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Poster Presentation

Effect of Hydroalcoholic Extract of Agrimonia eupatoria on Alpha Motoneurons Regeneration of Anterior Spinal Cord after Compression of Sciatic Nerve in Rat

Ghazaleh Nabaviniya, Maryam Tehrani Pour*, Javad Bahara

Department of Biology, Mashhad Branch, Islamic Azad University, Mashhad, Iran

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Abstract

If nerve cells damaged, they cannot be restored by themselves. Agrimonia eupatoria has been used in traditional medicine to heal the wounds and scratch, and dry the scars. Therefore, this herb probably contains compounds with restorative properties. The purpose of this study was to investigate the restorative effect of Agrimonia eupatoria on alpha motor neurons of anterior spinal cord. In this experimental study, 18 Wistar rats were divided into three groups of 6: control, compression, and treatment with hydroalcoholic extract with a dose of 75 mg/kg. After sciatic nerve compression, the extract was injected in treatment group in two times on first and eighth day, and samples of sciatic nerve were prepared from spinal cord segments. After tissue processing and staining, neuronal density was examined by using dissector and stereological methods in different groups. Data were analyzed by using ANOVA software at significance level of ($p<0.05$). Results showed that neuronal density in the compression group was significantly lower than the control group ($p<0.05$). Also in treated group with hydroalcoholic extract, significant increase was observed rather than the compression group, ($p<0.05$). Considering the increase in neuronal density in treatment group, this herb has improved the process of regeneration probably due to compounds similar to normal regenerative factors in body.

Keywords: Neuronal Density, Agrimonia Eupatoria, Reganeration, Sciatic Nerve

****Corresponding Author:*** Maryam Tehrani Pour

Email: *mehrdad.chaji@stu.um.ac.ir*

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