

9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics

Key Lectures

K-60

Challenge of cell therapy in endometriosis

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Endometriosis is a common medical problem, occurring in 10–15% of reproductive-age women and 20 to 50% of infertile women. Endometriosis is an inflammatory, mostly estrogen-dependent condition that happened due to the development of endometrial tissue outside of the uterus. Manifestations include pelvic pain, dysmenorrhea, infertility, and in some cases ovarian cancer. Despite the high prevalence of

endometriosis, the pathogenesis of this disease remains poorly understood. However, the most accepted theories are angiogenesis, cellular invasion, adhesion formation, fibrosis, neuronal infiltration, and abnormal cell growth. Also, some recent studies suggest that endometrial stem/progenitor cells function in the development of endometriosis. In other words, potential stem cells can form endometriotic implants. However, regarding the fact that endometrium becoming fibrosis during the progress of endometriosis, stem cell therapy offers the potential treatment of tissue injury and fibrosis. It is accepted that stem cell has the capacity of self-renewal and differentiation into other cells simultaneously confirming its important role in maintaining the homeostasis, repair, and renewal of endometrial fibrosis. Regarding the controversial role of stem cells, more efforts are needed to explore the specific stem cell-based therapy and make its clinical use.