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 group, tissue preparation was performed to look through a light microscope on 28th day of study. Serum MDA, TAC and Testosterone 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