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Antioxidants Effects on Sperm Parameter in Varicocelized Male Rat

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Abstract : Varicocele is one of the common causes of infertility in 30-50% of married men which occurs within the spermatic cord. It can be considered as an abnormal dilatation and stasis of veins of the pampiniform plexus that drain the testis. It occurs in 15-20% of the male population. Inducible nitric oxide synthase (NOS) activity has been frequently reported in varicose veins. Several studies have considered the relationship between varicocele and semen NO concentrations. NOS isoforms have been shown to regulate a number of functions, e.g., sperm motility and maturation and germ cell apoptosis in the testes. In adult patients with varicocele, the amount of NO levels in the varicose veins are 25 times higher than in serum of peripheral veins. The aim of this study was to review the effect of different antioxidant that we applied so far on sperm parameters as well as sperm DNA fragmentation. The findings of this study suggest that antioxidants improve sperm parameters which are associated with infertility in varicocelized rats, and treatment can reduce damage to sperm DNA and increase the chance of fertility.

Keywords : antioxidant, rat, sperm parameter, varicocele
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