

PATHOMORPHOLOGICAL FEATURES OF THYROID DISEASE IN NEWBORNS BORN TO MOTHERS WHO HAVE PASSED COVID-19 AMONG THE POPULATION OF THE ARAL REGION.

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Relevance of the topic: During the COVID-19 pandemic, it had a serious impact on the health of not only adults but also pregnant women and their newborns. Placental circulation disorders in the mother during pregnancy due to SARS-CoV-2 infection can negatively affect the development of the internal organs and tissues of the fetus through inflammatory processes and immunological changes. For the population living in the Aral Sea region, the environmental crisis, atmospheric air pollution with salt and dust aerosols, iodine deficiency, and other environmental factors can further exacerbate this impact. Therefore, the study of pathomorphological changes in the thyroid gland in newborns born to mothers who have undergone COVID-19 is currently considered an urgent scientific problem in the field of medicine.

Purpose of the work: to determine the pathomorphological and morphometric features of the thyroid gland in newborns born to mothers living in the Aral Sea region who have undergone COVID-19, and to evaluate their interconnection with environmental factors.

Research materials and methods: The study examined pathological anatomical materials of thyroid tissue in newborns born to mothers with a history of COVID-19. Histological studies were performed using hematoxylin-eosin and special dyes. Morphometric analysis evaluated follicular diameter, thyroid cell height, colloidal volume, stroma state, vascular density, and inflammatory infiltration. If necessary, immunohistochemical methods (Ki-67, TTF-1, thyroglobulin, CK19) were used to determine the proliferative activity and functional state of the cells. The results were analyzed statistically.

The results of the study showed that a number of specific pathomorphological changes in the thyroid tissue are observed in newborns born to mothers who have undergone COVID-19. Specifically, uneven follicular volume, a decrease in colloid content in certain follicles, hyperplasia and hypertrophy of thyroid cells, mild fibrosis in the stroma, interstitial edema, and microcirculatory changes were noted. In some cases, lymphocytic infiltration and dystrophic changes in endothelial cells were identified. Morphometric analysis showed that the follicular diameter and epithelial height

differed significantly compared to the control group. These changes may be associated with viral infection during pregnancy and unfavorable environmental factors in the Aral Sea region.

Conclusions: in conclusion, it can be said that pathomorphological changes observed in the thyroid gland in infants born to mothers who have had COVID-19 can affect the functional development of the gland. The ecological characteristics of the Aral Sea region are assessed as one of the additional risk factors contributing to the deepening of these changes. Pathomorphological and morphometric studies are important for the early diagnosis of these newborns, the organization of dispensary observation, and the development of measures for the prevention of endocrine disorders.

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