

MORPHOLOGICAL CONDITION OF OFFSPRING BORN WITH DIABETES IN THE MOTHER IN THE FIRST POSTNATAL PERIODS

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Diabetes mellitus is a serious medical and social problem that is increasing every year.

The purpose of the study. Study of postnatal morphogenesis of the stomach of offspring born to mothers with diabetes.

Materials and methods of research. Experimental studies were carried out on 60-70 adult laboratory white female rats (weighing 160-180 g) and their offspring. Experimental animals are kept in a normal vivarium diet.

Alloxan citrate buffer at a dose of 40 mg/100 g was administered to rats by intra-abdominal injection to create an experimental diabetes model in experimental animals. The rats of the control group were injected with isotonic solution in the same amount and ratio. Analysis of glucose levels in blood and urine of rats was performed on ChemWell 2910 Combi automatic biochemical and enzyme immunoassay analyzer.

The offspring of the animals were studied on 7-14 days of postnatal life.

Research results. Mother's diabetes had a negative effect on the digestive system of the offspring. These changes were also reflected in the early external general developmental signs of the primary newborn rat pups: despite the fact that the rat pups were born larger and heavier compared to the control littermates, the rat pups had migration of the auricles, no hearing. The processes such as the opening of the larynx, the appearance of a fur coat on the skin, the attempt to stand up and its implementation appeared relatively 2-3 days later. Histological examination of meda preparations of 3-7-day-old rat pups showed that the cells of the surface and pits of the medulla are prismatic, and the morphometric parameters of the medullary pits are lower than the morphometric parameters of the control group animals. Swelling, infiltration with mononuclear cells was observed in the gastric mucosa. All parts of the stomach showed atrophic changes, lymphoplasmacytic inflammatory infiltration and hypertrophy of the glands of the antral region. The total number of cells in the fundal area of the stomach is reduced.

Principal cells were not identified. The architecture of the fundal glands is not clearly visible. Thinning of the serous-muscular layer of the stomach and infiltration with mononuclear cells was found .

Thus, morphological and morphometric studies of the offspring born from female rats with diabetes (D) in the early postnatal periods showed that, despite their relatively large mass, the offspring lag behind in general physical development. Morphofunctional deficiencies are observed in all layers of the stomach.

Conclusions.

1. Diabetes mellitus in the mother negatively affects the morphofunctional state of internal organs of the offspring.
2. Despite the large mass of offspring born to mothers with QD (macrosomia), deficiencies in the morphofunctional state of their stomach develop.
3. Offspring born to mothers with diabetes should be monitored by a dispensary, and dynamic observation and treatment-prophylactic measures should be carried out in order to prevent metabolic syndromes.