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Structural Features of Left Ventricle Myocardium in Premature Born Rats in the Early Postnatal Ontogenesis

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Preterm birth is positively correlated with a predisposition to development of cardiovascular diseases in adulthood. Morphological and functional changes establishing in the heart in prematurely born children in the early postnatal ontogenesis is a priority, since it will give opportunity to prevent or correct the development of long-term negative

effects of prematurity on the cardiovascular system. A histological and morphometric analysis of the left ventricle myocardium of the heart of Wistar rats born after 21 and 21.5 days of gestation (the full gestation duration is 22 days) was carried out. Preterm birth leads to an increase in the relative volume of the stroma of the rat myocardium in the early postnatal ontogenesis. Preterm birth does not lead to a change in the number and coefficient of degranulation of mast cells in the myocardium of the left ventricle of the rat heart. Morphological changes in the myocardium of prematurely born rats are more pronounced at a shorter gestation period (21 days of gestation).

Keywords: preterm birth, myocardium, structure, fibrosis, mast cells, rats