



International Congress on Biological, Physical And Chemical Studies

International Congress on Biological, Physical And Chemical Studies - is an international conference platform under open access policy. The conference is led by international expert members who take an objective approach to peer review, ensuring each research paper is reviewed, edited by authors and evaluated on its own scholarly merits and research integration. Publishing and joining on the proceeding of the International Congress on Biological, Physical And Chemical Studies will ensure publishing experience and indexing possibilities on various global indexing.

Immunohistochemical and Morphometric Changes in the Placenta in Secondary Placental Insufficiency

Oripova Shakhnoza Asadullaevna

Bukhara Medical Institute named after Abu Ali ibn Sino

ABSTRACT

We studied immunohistochemical and morphometric changes in the placenta against the background of hypoxic-ischemic genesis, which depends on both the disturbances of the placenta itself, as well as on the presence of somatic or obstetric pathology in the mother, as well as on the condition of the fetus.

KEYWORDS: placental insufficiency, hypoxia, immunohistochemistry, fetus.

Objective of the study. To study the immunohistochemical and morphometric parameters of the placenta in secondary placental insufficiency.

Materials and methods.

Results of the study. The connective tissue stroma around the vessels is dense due to the proliferation of cells and fibers. Foci of vacuolation and necrosis are detected in the trophoblast layer on the surface of the suckers. In the maternal blood in the space between the suckers, there is a decrease in the size, deformation and fragmentation of erythrocytes. Narrowing and ischemia of the blood vessels of the placental suckers leads to a decrease in the number of terminal suckers, their hypoplasia and small size, and atrophy of all structural units in their components. If the stroma of a terminal sucker has few blood vessels and a swollen connective tissue, the connective tissue cells are sparsely located and the light staining of their nuclei indicates that they are young and immature cells. The stroma of the sucker has few capillaries and all of them have different diameters, only one of them has formed a syncytiocapillary barrier (see Fig. 1).

In the case of secondary placental insufficiency, the placental diameter (24.7 cm), thickness (5.2 cm) and maternal surface area of 478.4 ± 28.3 cm² also significantly increase. The placental/fetal index is slightly lower than in the control group .

Noteworthy changes in secondary placental insufficiency were a sharp decrease in the areas occupied by the terminal suckers and the inter-suckler space, and a threefold increase in the area occupied by secondary involutive changes compared to the control group.

The results of morphometric calculations of the manifestations of specific changes in the structure

of the terminal suckers showed that in the control group, the main part (79.4%) of the terminal suckers was occupied by suckers with 5 or more capillaries. It was found that the number of suckers with three or fewer capillaries and suckers without capillaries was very small. The number of sclerotic suckers was only 3.6%. In primary placental insufficiency, the number of morphometrically 5-capillary suckers was 3 times higher than in the control group, that is, only 27.2%. Instead, the number of 3-capillary, capillary-free and undifferentiated suckers increased sharply, and their area was 37.2%, 8.8% and 19.5%, respectively.

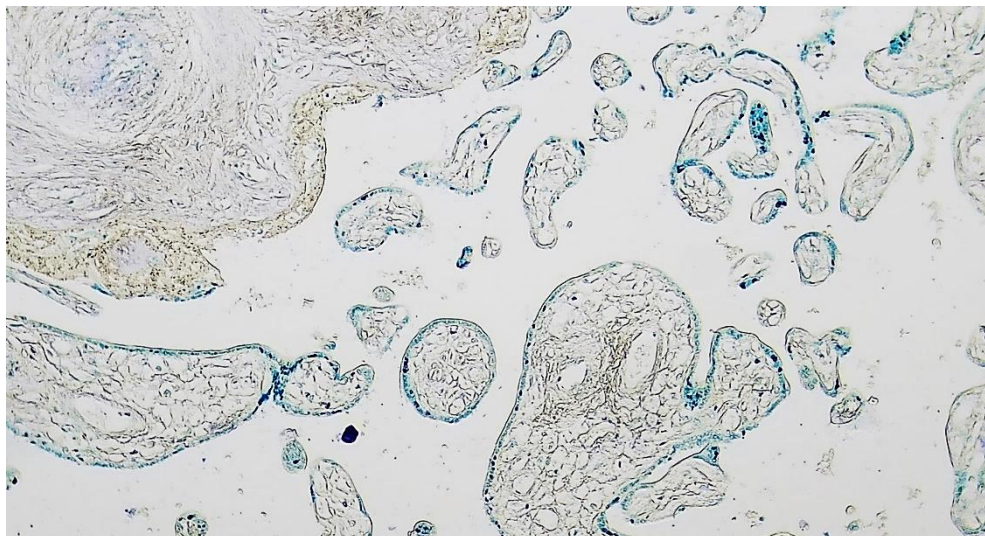


Fig. 1. Secondary placental sucker, vascular wall cells proliferated, narrowed lumen, dense stroma, trophoblasts have vacuolated and necrotic foci. Semi-thin section, stain: toluidine blue. X: 10x40. Terminal sucker, capillaries, syncytiocapillary barrier is weak, the stroma is swollen, and the trophoblasts are atrophied. Semi-thin section, stained with toluidine blue. X: 10x40.

