

## P145. Three Dimensional Power Doppler and the efficiency of IVF cycles.

*A Rabadanova (RU) [1], N Gugushvili (RU) [2], R Shalina (RU) [3]*

**Introduction.** One of the main factors of the efficiency of in vitro fertilization (IVF) is the optimal receptivity of the endometrium. Nowadays 3D ultrasound is being actively introduced into practice. This method helps to evaluate the degree of expression of the endometrium receptors. It allows to predict the probability of pregnancy in IVF cycles and avoid deliberately ineffective transfers in cryopreserved cycles.

**The aim of the study:** predicting the probability of pregnancy in patients undergone IVF cycles, using data of volume blood flow in uterus and endometrium on the day of embryo transfer.

**Materials and methods.** A prospective analysis of 43 treatment cycles of standard IVF program was carried out. In each cycle 1 or 2 embryos of good quality were transferred. Two groups were identified depending on the effectiveness of the IVF cycle. First group – patients after IVF with the onset of pregnancy (16 patients); second – those who had no pregnancy (27 patients).

On the day of embryo transfer, 3D reconstruction of the uterus was performed using the function of energy mapping with the determination of the vascularization index (VI), the blood flow index (FI) and the vascularization-flux index (VFI) in the uterine vessels and endometrium.

**Results.** In patients with an effective IVF cycles, the thickness of the endometrium on the day of embryo transfer ranged from 8.0 to 14.5 mm ( $10.4 \pm 0.7$  mm). A direct correlation between the blood flow parameters obtained with energy Doppler and the efficiency of IVF cycles was revealed ( $p < 0.05$ ). The parameters VI, VFI in myometrium and VI and VFI in subendometrium were significantly higher in patients with the onset of pregnancy than in an inefficient cycles. The most informative parameters were the thickness of the endometrium and VFI in myometrium and subendometrium.

**Conclusion.** Thus, the thickness of the endometrium in combination with the energy doppler (VI, VFI in myometrium and subendometrium) on the day of embryo transfer is a good predictor of the effectiveness of the IVF cycle.

[1] Russian national research medical University name N.A. Pirogov, Moscow, [2] Russian national research medical University name N.A. Pirogov, Moscow, [3] Russian national research medical University name N.A. Pirogov, Moscow