



THE PECULIARITIES OF THE PATHOMORPHOLOGY OF THE AFTERBIRTH IN PREMATURE PREGNANCY OF INFECTIOUS GENESIS.

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Annotation

Miscarriage is the most common complication of pregnancy and its frequency is 25-30 % of all clinically established pregnancies. Interruption in the early stages is from 5 to 20 % of all pregnancies , premature birth 30-35 %.

The causes of habitual miscarriage are multifactorial, and one of the leading factors many researchers consider infection. This article presents the role of ethological infections leading to pathological changes in the tissues of the placenta and premature birth.

With the alterative action of the herpes simplex virus during implantation, placentation and early embryogenesis, primary placental insufficiency occurs and there is a high probability of spontaneous miscarriages and congenital malformations of the fetus. The changes identified in the study are regarded as a morphological reflection of the



impact of herpes simplex virus toxins on the cell ultrastructure, which leads to a violation of the synthesis of nutrients and their transport in the placenta itself. The emerging structural changes have a direct impact on the morbidity of pregnant women, fetuses and newborns. However, sometimes they are contradictory and require further in-depth study using a set of modern research methods.

Key words : premature birth, infection, placenta, dysbiosis

ОСОБЕННОСТИ ПАТОМОРФОЛОГИИ ПОСЛЕДА ПРИ НЕДОНАШИВАНИИ БЕРЕМЕННОСТИ ИНФЕКЦИОННОГО ГЕНЕЗА.

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Аннотация

Невынашивание является наиболее распространенным осложнением беременности и частота его составляет 25-30% от всех клинически установленных беременностей. Прерывание на ранних сроках составляет от 5 до 20 % всех беременностей , преждевременные роды 30-35 %.

Причины привычного невынашивания многофакторны, и одним из ведущих факторов многие исследователи рассматривают инфекцию. В данной статье представлена этиологическая роль инфекций приводящая к патоморфологическим изменениям тканей плаценты и преждевременным родам.



Выявленные при исследовании изменения расцениваются как морфологическое отражение воздействия токсинов вируса простого герпеса на ультраструктуру клеток, что приводит к нарушению синтеза питательных веществ и их транспорта в самой плаценте. Формирующиеся структурные изменения оказывают непосредственное влияние на заболеваемость беременных, плода и новорожденных. Однако, порой они носят противоречивый характер и требует дальнейшего более глубокого изучения с использованием комплекса современных методов исследования.

Ключевые слова: Преждевременные роды, инфицирование, плацента, дисбиоз.

YUQUMLI GENEZLI MUDDATIGA YETMAGAN HOMILADORLIKDAGI YO'LDOSHNING PATOMORFOLOGIK XUSUSIYATLARI

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Annotasiya

Muddatidan oldin tug'ruq homiladorlikning eng keng tarqalgan asoratidir va uning chastotasi barcha klinik homiladorliklarning 25-30%i hisoblanadi. Barcha homiladorlik holatlarining 5-20% ni homilaning nobud bo'lishi, 30-35% ni erta tug'ruq tashkil qiladi.

Odatiy muddatidan oldingi tug'ruq sabablari ko'p faktorli hisoblanadi va ko'plab tadqiqotchilar infektsiyani etakchi omillardan biri deb hisoblashadi. Ushbu maqolada platsenta to'qimalarida patomorfologik



o'zgarishlarga va erta tug'ilishga olib keladigan infeksiyalarning etologik roli keltirilgan.

Implantatsiya, platsentatsiya va erta embriyogenez davrida oddiy herpes virusining o'zgaruvchan ta'siri bilan asosiy platsenta etishmovchiligi va spontan tushish yuqori ehtimoli mavjud. Tadqiqot davomida aniqlangan o'zgarishlar oddiy herpes virusi toksinlarining hujayra ultrastrukturasiga ta'sirini morfologik aks ettiradi, bu esa platsenta ichida ozuqa sintezi va ularning transportining buzilishiga olib keladi. Rivojlanayotgan tarkibiy o'zgarishlar homilador ayollar, homila va yangi tug'ilgan chaqaloqlarga bevosita ta'sir ko'rsatadi. Biroq, ba'zan ular ziddiyatli bo'lib, zamonaviy tadqiqot usullari majmuasidan foydalangan holda yanada chuquroq o'rganishni talab qiladi.

Kalit so'zlar : Muddatdan oldin tug'ruq, infeksiyalanish, yo'ldosh, disbioz

Premature birth is the most common complication of pregnancy, and its frequency is 25-30% of all clinical pregnancies. 5-20% of all cases of pregnancy are the death of the fetus, 30-35% are premature births. The usual pre-term causes of childbirth are multifaceted, and many researchers consider infection to be one of the leading factors. In this article, the etiological role of infections that lead to pathomorphological changes in placental tissues and premature birth is presented.

