Evaluation of Electromagnetic Field Effect on Oxidative Stress Level, Testosterone Hormone and Sexual Behavior in Male Rat Treated with Omega 3

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Abstract

Background and Objective: Omega-3s are considered essential fatty acids that cannot be synthesized by human body and should be obtained from foodstuff. This study aimed at evaluating the beneficial effect of Omega-3s ,exposed in Electromagnetic Field (EMF), on sexual behavior ,Serum total testosterone level, malondialdehyde (MDA) level and total antioxidant capacity(TAC) in male rats.

Material and Methods: 32 Wistar rats (males=24, females=8) were allocated to four groups of Control, EMF, omega 3 and omega 3 & EMF. Estradiol benzoate was injected to the female rats subcutaneously. Then after taking biopsy from epididym and testis of each groups, tissue preparation was performed to look through via light microscope on 28th day of study. Serum MDA, TAC and Testestrone were measured in male rat by Radio Immune Assay (RIA) method.

Results: The highest degree of testicular tissue destruction and MDA level were observed in electromagnetic field group and the lowest in omega 3 group. The sexual behavior, testosterone hormone and TAC level were lowest in electromagnetic field group and highest in omega 3 group.

Conclusion: Based on the Results, administration of omega 3 can significantly lower the adverse effects of EMF and have beneficial influences on sexual behavior in male rat.

KeyWords: Electromagnetic Field Effect (EMF), Rat, Omega 3, Sexual Behavior

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