The possibility of optimization of hemodynamics in the fetoplacental pool as a factor of influence on perinatal outcome

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Aim: To study the possibility of optimization of hemodynamics in the fetoplacental pool as a factor of influence on perinatal outcome.

Introduction: Endothelial dysfunction in uteroplacental pool is a universal response of placenta to adverse effects of hypoxia, which leads to a high percentage of obstetric complications. Recreation is a way of optimization of hemodynamics in fetoplacental complex in the interests of antenatal protection of the foetus.

Methods: The study was conducted at the 3rd Maternity hospital, Zaporozhye including 40 pregnant women with VD with age group of 21–36 years (Primapara – 52.5%, multipara is 47.5%). 40 pregnant women with chronic venous insufficiency to restore homeostasis used the IR thermo-camera, designed and implemented by the Department of Clinical Pathophysiology, Institute of physiology. Pregnant women of the main group underwent 3 sessions of IR sonotherapy (1 time per week), lasting 30 min at temperature of 35 °C.

Results: Pregnant women with VD after using sonotherapy in the infrared heat chamber in the complex sanatorium treatment, on comparison with the control group, a more pronounced therapeutic effect of lowering body weight by 22.3 ± 1.2%, and decrease of systolic 14.6 ± 0.2 mmHg and diastolic 15.1 ± 1.1 mmHg pressure. Ended pregnancy in a core of group women, the birth of full-term newborns with no signs of distress, with an Aggar score of 7–9 points, body mass 2980–4000 g, in the case of birth by caesarean section for obstetric indications.

Conclusion: The research conducted in the sanatorium “Velikii Lug”, confirms the effectiveness of the use of the IR sonotherapy in optimizing antenatal protection of the fetus against the background of endothelial dysfunction.

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