The Effect of Aquae Extract of Aloe Vera on Expression of Acetylcholinesterase (AChE) After Spinal Cord Compression in Adult Rats

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Abstract

Introduction:
Prevalance of SCI is fast growing. In this study we evaluate the effect of Aloevera gel insaving of motoneurons and expressing the Acetylcholinesterase enzyme.

Materials and Methods:
32 adult Sprague-Dawley rats were randomly divided into 4 groups: 1-Laminectomy + saline injection. 2-Laminectomy + Aloevera injection. 3-SCI + Aloevera injection. 4-SCI + saline injection. Examination of Acetylcholinesterase enzyme was performed by counting the motoneurons based on using immunohistochemical technique.

Result:
4 weeks after laminectomy, results indicated compression reduce number of motoneurons. Aloevera gel mitigates reduction in number of motoneurons. It also helps to increase the Acetylcholinesterase enzyme after SCI.

Conclusion:
Unknown neuroprotective effects of Aloevera coming from its anti-inflammatory and neuroprotective properties are in charge of the observed decrease in the number of dead motoneurons, and subsequent increase in Acetylcholinesterase after SCI.

Keywords: SCI, Acetylcholinesterase, Aloevera gel