and has influence on apoptosis intensity and sensitivity to ischemia. **Objective.** The aim of the investigation was to study the role of cardiotrophin-1 in pathological myocardial remodeling in arterial hypertension with diabetes. **Methods.** Spontaneous hypertensive rats with experimental diabetes were used in the study. The expression of cardiotrophin-1 was analyzed by immunohystochemical method. Apoptitic cells were confirmed by annexin V detection. **Results.** It was found that cardiac content of cardiotrophin-1 was 2.6-fold higher in myocardium of hypertensive rats with diabetes in comparison with rats without diabetes. The concentration of annexin V was slightly increased in animals with experimental diabetes. **Conclusion.** The high content of cardiotrophin-1 in hypertension with diabetes is thought to be the factor which decreases the intensity of caridomyocytes' apoptosis.

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Kolesnyk MYu. [The role of cardiotrophin-1 and annexin V in myocardial remodelling of spontaneous hypertensive rats with experimental diabetes mellitus]. Morphologia. 2013; 7(3):60-4. Russian.

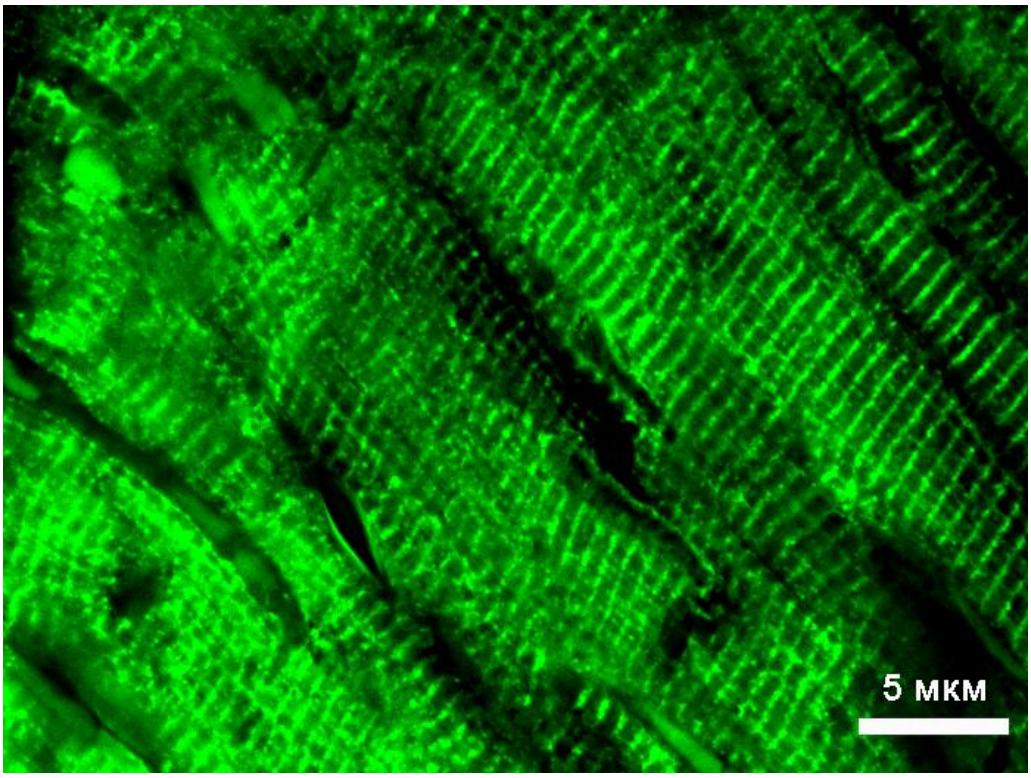

Fig. 1. SHR line rat myocardium with longitudinal fibers arrangement. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to rat cardiotrophine-1. Lens ×63.

