

## **THE EVALUATION OF DEPRENYL EFFECT ON BCL-2 PROTEIN EXPRESSION ON SPINAL MOTONEURON OF ADULT RAT FOLLOWING SCIATIC NERVE ROOT AVULSION**

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**BACKGROUND/AIMS:** Avulsion of sciatic nerve ventral root leads to cell death of motor neurons.

Deprenyl has a neuroprotective effect on spinal cord motoneurons.

The aim of this study was to evaluate the deprenyl effect on Bcl-2 expression in adult rats after ventral root avulsion of sciatic nerve.

**METHODS:** 24 Sprague -Dawley adult male rats were divided into experimental and control groups and each group was further subdivided into three groups. Rats were anesthetized with ketamin and xylazin injection and then their left sciatic nerve was avulted. Experimental subgroup rats were injected intraperitoneally with 0.25 mg/kg of deprenyl while control groups received an equal volume of distilled water. 2 intact rats were also considered as a sham group.

The first injection was performed one hour after avulsion and lasted for one; two and six weeks daily. The animals were then sacrificed. Spines were removed at L1 lumbar segment equal with L4- L6 spine segment .These segments were lysed in lysis buffer and centrifuged .Optical density of supernatants were detected by an ELISA reader. The normality of data was confirmed by the Npar test.

**RESULTS:** Variance analysis showed no significant difference between the experimental group and sham group. Otherwise, there were significant differences between two week and six week experimental groups and equal control group and also between these groups and the sham group.

**DISCUSSION/CONCLUSION:** It seems Bcl-2 protein expression is increased by deprenyl drug.

**Keywords:** avulsion, deprenyl, motoneuron