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Influence of maternal hemoconcentration on fetal development

Zefirova T., Sabirov I., Chistyakova N., Zhelezova M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

This paper deals with the modern views on the rheological properties of blood in pregnant women and their effect on placental blood flow, fetal growth and development. Physiological role of hemodilution was determined during the second trimester of pregnancy. We have presented our own data on gestation process and perinatal outcomes in women with elevated blood concentration indices. It was found that the most typical complication in such cases is a fetal growth retardation, being detected in 40% of cases. It has been shown that the pathophysiological mechanism of this condition is based on the increased viscosity of blood in the small vessels and on disorders of microcirculatory blood flow. The rationality of the therapy aimed at improving the rheological properties of blood has been proved. In particular, pregnant women with high hemoglobin indices in the second trimester are recommended to take Dipyridamole.

Keywords

Blood viscosity, Fetal growth retardation, Hemodilution, Microcirculation, Pregnancy