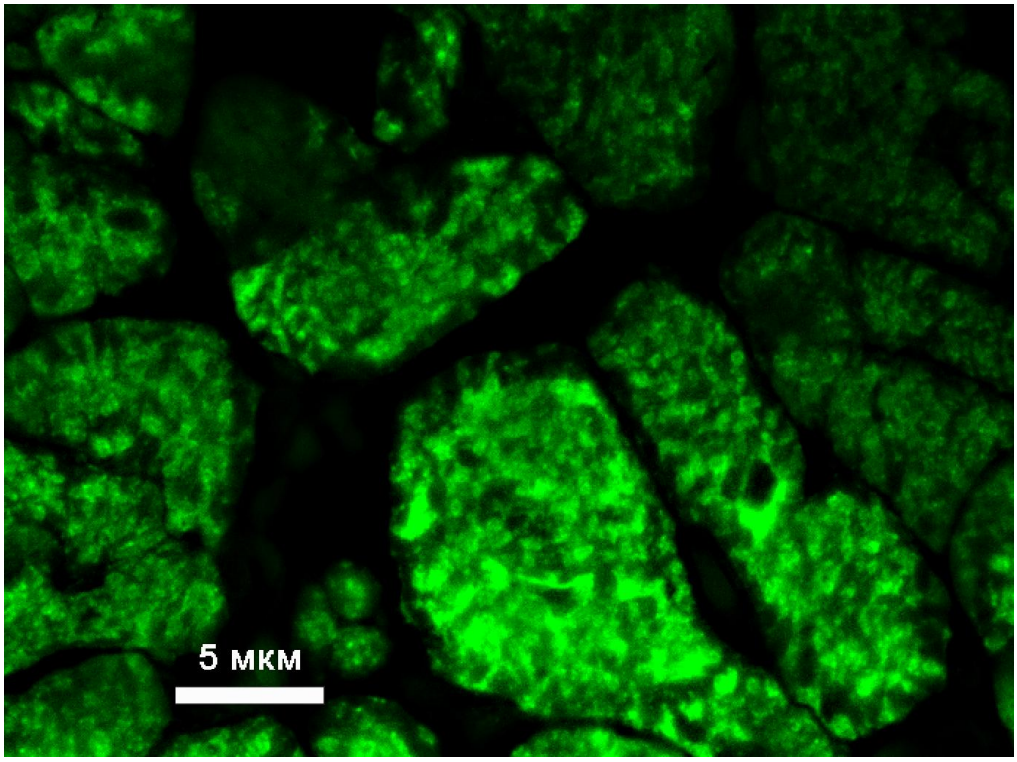

Fig. 2. SHR line rat myocardium with transverse fibers arrangement. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to Rat Cardiotrophine-1. Lens ×63.

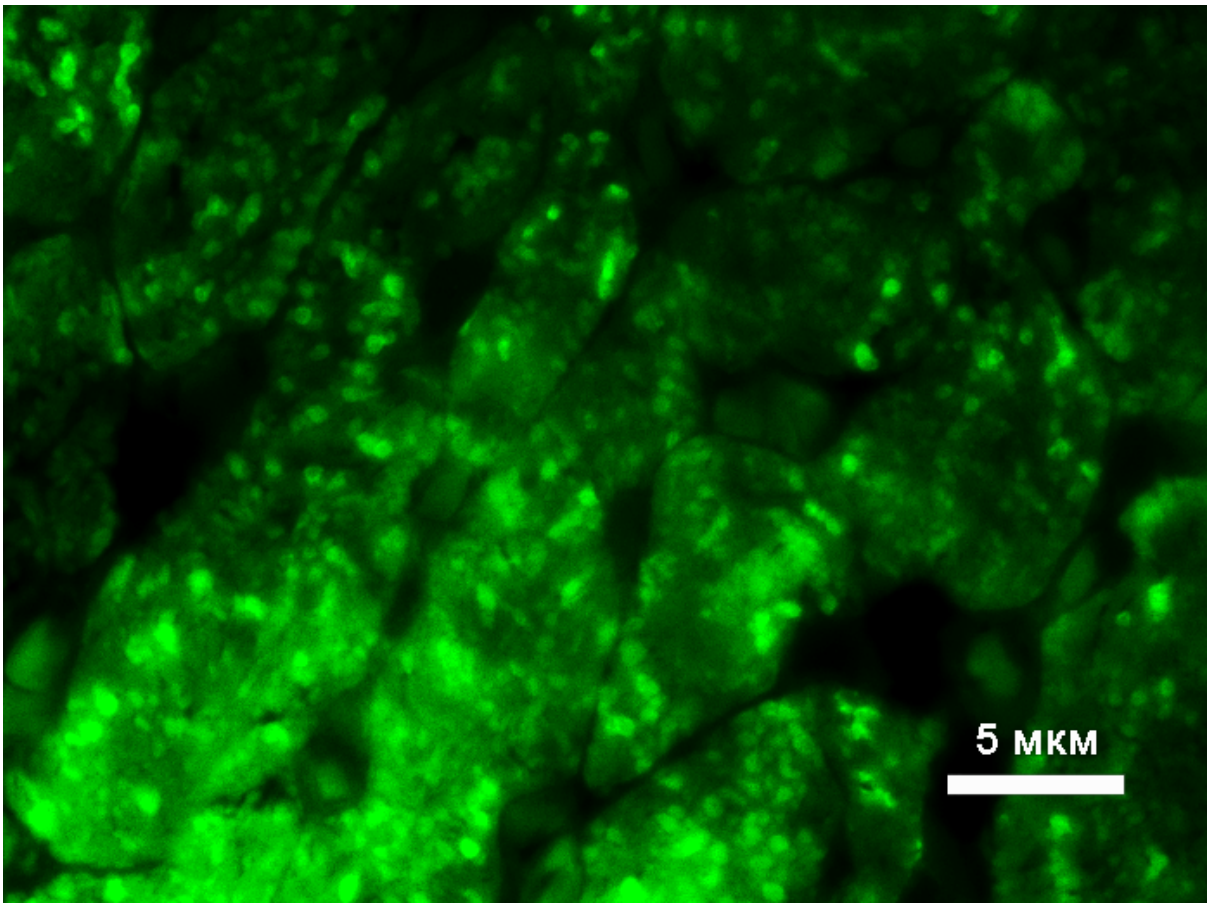

Fig. 3. SHR line rat myocardium. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to Rat Annexin V. Lens ×63.

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