

Effect of He-Ne Laser Therapy on the Testis and Serum Testosterone Level in Adult Rats

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Abstract : The trial was conducted to examine the effect of He-Ne laser therapy on the testis and serum testosterone level in adult rats. Thirty five albino Western adult male rats aged 3-4 months and weighing approximately 250-300 g were used and divided into three treatments. Testicular tissue of rats in the first and second treatments were exposed once daily for three successively days to a dose of irradiation 1.02 j/cm² (40 second), and to 2.03 j/cm² (80 second) respectively, while the third group left without any treatments (control). The results showed that the process of irradiation adversely affected on the level of serum testosterone concentration of the irradiated rats in the first and second treatment comparing to the normal level in the control group. While the histological examination showed that decrease in number of germ cells with 40 second of irradiation at day three, with 80 second of irradiation the decreased started at day two and three. The spermatids number decreased in rate low, medium, high respectively for three days of 40 second of irradiation, while the spermatids number were adversely affected by dropping in a rate of medium, large and very large for three days of 80 second of irradiation, respectively. In conclusion our study revealed that any reduction in sertoli cells causes adverse affect on both spermatids and germinal cells which increase with the increasing of duration and repetition of irradiation.

Keywords : He-Ne laser, rats, testosterone, spermatids

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