

## **9<sup>th</sup> Yazd International Congress and Student Award on Reproductive Medicine with 4<sup>th</sup> Congress of Reproductive Genetics**

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### **Key Lectures**

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#### **K-4**

#### **Recurrent implantation failure: Update etiology, diagnosis, treatment, and future direction**

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Implantation failure can be used for both patients who have never shown increased level of human chorionic gonadotropin, and those who have increased HCG without later evidence of gestational sac and only applicable in ART.

It is important to consider age, stage of embryo-cleavage, or blastocyst. Therefore, recurrent implantation failure (RIF) is the failure of clinical pregnancy after 4 good-quality embryo transfers at least three fresh or frozen IVF cycles in women under

age 40 years. Maternal age, BMI, smoking, and stress considered as the risk factors of RIF. Pathophysiology mechanism of RIF include immunological (maternal killer cells, peripheral, uterine Th1/ th2 ratio, TNF- $\alpha$  level-autoantibodies, and Aps-hereditary thrombophilia), Infection, Leukemia inhibitory factor, anatomical abnormalities, endometrial thickness, and genetic. Therapeutic interventions for RIF are optimal IVF treatment (Embryo factor-transfer methods-ovulation induction protocol-progesterone support) immunotherapy such as Tacrolimus, IVIG, PBMC (peripheral blood mononuclear cell), and granulocyte colony-stimulating factor (G-CSF), treatment of infection, correction of intra uterine pathologies, salpingectomy, endometrial injury, genetic (PGS) – PGD, endometrial receptivity array, male factors, lifestyle modification, supportive treatment. The recommendation for women with RIF perhaps the best is personalized medicine.