

0-5 Peripheral Blood NK Cell Cytotoxicity and Vascular Perfusion of Endometrial and Subendometrial Layers in Women with Recurrent Pregnancy Losses and Multiple Implantation Failures after IVF Cycles

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Objectives: Decreased blood flow in endometrial layers has been reported in women with recurrent pregnancy losses (RSA) and autoimmune abnormalities. In this study, we aimed to investigate if there is any correlation in endometrial development, endometrial and subendometrial blood flow pattern, and cellular immune abnormalities.

Methods: Women with a history of 3 or more RSA or multiple implantation failures after IVF cycles were studied during peri-ovulation time. Endometrial thickness, pulsatility index (PI) and resistance index (RI) of uterine vessels by two-dimensional (2D) ultrasound, vascularization index (VI), flow index (FI) and vascularization flow index (VFI) of endometrium and subendometrium by three-dimensional (3D) power Doppler ultrasound using Virtual Organ Computer-aided AnaLysis (VOCAL™) and shell-imaging were measured by GE Voluson 730® (GE Kretz, Zipf, Austria). NK cell cytotoxicity, % CD56, CD3 and CD19 cells were measured by flowcytometry at the time of ultrasonographic evaluation. Ultrasonographic and immunological parameters were analyzed by Pearson's correlation.

Results: Endometrial VFI ($r=-0.516$; $p=0.050$) and Subendometrial VFI ($r=-0.552$; $p=0.041$) were negatively correlated with peripheral blood NK cell cytotoxicity (E: T ratio 50:1 and 25:1). VI ($r=0.960$; $p=0.000$), FI ($r=0.946$; $p=0.000$) and VFI ($r=0.946$; $p=0.000$) of Endometrium were positively correlated with those of subendometrium. Uterine radial artery RI was positively correlated with thickness of endometrium ($r=0.697$; $p=0.008$). However, it was not correlated with peripheral blood NK cell cytotoxicity ($r=0.332$; $p=0.247$).

Conclusion: Subendometrial and endometrial perfusion is negatively correlated with peripheral blood NK cell cytotoxicity in women with RSA or multiple implantation failures after IVF cycles.

0-6 Comparison of Clinical Outcomes According to the Day of Embryo Transfer in Human IVF-ET Program

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Objectives: The majority of embryo transfer (ET) to date had been performed on day-3 to reduce potential risks for developmental arrests of in vitro cultured embryos before ET. Development of sequential media has significantly improved culture conditions that could allow for blastocyst transfer on day-5. While the day-5 ET provides higher clinical pregnancy