CHAPTER 32

ENDOMETRIAL INJURY SCORING SYSTEM (EISS)

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Individualized endometrial injury specifying based on EISS (Endometrial injury scoring system) in women with unexplained implantation failure

Despite normal appearence of endometrium or endometrial cavity normal arrangement or position of implantation site might be corrupt or alter in women with unexplained implantation failure. The implantation site may be located deep or its localization may be changed. If the implantation site is located deep, endometrial injury can rise it to the surface. Gentle trimming of endometrium with electrocoter or loop to create injury can enable the emergence of the implantation region in the deep. Many IVF clinics make endometrial injury to patients having the history of implantation failure. However, today, there is no universally accepted protocol regarding the optimal number and timing of the endometrial injury that are needed for achieving the improvement in receptivity. Along this line, the type and period of endometrial injury vary among clinicians. Due to these facts, standardization of endometrial injury procedures are required for improving implantation rates.

What is the role of endometrium in recurrent implantation failure (RIF)?

Despite the efforts of many investigators, definition of the role of the endometrium, its shape, and volume in recurrent implantation failure (RIF) cases continues to be difficult. This may be due mainly to the difficulties in validating the reasons for a defective implantation as well as for a decline in the implantation rates when there is a abnormally shaped endometrial cavity or a reduction in endometrial volume. Disturbed synthesis and expression of receptivity genes, hormonal factors, and inflammatory cytokines in the endometrium during the window of implantation might be a common factor among patients with RIF. For instance, dysregulated expression of several endometrial genes and prostaglandin have been reported in women with RIF. Moreover, many women suffering form implantation failure exhibit retarded endometrium suggesting they have a defective endometrium. All these data strongly suggest the hypothesis that decline in implantation rates in RIF patients could be due to a pathologic alteration in endometrium and its shape.

is proportional to the negative intrauterine pressure. The smaller the endometrial cavity the smaller the negative intra-uterine pressure. In line with this, increase in spontaneous preganancy rates may be due to an increase negative intrauterine pressure. However, the impact of negative intra-uterine pressure on IVF preganancy rates can be ignored due to lack of any role of fallopian tubes during embryo transfer. Nevertheless, increase in cavity length and volume can give rise to the surface of the implantation zone that facilitates the attachment of the embryo in IVF/ET cycles. Moreover, by reducing the intensity of the pathological subendometrial contractions normal cavity length and volume may allow a silent endometrial environment. It is well known fact that silence is critical for embryo attachmenT.

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