



## MORPHOLOGICAL STATE OF THE JEJUNAL WALL IN RAT PUPS BORN UNDER CONDITIONS OF DIABETES MELLITUS IN THE MOTHER

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**Annotation.** *Experimental diabetes mellitus causes inflammatory-dystrophic changes in the vascular-tissue structures of the jejunal wall. In the development of the established patho morphological disorders of the postnatal development of the vascular-tissue structures of the jejunum, the leading role is played by the violation of the morphofunctional state of the intraorgan vessels of the microcirculatory bed of the organ, which subsequently leads to a violation of the trophism of tissue structures and dystrophic and degenerative changes.*

**Key words:** small intestine, experimental diabetes, morphology

**INTRODUCTION.** Recently, the disease diabetes mellitus, as the most widespread endocrine disease, has become a medical and social problem for many countries of the world. This is largely due to the fact that with this disease the incidence of various complications is quite high, which lead to a decrease in the working capacity of patients and often to disability.

**Material and research methods.** The objects of our morphological study were materials from the lean part of the small intestine of white rat pups on the 14th, 21st, and 30th days of postnatal life. To create a model of diabetes, rat pups on the 14th day of postnatal life were injected intraperitoneally with alloxan in acetate citrate buffer at the rate of 11 mg% per 100 g of weight. The work used morphological, morphometric, vascular injection research methods.

**Results.** The results of our studies showed that in the early periods of postnatal life of animals suffering from experimental diabetes mellitus, inflammatory-dystrophic changes were observed in the jejunal mucosa. The stroma of the mucous membrane is edematous, dilated, infiltrated by mononuclear cells. The epithelial cells are swollen, low-cylindrical in shape, the boundaries between them are not clear. Cell nuclei are polymorphic and are less



ordered in the basal part of cells. The mucous membrane contains a large number of spherical goblet cells, the nuclei are sickle-shaped and pressed against the basal part of the cells. Electron microscopic studies have shown pronounced intercellular edema and expansion of intercellular spaces. The epithelial cells are swollen. Microvilli are reduced, with destructive changes. Goblet cells are filled with secretions and have a moderate electron density. Among the epithelial cells, intraepithelial lymphocytes are often detected, containing a light cytoplasm, poor in organelles. Their shape is irregular due to the numerous pseudopodia wedged into the interepithelial fissures. In the serous-muscular membrane, swelling, infiltration with cellular elements, dissociation and swelling of muscle fibers are noted. The blood vessels of the stroma of the villi are dilated, tortuous and filled with blood.

**CONCLUSIONS.** 1. Experimental diabetes mellitus causes inflammatory-dystrophic changes in the vascular-tissue structures of the jejunal wall.

2. In the development of the established pathomorphological disorders of the postnatal development of the vascular tissue structures of the jejunum, the leading role is played by the violation of the function of the intraorgan vessels of the microcirculatory bed of the organ, which subsequently leads to a violation of the trophism of tissue structures.

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