عنوان مقاله:

Effect of antioxidant therapy on the sperm DNA integrity improvement; a longitudinal cohort study

محل انتشار:

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خلاصه مقاله:

Background: The effect of antioxidant therapy on sperm DNA fragmentation index (DFI)and achieving natural pregnancy were under debate. Very few studies have showedthe rate of pregnancy rate after the antioxidant therapy due to ethical and technicallimitations.Objective: The aim of this cohort study was to determine the improvement rate ofsperm DFI and natural pregnancy rate after the antioxidant therapy in infertile men.Materials and Methods: 1645 infertile men were subjected for this study from May2015 to December 2017. The Spermogram and sperm DFI were assessed using WorldHealth Organization (WHO) 2010-based protocols and sperm chromatin structure assay(SCSA), respectively, in sperm samples before and after antioxidant therapy.Results: The total sperm DFI improvement rate was 38.9% in the total population.Sperm DFI improvement had close correlation with total motility (r= 0.731, p= 0.001)and progressive motility improvement (r= 0.885, p= 0.001); 16.8% of individuals whocompleted antioxidant therapy for nine months achieved natural pregnancy.Conclusion: The results of the current study suggested that SCSA along withspermogram might be a suitable option for the evaluation of fertility potential. Inaddition, antioxidant therapy may be useful for men with high levels of sperm DFI.However, the rate of pregnancy was still low and other treatment protocols such asassisted reproductive technology may be necessary.

کلمات کلیدی:

Antioxidant, Reactive oxygen species, DNA fragmentation, Male infertility