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Morphological Changes in the Placenta in Secondary Placental Insufficiency Against the Background of Hypoxia

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ABSTRACT

We studied morphological changes of secondary insufficiency in pregnant women. Based on the data obtained, we came to the conclusion that with mild hypoxia, the changes were minimal, this degree is compensated. With moderate hypoxia, a violation of the vascular network was manifested and degenerative changes in the villi began, and blood circulation and metabolism disorders in the umbilical cord tissues were noticeably noted.

KEYWORDS: secondary placental insufficiency, morphology, pregnancy, newborns.

Objective of the study. In this regard, we studied the morphological study of the placenta. The study was conducted on a contingent of 100 women from the risk group for the development of secondary placental insufficiency against the background of hypoxia, including 30 patients with a physiological course of pregnancy and childbirth (1st control group), the main prospective group consisted of 70 patients, of which 35 pregnant women were registered at the end of the second trimester of pregnancy who did not receive appropriate preventive therapy (2nd group) and the 3rd group consisted of patients who were registered from the early stages of pregnancy and promptly underwent a comprehensive study and received therapy aimed at preventing fetal hypoxia.

Materials and methods. For the study, 100 biopsy samples were taken from the placenta tissue of pregnant women with secondary placental insufficiency. The biopsy sections were fixed in 10% neutral formalin for 48 hours. Dehydration was performed in alcohols of increasing concentration and in chloroform. Histological sections were first stained with hematoxylin and eosin, toluidin blue, alcian blue to determine morphological changes. The stained preparations were examined under a microscope. To evaluate the histochemical results, morphometric studies were performed using the Student method. The scientific research program was carried out on the basis of the Bukhara Perinatal Center together with the Department of Obstetrics and Gynecology No. 2 of the Bukhara State Medical Institute and in the Bukhara Pathological Anatomy Bureau. A clinical and morphological study of the placenta was conducted in 40 patients in the biopsy diagnostics department of the Bukhara pathological anatomical bureau. The material for the pathological anatomical study was pieces of placenta and umbilical cord tissue, which were fixed in 10%

neutral formalin. The sections were stained with hematoxylin-eosin and Van Gieson and toluidine blue, analyzed in a universal Leika microscope, and the necessary areas were photographed.

Results of the study. The study of placental tissue was conducted on a contingent of 100 women from the risk group for the development of placental insufficiency against the background of hypoxia. In some cases, its dystrophy or complete disappearance is noted, which may indicate long-term exposure to hypoxia. The image can distinguish the chorionic villi, which are the main functional units of the placenta. The villi are structured formations surrounded by syncytiotrophoblast and cytotrophoblast cells. In some areas, visible changes can be seen, such as deposits and changes in the villi or fibrinoid deposits, which is associated with pathological processes such as hypoxia.

Conclusions. In some cases, its dystrophy or complete disappearance is noted, which may indicate long-term exposure to hypoxia. The image can distinguish the chorionic villi, which are the main functional units of the placenta. The villi are structured formations surrounded by syncytiotrophoblast and cytotrophoblast cells. In some areas, visible changes can be seen, such as deposits and changes in the villi or fibrinoid deposits, which is associated with pathological processes such as hypoxia.

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