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MANAGEMENT OF RECURRENT IMPLANTATION FAILURE

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Management or recurrent implantation failure.

Implantation failure is rather a common event since only 73% of the concepted embryos are implanted into the endometrial cavity, and only 50% of them will end up as live births.

The immunology of RIF is complex. Cytokines and uterine Natural Killer cells are definitely involved. Additionally the extracellular matrix is also altered as this is described by MMP alterations. The role of inflammation is also crucial as the prostaglandin profile is also reported to be changed. In the frame of reproductive immunology, our group and others have demonstrated the immunomodulatory role of the CRH peptide during implantation and early pregnancy development. It has been shown that CRH is expressed in the implantation sites, and that CRH facilitates decidualization. Additionally we have shown that CRH facilitates maternal tolerance during implantation by inducing FasL expression upon the trophoblast surface, triggering in turn, Fas-expressing T cell apoptosis.

Recently, it has been reported that endometrial injury –as this is performed by a pipelle biopsy – one cycle before an IVF/ET, significantly increased the implantation, pregnancy and live birth rates in women who had one or more IVF failure. More over it has been shown that insertion of autologous peripheral blood monocytes (PBMC) along with HCG to the uterine cavity during the ET, significantly increased clinical pregnancy, implantation and live birth rates in patients with repeated failure of IVF/ET. By combining the knowledge on CRH and its association with a Th2 profile, and the reported effect of the PBMCs on IVF/ET efficacy, we investigated whether the intra-uterine administration of CRH-treated PBMCs during ET could increase IVF/ET in women with RIF. Our results indicate that such intervention

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significantly improves the clinical pregnancy rate, supporting a new clinical application in the field.