Comparison between Selegiline and Acetyl L-Carnitine after spinal cord injury

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Abstract

Aim:
The aim of this study was to compare the neuroprotective effect of Selegiline and Acetyl L-Carnitine.

Materials and Methods:
By the use of Aneurysm Clips we injuried spinal cord in adult female rats in means of study Spinal Cord Injury(SCI).Then animals were devided into 3 groups depended on the type of treatment: 1_ treated with Selegiline 2- treated with Acetyl l-Carnitine 3_ Injected normal saline as control.Injections were continued for 21 days .After this period they were sacrificied by transcardiac perfusion and spinal cord was prepared for microscopic study .Total motoneurons counts were done in anterior horn of spinal cord and motoneurons reduction were calculated . Apoptosis in these neurons were studied by ultrastructure technique.

Results:
Motoneurons reduction were decreased in the group which were treated with Acetyl l-Carnitine, and increased in the control group. The ultrastructural study of mitochondria showes changes known as cromatolysis.

Conclusion:
Neuroprotective effect of Acetyl L-Carnitine is more than Selegiline and farther more studies is necessary to recognize this.

Keywords: Selegiline-Acetyl L-Carnitine-SCI.