

Benefits of the use of Myo-inositol (FT 500Plus) in women with polycystic ovary syndrome undergoing in-vitro fertilization in antagonist protocols with agonist trigger to prevent the OHSS.

M Khmil (UA) [1], S Khmil (UA) [2], R Mykula (UA) [3], A Khmil (UA) [4], I Pidhaina (UA) [5]

Context

The use of Myo-inositol increases the quality of oocytes (QO) in antagonist protocols with agonist trigger in patients with PCOS, undergoing IVF in the context of preventing the OHSS.

Objective

To prove the benefits of using Myo-inositol to improve the QO in women with PCOS undergoing IVF using antagonist protocols and agonist trigger to prevent the OHSS.

Methods

146 women with PCOS were involved in the research and were randomly assigned into 2 groups: with and without using Myo-inositol in protocol with recombinant (r)FSH, antagonist and GnRH agonist trigger.

Patients

Randomized clinical and laboratory studies were conducted among 146 women, aged 24-39 years, who had been diagnosed PCOS and treated 8-12 weeks by Myo-inositol before stimulation, and using stimulation protocol with rFSH, GnRH antagonist, GnRH agonist trigger.

Intervention(s)

Both groups received rFSH, antagonist and 0.2 ml GnRH agonist trigger 36 hours before follicular aspiration with further embryos vitrification at the blastocyst stage. The second group of patients supplementary received Myo-inositol in a dose of 2000 mg daily during 8-12 weeks until the beginning of stimulation.

Main Outcome Measures

Evaluation of the effectiveness of the treatment was based on the following parameters: I C - factor of oocytes retrieval without follicular flushing ; II C - total efficiency ratio of the obtained oocytes including oocytes after follicular flushing; III C - fertilization rate; IV C - frequency of embryo splitting; V C - hatching blastocysts; VI C - clinical pregnancy rate; VII C - miscarriage rate.

Results

There were 3 cases of mild OHSS. All embryos were frozen. The parameters which were presented above: I C in the first group was 0.73%, in the second – 0.79%. II C in the first group was 0.77%, in the second – 0.81%. III C in the first group was 78.1%, in the second – 81.4%; IV C in the first group was 71.2%, and in the second – 75.4%. V C in the first group was 40.4%, in the second – 41.3%. VI C in the first group was 43.3%, VII C –17.5%, and respectively 44.1% and 16.8% in the second group. All patients were transferred 1 embryo.

Conclusions

According to the study was based on small sample sizes, we can say that the effect of Myo-inositol is not significant, but has a positive result for the treatment of women with PCOS and the use of antagonist protocols with agonist trigger practically can prevent the OHSS, in patients undergoing IVF.

[1] Medical Center , [2] Medical Center, [3] Medical Center, [4] I.Horbachevsky Ternopil State Medical University, [5] I.Horbachevsky Ternopil State Medical University