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TITLE

VASCULAR ENDOTHELIAL GROWTH FACTOR AND ITS RECEPTORS IN THE PLACENTA OF GRAVIDAS WITH OBESITY

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ABSTRACT

Context

Morphological and functional changes in the placenta of gravidas with obesity are almost unexplored. The purpose of this research was to carry out immunohistochemical study VEGF and its receptors in the placenta of gravidas with obesity.

Objective

The purpose of this research was to carry out immunohistochemical study VEGF and its receptors (VEGFR-1, VEGFR-2 and VEGFR-3) in the placenta of gravidas with obesity.

Methods

The study is based on the morphological analysis of 20 secundines after the timely delivery (39-40 weeks). The main group consisted of 24 women (aged 29-40), suffering from alimentary-constitutional obesity. The control group consisted of 16 patients (aged 23-37) with normal body weight and physiological pregnancy. The expression of VEGF and its receptors was determined by immunohistochemical tests. Morphometric analysis of the preparations was performed using image analysis system based on "Axio Imager M1» microscope with AxioVision software (Carl Zeiss).

Results

In the main group, histological study of the placenta preparations, stained with hematoxylin and eosin, revealed that maturation degree of the villous tree corresponded to gestational age, along with moderately expressed compensatory-adaptive and involution-degenerative processes.

Conclusion

The identified features of immunohistochemical distribution of VEGF expression and its receptor in placental tissue of women suffering from obesity, to a certain extent, reflect the processes related to compensation and abnormal functioning of the mother-placenta-fetus system in the presence of hypoxia and hyperlipidemia. Research results indicate unavoidable development of morphological changes in the placenta during pregnancy against the background of obesity. Decrease in body weight before pregnancy can reduce the risk of placental disorders and improve perinatal outcomes.

INSTITUTE

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