Dear Prof. G. (Gholamreza) Pourmand,

Congratulations, your abstract has been accepted for presentation during the 33rd Annual EAU Congress Copenhagen

Your presentation is scheduled in the following session:

Session title:
Male infertility 2: Genetic factors and diagnostic dilemmas
Session type:
Poster Session 56
Presentation mode:
Standard presentation
Date:
Sunday, 18 March 2018, 15:45 - 17:15
Room:
Red Area, Room 2 (Level 0)

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Abstract ID Number:
AM18-0746
New Number:

756

Abstract Title:
The differentiation of non-obstructive azoospermic patients' germ cells using supernatant product of adipose tissue-derived mesenchymal stem cells and three-dimensional structure
Authors:
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Body

Introduction & Objectives Out of the 1% of men with infertility around the world, 10% are classified as non-obstructive azoospermia (NOA) patients. In cases of NOA due to maturation arrest, injection of immature germ cells into the egg cytoplasm is the only way to improve fertility potential. However, due to this method's low efficacy, extensive researches are being

conducted to create optimal culture system in order to in vitro spermatogenesis. In this study, the effect of adipose tissue-derived mesenchymal stem cells (SPAS) in combination with fibrin scaffold on differentiation of NOA-derived testicular cells was investigated.

Materials & Methods Totally, testis tissues of 12 NOA patients (caused by maturation arrest) referring to infertility treatment center of ACECR (academic center of education, culture and research, Qom branch) were obtained by open testicular biopsy and then dissected mechanically. Testicular cell suspension was coated into fibrin scaffold and finally SPAS was used as the differentiating medium and scaffolds were placed in 34°C with 5% Co2 and 95% humidified incubator for 14 days.Histology analysis using hematoxylin/eosin staining and Real Time-PCR for TNP2, PRM2 and 3βHSD genes were done before and after culture.

Results Since there was a significant increase in expression level of TNP2, PRM2 (as indicators for the presence of post-meiotic germ calls) and 3βHSD (as a marker for leydig cells function) mRNA after 14 days culture and the presence of elongating spermatids and sperm like cells in histological analysis.

Conclusions It seems that the introduced culture system for germ cells with somatic component was efficient in supporting post-meiotic differentiation.

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