

عنوان مقاله:

Evaluation of ebselen supplementation on cryopreservation medium in human semen

محل انتشار:

مجله طب تولید مثل ایران، دوره 12، شماره 4 (سال: 1393)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Background: An effect of cryopreservation on human sperm is sublethal cryodamage, in which cell viability post-thaw is lost more rapidly at later times than in fresh cells. Objective: This study examined whether the addition of an antioxidant to cryopreservation medium could improve the post-thaw parameters and evaluation of sperm chromatin quality of cryopreserved human spermatozoa from men with normal semen parameters. Materials and Methods: Semen samples (n=35) were collected by masturbation and assessed following WHO standards. Individual samples were classified as two portions. One portion (n=10) was for elucidate the concentration of ebselen. Then the samples (n=25) were divided in to 5 groups. The first aliquot remained fresh. The second aliquots was mixed with cryopreservation medium. The third aliquots were mixed with cryopreservation medium containing solvent of ebselen. The fourth and fifth aliquots were mixed with cryopreservation medium containing 1.25 and 2.5 μm of ebselen. Samples were frozen and thawed samples were assessed for sperm parameters. Three-way ANOVA Multivariate measures were used to assess. According to this assessment the differences are observed in existent groups in post-thaw count, motility index, vitality staining, and morphology and DNA fragmentation. Results: After freezing the media containing of ebselen, DNA fragmentation is significantly different in comparison with control group. ebselen with 1.25 μm dose was significantly associated with post-thaw DNA fragmentation ($p=0.047$). Similarly ebselen with 2.5 μm dose was significantly associated with post-thaw DNA fragmentation ($p=0.038$). But other parameters were not altered. Conclusion: These results suggest that the addition of ebselen to cryopreservation medium doesnot improve post-thaw parameters and DNA fragmentation of sperm

کلمات کلیدی:

Cryopreservation, Ebselen, DNA fragmentation, Human sperm

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