

**Histological and Histochemical Study of Low Power Laser  
Irradiation (LPLR) Effect on Nerve Injury**

**Abstract**

The experimental study of the effect of low power laser irradiation (LPLR) on nerve injury histologically and histochemically had been carried out. Ten dogs were used in this study and divided into two groups, control and experimental. Surgical exposure of their mental nerves was done for all in the same way. In the experimental group, the exposed nerve was subjected to laser irradiation for 5 minutes following the application chart of the device for neural disorders, and then the animals were scarified at 1, 3, 7, 14, 30 days intervals. The control group were followed the same regime but without laser radiation. Biopsies were taken for light microscopy study (H&E and silver impregnation stain), electron microscopy study and histochemical study (OTAN and Gomori's acetyl thiocholine methods) was used. The obtained results were as follow:

Temporary mild degenerated traumatic changes occurred at the first, third and seventh day following laser radiation. Regeneration started at 14<sup>th</sup> day with complete regeneration at 30<sup>th</sup> day. It can be concluded that laser therapy enhance recovery of injured irradiated nerve without any residual effects.