

## **Effectiveness of ozone therapy in gynaecology.**

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Approximately 13 million premature infants are born in the world each year; they account for 60-70% of early neonatal mortality and 65-75% of infant mortality. Recently, ozone has been widely used in surgery and other areas of medicine, but so far there have been only sporadic reports of its use for the treatment of obstetric pathology.

Aim of the research: to study the efficacy of ozone therapy in the treatment of prematurity.

Material and methods. We enrolled 100 pregnant women with threatened miscarriage, of whom 70 received medical ozone and 30 received only conventional therapy. Depending on the gestational age at which the threatened abortion occurred, all the pregnant women were divided into 2 groups.

group: pregnant women with a threatened miscarriage in the first trimester (70 pregnant women).

group: pregnant women in the second trimester (30 women).

Within each group, the primary (with ozone therapy) and comparative subgroups were defined, depending on the method of treatment.

Ozone therapy was performed as intravenous channel infusions of ozonated physiological solution containing 400 µg/l ozone gas mixture in a 400 ml vial with sterile 0.9% sodium chloride solution for 10-15 minutes at the rate of 1 µg/l. Ozonated physiological solution was administered intravenously by infusion at the rate of 80-10 µg/l in group I corresponding to the procedure duration of 40-50 min.

Along with ozone therapy, the patients in the main subgroups received tocolytics depending on the gestational age and sometimes antibiotic therapy for infectious and inflammatory diseases. The effectiveness of ozone therapy was studied by laboratory studies, in which the levels of estradiol, progesterone and estrogen were determined.

Results and discussion. To study the direct effect of ozone therapy on the clinical picture of threatening miscarriage, an improvement in the patients' condition was observed. This is evidenced by a more rapid reduction in pain than in controls, which led to discontinuation of antispasmodics, a decrease in nervous excitability, improved sleep, reduced or completely disappeared signs of early toxicity in almost 80% of pregnant women.

As a result of composite treatment with the use of medical ozone, the pregnancy was preserved in 88% of the patients in Group I and in 72% of the pregnant women in the main subgroup of Group 2. In the comparison subgroups, pregnancies were preserved in 62% and 58% of cases, respectively.

In comparing the course of pregnancy in pregnant women who did not receive ozone therapy, a higher incidence of recurrent threatened miscarriage was noted, whereas in the group receiving ozone therapy, the recurrent threatened miscarriage was noted 16 times less frequently.

Late toxemia, the second most common complication in pregnant women in the study group, was 22 times less frequent than in the comparison subgroup.

Laboratory analysis showed that pregnant women in the first trimester of pregnancy had a weekly increase in progesterone levels of 7.6 nmol/L to 23.7 nmol/L, and prolactin levels of 83 (mE/l) to 138 (mE/l), respectively, compared with the comparison group. And blood levels of estradiol increased from 926 (nmol/L) to 1,753 (nmol/L). This weekly increase in the blood levels of estradiol progesterone and prolactin in pregnant women is not only an important indicator of the efficacy of ozone therapy in combination with holistic treatment, but also improves the prognosis for pregnancy and childbirth.

Conclusions. Thus, ozone therapy, thanks to its many therapeutic effects, can improve the effectiveness of treatment and avoid the use of many drugs used in threatening miscarriage. The condition of newborns was also better in mothers who received ozone therapy (according to the Apgar School, 76% of children scored 7-10, while in the comparison group 53.8% of children scored 53.8%).