The structural units of the capillary wall are not fully developed, i.e. the endothelial layer is thin, the nuclei of most capillaries are not visible, and the erythrocytes in the lumen are reflected as sticking together. The trophoblasts on the surface of this type of terminal suckers are densely packed in some areas and sparsely packed in others. The nuclei of the trophoblasts in the dense areas have changed shape, the karyolemma is uneven, bulges have appeared, and the chromatin has become dense, indicating that the cells have atrophied and aged.

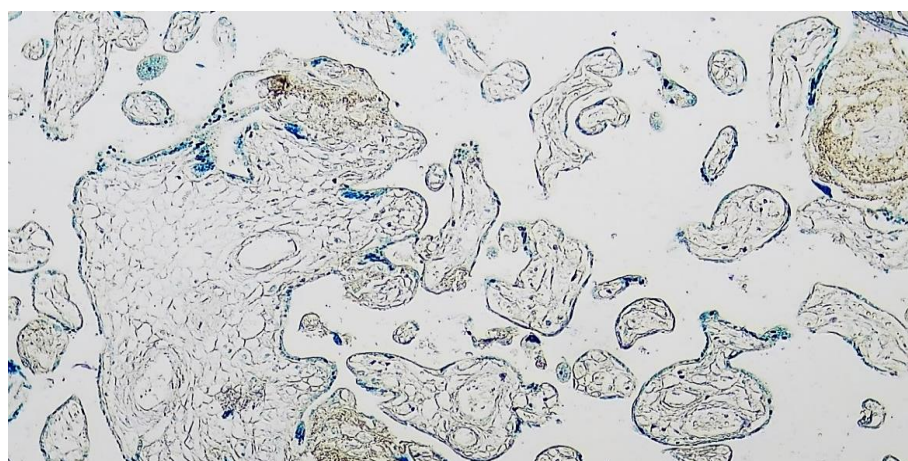


Figure 2. Terminal sucker, capillaries, syncytiocapillary barrier is weak, the stroma is swollen, and the trophoblasts are atrophied. Semi-thin section, stained with toluidine blue. X: 10x40.

Conclusions. The main etiopathogenetic factor in the development of placental insufficiency in group 1 pregnant women was infection of the placenta and amniotic membranes. The pathogenesis

of placental insufficiency was identified as impaired uteroplacental blood circulation, placental infarction, engorgement of the placenta, an excess of fibrinoid, inflammation of the amniotic membranes and placental engorgement, i.e. chorioamnionitis, villusitis.

References.

1. Ayupova F. M., Babazhanova S. D. Perinatal outcomes in pregnant women with preeclampsia and fetoplacental insufficiency // *Medical journal of Uzbekistan*. - Tashkent, 2008. - №5. - P. 28-30
2. Babazhanova S. D., Lyubchich A. S., Khasanova S. S. Perinatal damage to the brain of the fetus and newborn in fetoplacental insufficiency // *Pediatrics*. - Tashkent, 2008. - №3-4. - P. 5-8
3. Barinov S. V., Rogova E. V., Kadtsyna T. V., Shamina I. V. Prediction of placental insufficiency in multiple pregnancies based on the determination of placental growth factor // *Obstetrics and Gynecology*. - M., 2015. - No. 7. - P. 43-47.
4. Beznoshchenko G. B., Kravchenko E. N. Placental disorders and venous insufficiency: scientific publication // *Russian Bulletin of Obstetrician-Gynecologist*. - M., 2015. - Vol. 15 No. 5. - P. 50-55.
5. Bubnova N. I., Zaidieva Z. S., Tyutyunnik V. L. Morphology of the placenta in genital herpes infection // *Obstetrics and Gynecology*. 2001. No. 6. - P. 24-28.
6. Gabidullina R. I., Ganeeva A. V., Mayanskaya S. D., Sitarskaya M. V. Variability of blood pressure in pregnant women with placental insufficiency // *Russian Bulletin of Obstetrician-Gynecologist*. - M., 2019. - Vol. 19 No. 6. - P. 37-42.
7. Gafurova M. R. Placental insufficiency in women with epilepsy: pathogenesis, diagnosis, severity assessment and obstetric tactics // *News of dermatovenereology and reproductive health*. - Tashkent, 2013. - No. 3 - P. 40-41.