CLAUDINE 3 AND 5 IN "IMPLANTATION WINDOW" ENDOMETRIM FROM WOMEN WITH TUBAL FACTOR OF INFERTILITY

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Structural, functional and molecular changes of endometrium are the basis for the adequate response to embryo signals resulting in implantation. Claudines are the main tight junction constitutents, which control lumen membrane change in the period of implantation.

The goal of the study was to evaluate characteristics of tight junctions molecules claudines in the period of "implantation window" in women with tubal factor of infertility.

Materials and Methods: The endometrial samples of 30 infertile women involved in IVF programs, obtained via Pipelle biopsy in the period of "implantation window" were morphologically and immunohistochemically analyzed according to treatment outcome: become pregnant (I group) or not (II group).

Results: Patients of II group showed inadequate morphological transformation in endometrium: secretory transformation occurred later and the number of mature pinopodes was sighnificantly lower (less than 20%), than in 1st group – more than 50% of surface epithelium ($p<0.05$). Analyzes of tight junctions pattern revealed score in II group for claudines 3 and 5 less than 0,5. The 1st group had better results (claudine 3 – 4, 5 score, claudine 5 – 3,5 score).

Earlier we identified the correlation in the same group of patient between progesterone receptor/estradiol receptor (PR/ER) ratio and outcomes of infertility treatment. The mean of PR/ER 1, 5-2,0 in "implantation window" correlates with positive results. We used therapy by estradiol ("Divigel", Orion-Pharma) and progesterone when ER/PR differs from normal ratio.

Obtained results taken together suggest tight junctions and receptivity of the endometrium to play a crucial role in implantation, but need to further investigation.