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Матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м. Чернівці, 10, 12, 17 лютого 2020 р.) – Чернівці: Медуніверситет, 2020. – 488 с. іл.

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У збірнику представлені матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м.Чернівці, 10, 12, 17 лютого 2020 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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STUDY OF PROLIFERATIVE PROCESSES IN CASE OF IRON DEFICIENCY OF PREGNANCY AND PRETERM MATURATION OF THE PLACENTAL CHORIONIC TREE

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Investigation of the regulation processes concerning the number of cells is essential to specify the mechanisms of preterm maturation of the chorionic placental tree and preterm labour, that was carried out for the first time in case of iron deficiency anemia of pregnancy. The diagnosis of preterm maturing of the chorionic tree is based on finding the fact of its preterm structure as compared to the parameters of a certain gestation period, which can be calculated on the percentage of various types of chorial villi. Preterm maturing of the chorionic tree is found in the samples after abortions and during preterm labour.

58 placentas were examined. The following groups of the study were formed: The group №1- the examination of combined iron deficiency anemia and preterm maturation of the chorionic tree in 29-32 weeks of gestation. The group №2 – the examination of preterm maturation of the chorionic tree without anemia in labour in 29-32 weeks of gestation. The group №3 - physiological pregnancy (37 - 40 weeks of gestation). The placental tissue was fixed in phosphate buffered neutral 10% formalin solution with further preparing paraffin blocks. By means of a sliding microtome the cuts were made 5 micrometers thick keeping to appropriate requirements. The number of Ki-67-positive nuclei was calculated in per mille. Statistically significant were differences with $p \leq 0,05$.

The results are displayed in Table.

Table

Groups	Number of examined placentas	Ki-67-positive nuclei (‰)
The group 1- the examination of combined iron deficiency anemia and preterm maturation of the chorionic tree in 29-32 weeks of gestation	18	68±1,4
The group 2 – the examination of preterm maturation of the chorionic tree without anemia in labour in 29-32 weeks of gestation	19	32±1,1
The group 3 - physiological pregnancy (37 - 40 weeks of gestation)	21	3±0,1

Thus, iron deficiency anemia of pregnancy and preterm maturation of the chorionic tree both separately and in their combination result in intensification of proliferation processes in the placental chorionic villous trophoblast.

Ilika V.V.

IMMUNOHISTOCHEMICAL STUDY OF PROCESSES OF CELL PROLIFERATION OF THE PLACENTA IN ACUTE CHORIONAMNIONITIS IN COMBINATION WITH IRON DEFICIENCY ANEMIA

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The study of oxidative stress at the cellular level showed that the effect of the same oxidizing agent (e.g., H2O2) on proliferating cells leads to a wide range of cellular responses, such as proliferation, differentiation, migration, and cell death. We previously highlighted the results of a chemiluminescent study of nitroperoxide in the inflammation foci of the chorionic and basal plates of the placenta in pregnant women with iron deficiency anemia (IDA), a histochemical study of the processes of oxidative modification of proteins, and an immunohistochemical study of apoptosis. In order to comprehensively understand the effect of free radical processes on the morphology of the

placenta in the combination of these conditions, we also studied the proliferation of the trophoblast of the chorionic villi of the placenta.

Material was fixed for 18-24 hours with a 10% solution of neutral buffered formalin and embedded in paraffin for immunohistochemical investigation. This study was carried out on 5 μm thick sections placed on the adhesive glass. Monoclonal antibodies to the Ki-67 protein were used. Immune staining was visualized with the streptavidin-biotin method using the LSAB kit (DAKO, Denmark). After obtaining digital copies of the image, the optical density of the histochemical staining was measured by computer microdensitometry in relative optical density units in the environment of the ImageJ. The arithmetic mean and its error was calculated using the PAST 3.16 computer program. The discrepancy in average trends were carried out using bilateral unpaired student criterion. They were considered statistically significant at $p \leq 0.05$.

Based on an immunohistochemical study, quantitative parameters of cell proliferation processes were determined by determining the Ki 67 antigen by quantifying Ki 67 positive trophoblast nuclei of the chorionic villi of the placenta in acute chorionamnionitis in combination with IDA.

85 placentas were examined. Including the placenta of physiological pregnancy (n=20) and the placenta from women with IDA without inflammation (n=21) were studied for comparison. Accordingly, quantitative indicators of immunohistochemical staining for the Ki-67 proliferative antigen in the trophoblast of the chorionic villi of the placenta during physiological pregnancy amounted to 3±0.9, with IDA – 48±2.9, where $p < 0.001$ relative to the norm.

The optical density of the immunohistochemical image averaged 54±2.3 in placentas with acute chorionamnionitis (n=23), which with a statistical discrepancy is greater than the placenta of physiological pregnancy ($p < 0.001$), and in combination with IDA (n = 21) – 56±3.8 ($p < 0.05$ compared with inflammation without anemia).

Thus, after obtaining the results of the study, we learned that according to quantitative indicators of immunohistochemical studies proliferation processes grow at acute chorionamnionitis in the trophoblast of the chorionic villi of the placenta, however, comorbid iron deficiency anemia does not cause an intensification of these processes.

Kashperuk-Karpiuk I.S.

THE TOPOGRAPHO-ANATOMICAL FEATURES OF THE BUCCAL REGION OF HUMAN FETUSES

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Buccal region is a complex of structures of soft tissues, anatomic components of which are in a close mutual position, while its shape is maintained of the external muscular-aponeurotic system. It consists of muscles, fascias and maintaining junctions, which come from deep and fixed structures to moved skin.

There are numerous anatomic structures located on relatively small area, including terminal segment (portion) of parotid duct, buccal fat pad, blood vessels, lymphatics and nerves. The lack of knowledge about the peculiarities of the structures of buccal region induce us to carry out new researches, which allows to improve the methods of diagnostics and surgical correction of congenital and acquired diseases of human face.

We have developed the scheme of topographo-anatomical coordinates of the boundaries of lateral and buccal areas of the face and imaginary line of the parotid duct. Parotid duct projection on the skin of buccal region passes from the auricle's tragus to the angle of the mouth.

The direction of the parotide duct is arched, with the convexity up, due to well developed buccal fat pad. The additional parotide duct is detected in 22% of cases. We have researched a variety of anatomical variants of syntopic interactions between the buccal fat pad and parotide duct or its shape variants. Duct either pierces the corpus buccal fat pad or passes it superiorly.