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 utero-placental 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. Endod delivery in a core group of women, the birth of full-term newborns with no signs of distress, with an Apgar score of 7–9 points, body mass 2980–4000 g, 1 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 IR sonotherapy in optimizing antenatal protection of the fetus against the background of endothelial dysfunction.

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PS041

Perinatal loss in multiple pregnancies

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Aim: The aim of the study was to analyze causes of perinatal loss in multiple pregnancies.

Introduction: In population rate of multiple pregnancies varies from 0.7 to 1.5%. Multiple pregnancies are complicated by perinatal loss 4–9 times more frequently than singleton pregnancies.

Methods: Retrospective study of medical histories was carried out. Thirty patients with twin pregnancy and perinatal loss of one or both fetuses were included. Thirteen (43.3%) twins were mono-chorionic (MC), 17 (56.7%) – dichorionic (DC). At 11–14 week of gestation choriocity was diagnosed by ultrasound; transvagal measurement of cervix was performed at 19–21 week; biometry was done to identify degree of fetus’ discordance.

Results: Complications of DC pregnancy: discordant fetal growth – 17 (100%), fetal growth restriction – 7 (41.2%), cervical insufficiency – 4 (23.5%). Discordant fetal growth was diagnosed in 17 DC twins: 8 (47.1%) – <20%, 9 (52.9%) – >20%. 8 (47.1%) patients with discordance >25% had highest degree of fetal growth restriction (estimated fetal weight <5%).

Perinatal loss in patients with DC twins was 61.8% (21 of 34 children). Highest mortality [10 of 21 (47.7%)] was among newborns at 22–27 week of gestation with DC type of placentation: 7 – intrauterine death, 3 died postnatally. Seventeen cases of intrauterine death were diagnosed: 7 (41.2%) – 22–27 weeks, 3 (17.6%) – 28–31 weeks, 5 (29.4%) – 35–36 weeks, 2 (11.8%) – at term.

Complications of MC pregnancy: discordant fetal growth – 13 (100%), twin-to-twin transfusion syndrome (TTTS) – 11 (84.6%), fetal growth restriction – 9 (69.2%), cervical insufficiency – 4 (30.8%). Discordant fetal growth was diagnosed in 13 MC twins: 7 (53.8%) – <20%, 6 (46.2%) – >20%. Four (30.8%) patients with discordance >25% had selective fetal growth restriction.

Perinatal loss in patients with MC twins was 80.8% (21 of 26 children). Highest mortality [13 of 21 (61.9%)] was among newborns at 22–27 week of gestation: all of them died antenatally. Nineteen cases of intrauterine death were diagnosed: 13 (68.4%) – 22–27 weeks, 4 (21.0%) – 28–31 weeks, 1 (5.3%) – 35–36 weeks, 1 (5.3%) – at term.

Conclusion: There were 1.3 times more perinatal losses in MC twins than in DC twins (80.8% vs. 61.8%). Regardless of choriocity, perinatal losses were observed more frequently at 22–27 weeks of gestation: DC (47.7%) and MC (61.9%) twins. Causes of perinatal loss in DC twins: prematurity – 52.9%, discordant fetal growth (>20%) – 52.9%, fetal growth restriction – 41.2%. Causes of perinatal loss in MC twins: TTTS – 84.6%, prematurity – 76.9%, fetal growth restriction – 69.2%, discordant fetal growth (>20%) – 46.2%.

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PS230

Hyaluronic acid solution as a treatment of adhesive intestinal obstruction in children – A positive effect

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Aim: To explore the possibility of using hyaluronic acid solution (HAS) for the treatment of intraperitoneal adhesions in children.

Introduction: Adhesive intestinal obstruction (AIO) has been found to be a challenging problem of abdominal surgery with increased occurrence in children worldwide. Intrapertoneal adhesions occur commonly after abdominal surgery and frequently cause intestinal obstruction. Current means of adhesion prevention includes good surgical technique and anti-adhesion barriers. This study is hence directed towards the effect of hyaluronic acid solution (HAS) in reducing the incidence and recurrence of adhesions.

Methods: 84 children were operated on for AIO. 21 children (25%) were operated on for early adhesive intestinal obstruction (EAIO), 63 (75%) – on late adhesive intestinal obstruction (LAIO) and 12 (14.29%) for recurrent AIO. Following surgery, these children were divided into two groups; group I (56 patients) and group II (28 patients). The Hyaluronic Acid Solution; Defensal was used. Follow-up on the children took place from 1 to 4 years.

Results: 13 children (23.21%) in group I were found to have adhesion syndrome in the first year after surgery. This increased to 20 (35.71%) patients over the 4 year period. Children in the II group who had undergone treatment for adhesion syndrome (cured conservatively using HAS) over a 2.5 year postoperative period were not found to have adverse syndrome at the end of the follow-up period with the exception of 2 (7.14%) patients. When compared to group I patients who had no treatment by the HAS, group II patients showed a higher degree of recovery with minimal recurrence.

Conclusion: Although accompanied by a minimal recurrence rate, HAS shows effectiveness as a treatment for adhesive intestinal obstruction in children. This serves as a step further towards a complete prevention of postoperative adhesion common in children.

References


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