The combination of infectious agents in the endometrium contributes to the development of endocrinopathies, the balance of local and general immunosuppression, the violation of placentation processes, the formation of the embryo and the creation of additional conditions for the termination of pregnancy . With the variable effect of simple herpes virus during implantation, placentation and early embryogenesis, there is a high



probability of primary placental insufficiency and spontaneous miscarriage. The changes identified in the course of the study demonstrate a morphological reflection of the effect of simple herpes virus toxins on cell ultrastructure, which leads to a violation of nutrient synthesis and their cleavage in the placenta. Developing structural changes have a direct effect on pregnant women, the fetus and newborn. However, sometimes they are contradictory and require a more in-depth study using a complex of modern research methods. Placental insufficiency (PN) is a clinical and morphological syndrome caused by structural and functional changes resulting from a complex reaction of the placenta and fetus in response to various pathological conditions of the maternal organism. The main link in the pathogenesis of PN is a violation of fetal and placental blood flow, leading to inadequate provision of oxygen and nutrients to the growing fetus, to the progression of tissue hypoxia in the fetus.

The fetoplacental system is one of the main systems responsible for the formation of the conditions necessary for the development of the fetus. Pregnancy complications, as well as extragenital diseases of the mother, quite often lead to various changes in the placenta that significantly disrupt its function, which in turn negatively affects the condition of the fetus, causing the development of hypoxia and its growth delay. Having a wide range of compensatory adaptive reactions, the placenta provides not only the growth and development of the fetus, but also largely determines the outcome of the entire pregnancy and childbirth. Hormonal activity of the placenta contributes to the preservation and progression of pregnancy, increasing the activity of the endocrine organs of the mother. Biologically active substances synthesized by it provide protection of the fetus by neutralizing the immune complexes exchanged between the mother and fetus, and also have an effect on various immunocompetent systems of the mother. It should be noted that during intrauterine development, various



factors influence the fetus, primarily unfavorable environmental conditions, features of the state of the maternal organism (extragenital pathology, complications of pregnancy and childbirth), as well as the functional state of the placenta. Various factors that contribute to the laying of an abnormal embryo or create unfavorable conditions for its physiological development lead to the termination of pregnancy.

A special place in the etiology and pathogenesis of spontaneous miscarriages is occupied by infectious pathology, the clinical manifestations and complications of which largely depend on the type and pathways of the pathogen. The persistence of infectious agents in the endometrium contributes to the progression of concomitant endocrinopathies, the imbalance of local and general immune mechanisms, leading to disruption of the processes of placentation, embryo formation and the creation of additional conditions for termination of pregnancy. The importance of infections is especially great, the pathogens of which actively multiply in the placenta, damage it, penetrate the placental barrier and cause intrauterine infection of the fetus. Among them, the greatest interest of researchers is caused by herpes infection. With the alterative effect of the herpes simplex virus during implantation, placentation and early embryogenesis, primary placental insufficiency occurs and there is a high probability of spontaneous miscarriages and congenital malformations of the fetus. Infection of the fetus at a later date does not lead to the development of congenital malformations, but causes generalized inflammatory changes in various organs and delays in fetal development. In the presence of a viral infection in the mother-placenta-fetus system, various degrees of severity of structural differentiation disorders are determined in the afterbirth.



The purpose of the study: the role of morphological changes in the fetal part of the placenta in the development of miscarriage on the background of infection.

Materials and methods of the study: 60 pregnant women with habitual miscarriage and premature birth for up to 34 weeks were examined. The material was collected during the termination of pregnancy. The criteria for the selection of patients in the present study were the presence in the anamnesis of 2 or more spontaneous abortions of pregnancy against the background of infection. Placental tissue samples for light microscopy were fixed in a 10-12% formalin solution on a phosphate buffer. Paraffin sections were stained with hematoxylin and eosin.

The results of the study. Microscopy reveals fields of villi at different stages of development, mainly terminal villi. Along with them, areas containing immature intermediate villi of irregular shape, large sizes, with preserved stromal channels and numerous Kashchenko—Hofbauer cells are determined. It is also characterized by the presence of limited focal productive inflammation involving the fetal and maternal parts of the placenta in the pathological process. At the same time, inflammatory infiltration of various types is detected in the amnion epithelium, syncytiotrophoblast, vascular endothelium, basal plate cells and septa. As part of these infiltrates, giant mononuclear cells with large hyperchromic nuclei containing a basophilic inclusion of the virus are determined. Electron microscopic examination of the placenta revealed changes in the ultrastructure of the capillary endothelium and the epithelium of the villi in the form of destruction of the nuclear envelope, disruption of mitochondrial membranes, as well as vacuolization of the cytoplasm with the formation of necrosis sites in endothelial cells. As a result of lysis of the outer cell



membranes of the epithelium of the villi, cell integrity is violated and cell organelles are washed out into the lumen of the lacuna.

Conclusions: The described changes are regarded as a morphological reflection of the effect of herpes simplex virus toxins on the ultrastructure of cells, which leads to a violation of the synthesis of nutrients and their transport in the placenta itself. Emerging structural changes have a direct impact on the morbidity of pregnant women, fetuses and newborns. However, sometimes they are contradictory in nature and require further in-depth study using a set of modern research methods.