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OVARIAN STIMULATION DOESN'T INFLUENCE THE UTERINE IMMUNE ENVIROMENT IN HEALTHY INFERTILE WOMEN.

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OBJECTIVE: There is a controversy about the impact of the OS on the immune cell composition and behavior in women undergoing to IVF. Our aim was to determine whether OS has any impact on the mothe_rs immune uterine cells in healthy infertile patients undergoing to IVF.

DESIGN: Prospective cohort study

MATERIALS AND METHODS: Sixty-five patients at IVI RMA Madrid who experienced RM or RIF and were undergoing IVF were included between November 2016 and November 2017. Endometrial biopsies were taken on LH+7 in a natural cycle or hCG+7 after OS. Twenty-five healthy oocyte donors were included as a control group, and they underwent similarly two endometrial biopsies in a natural cycle and stimulated cycle on the same days. Patients included in the study had a normal karyotype, pelvic ultrasound, serum TSH, fasting glucose and insulin, inherited thrombophilia tests (factor V Leiden, prothrombinG20210A, homocysteine, protein C, S and anti-thrombin III) and were negative for anticardiolipin and anti-b2-glycoprotein (IgG and IgM) antibodies and lupus anticoagulant. They had a normal cervical cytology and were negative for HPV, Chlamydia, Ureaplasma and Mycoplasma. The immune cell populations were analyzed by 3 techniques: flow cyitometry, immunohistochemistry and gene expression. An ‘‘artificial embryo’’ as HLA-C tetramer molecule was used to investigate immune cells binding. We analyzed the gene expression of the main proinflamatory TNF alpha and anti-inflammatory IL-10 cytokines in all samples.

RESULTS: We compared the number, % and gene expression of CD56bright (uNK), CD56+CD16+, CD16+, TregCD25+CD4+FoxP3+ cells, the uNK binding to HLA-C tetramer (‘‘artificial embryo’’), TNFalpha and IL-10 expression and no differences were observed in natural cycles between groups (patients and oocyte donors). Similarly, we di_dt find any differences when the immune cells were analyzed in endometrial biopsies obtained during OS between both groups. When biopsies from natural cycles and from OS cycles were compared, again we could not detect any significant differences in the immune cell populations.

CONCLUSIONS: OS doe_st affect the uterine immune cells populations or the HLA-C binding capacity in healthy women undergoing OS. Further studies are undergoing to investigate if women with previous autoimmune disorders may have different responses. Supported by: CDTI. Spain FERTILITY & STERILITY_ e131 IMAGING AND REPRODUCTIVE MEDICINE