

عنوان مقاله:

Sperm Telomere Length and Chromatin Status in In-dividuals with Varicocele

محل انتشار:

بیستمین کنگره بین‌المللی بیولوژی تولید مثل و پانزدهمین کنگره بین‌المللی سلول های بنیادی (سال: 1398)

تعداد صفحات اصل مقاله: 1

نویسندگان:

S Sabet - *Reproductive Biotechnology, Reproductive Biomedicine Re-search Center, Royan Institute for Biotechnology, ACECR, Isfahan, Iran. ACECR Institute of Higher Education, Isfahan, Iran*

M Tavalaei - *Reproductive Biotechnology, Reproductive Biomedicine Re-search Center, Royan Institute for Biotechnology, ACECR, Isfahan, Iran*

S TAHAMTAN - *Reproductive Biotechnology, Reproductive Biomedicine Re-search Center, Royan Institute for Biotechnology, ACECR, Isfahan, Iran*

MH Nasr Esfahani - *Reproductive Biotechnology, Reproductive Biomedicine Re-search Center, Royan Institute for Biotechnology, ACECR, Isfahan, Iran. Isfahan Fertility and Infertility Center, Isfahan, Iran*

خلاصه مقاله:

Background: Varicocele is referred to as abnormal ventricular expansion of the testicles with incidence of 10-20% in male population oxidative stress are considered as an effective me-diator for Varicocele associated infertility that it can effect on telomere length integrity and sperm chromatin .Considering that the level of oxidative stress is high in infertile men with Varicocele, the aim of this study was to compare the length of sperm telomere as a potential indicator for predicting genome integrity, along with assessing the status of sperm chromatin and lipid peroxidation between infertile men with varicoceles and fertile individuals. Materials and Methods: This study was performed on 18 sam-ples of male and female varicocele (II and III grade) and 20 fertile individuals. On a part of each semen sample, sperm mo-tility, concentration and morphology were evaluated by using computer-aided sperm analysis (CASA), and on the remaining semen sample evaluation of protamine deficiency, DNA frag-mentation, sperm lipid peroxidation, and sperm telomere length were performed by Chromomycin A3 staining, TUNEL assay, Bodipy probe and real time PCR, respectively. Results: The results showed that the mean of sperm parameters including sperm count concentration, and sperm motility in infertile men with varicocele were significantly lower in com-parison with fertile individuals. Also, the percentage of abnor-mal morphology was significantly higher in infertile men with Varicocele ($p < 0.05$). in addition, mean percentage of sperm lipid peroxidation, protamine deficiency and DNA fragmen-tation were significantly higher while mean of sperm telomere length was significantly lower in infertile men with varicocele compared to fertile men ($P < 0.05$). Conclusion: The result of this study shows that infertile men with varicocele have telomere length less than fertile, which may be due to increased oxidative stress and its relevance to varicocele state. Therefore, by antioxidant therapy alone or in combination with varicoelectomy could reduce the effects of oxidative stress on sperm telomere length and chromatin

کلمات کلیدی:

Varicocele, Sperm Telomere Length, Infertility

