

[1]LIU Songjiang ,HAN Shuli,ZHU Riqi,DUAN FUji.elimination and supplementation method in the application of the malignant tumor treatment[J].Acta

Chinese Medicine and Pharmacology,Vol.42,No,2,2014,42-44 pages.

[2]Yuan-ChiehYeh,Hsing-YuChen,Sien-HungYang,Yi-Hsien Lin, Jen-HweyChiu, Yi-Hsuan Lin,and Jiun-LiangChen1.Hedyotis diffusa Combined with Scutellaria barbata Are the Core Treatment of Chinese Herbal Medicine Used for Breast Cancer Patients:A Population Based Study.Evidence-Based Complementary and Alternative Medicine.

Volume 2014, Article ID202378,9pages.

[3]WANG Qunhong, HU Min, XIANG Xueyan, WANG Guanfu.Experimental Study

on Anti — tumor Effect of Danggui Buxue Decoction[J].Chinese Archives of Traditional Chinese Medicine,Vol.32,- No.4,2014:904-905+974.pages.

THE EXPERIMENTAL STUDY OF THE EFFECT OF THE ACUPUNCTURE THERAPY OF ACTIVATING BRAIN AND REGAINING CONSCIOUSNESS ON THE EXPRESSION OF PROTEINS RELATED TO NEURONAL APOPTOSIS IN THE HIPPOCAMPUS TISSUE OF ALZHEIMER'S DISEASE RATS

Wang Yujue1 ; Lv Ling2

(1.The Second Affiliated Hospital of Heilongjiang University of Chinese Medicine, Harbin 150001, China ; 2.The Second Hospital of Harbin, Harbin 150001, China)

Biography : Wang Yujue(1985.01-), Master Degree Candidate, Research Direction : To treat nervous system disease by acupuncture combined with rehabilitation, Mailing Address : Heilongjiang province Harbin city Nangang District Gogol Street No. 411, the doctor's office of third rehabilitation ward of the Second Affiliated Hospital of Heilongjiang University of Chinese Medicine, Mailbox : wangyujue201314@126.com, Tel : 13100880662.

Corresponding Author : Lv Ling(1984.01-), Master Degree Candidate, Research Direction : To treat senile disease by acupuncture therapy, Mailing Address : Heilongjiang province Harbin city Daowai District Satellite Road No. 38, the doctor's office of occupational disease ward of the Second Hospital of Harbin, Mailbox : ll2008817@163.com, Tel : 13766821932.

The Alzheimer's disease, also named senile dementia[1], is a primary neurodegenerative disease of brain[2]. Its main clinical symptoms are recent-memory disturbance, decreasing of learning ability, l-apopathy and dyskinesia[3]. The morbidity of the Alzheimer's disease went up year by year[4]. Older age and lower level of education were highly correlated with the development of AD[5]. Thus, finding an effective method to control the Alzheimer's disease is the major task to be solved in the world.

Objective: This study aims to explore the effect of the acupuncture therapy of activating brain and regaining consciousness on the learning and memory function and the expression of Bcl-2, Bax and Caspase-3 in the hippocampus tissue of Alzheimer's rats mediated by A β 1-42. Investigate the mechanism of the anti-apoptotic action of the acupuncture therapy of activating brain and regaining consciousness.

Methods:

1. Sixty clean level Wistar rats were randomized into five groups including blank group, model group, AAR group and control group. After successfully modeling, the AAR group was treated by needling Neiguan、Renzhong、Yintang、Baihui caves for four weeks. The control group was treated by needling Shenshu、Zusanli caves. The other two groups were given no treatment.
2. To observe the behavior change of the rats through Morris water maze test the day after the last treatment.
3. To observe the neuronal apoptosis in the hippocampus tissue of Alzheimer's rats by Tunel assay after the last day of Morris water maze test.
4. To observe the expression of Bcl-2、Bax and Caspase-3 in the hippocampus tissue of Alzheimer's rats by immunohistochemical method.

Results:

1. From the second day of orientation navigation experiments, the escaping latency was significantly shorter in the AAR group and the control group.The downward trend was more obvious in the AAR group, with significant differences compared with the control group (P < 0.05) . In the observation of percentage of the second quadrant time and traversing times, it showed marked increasing in the AAR group and the control group.But a higher trend was showed in the AAR group compared with the control (P < 0.05) .
2. The number of apoptosis cells in the AAR group and the control group was obviously fewer than that in the model group.
3. The expression of Bcl-2, compared with the model group, was increased in the AAR group and the control

group ($P < 0.01$), and the AAR group showed a better effect ($P < 0.05$). The expression of Bax and Caspase-3, compared with the model group, was decreased in the AAR group and the control group ($P < 0.05/P < 0.01$), and the AAR group showed a better effect ($P < 0.05$).

Conclusions:

1. The acupuncture therapy of activating brain and regaining consciousness has a marked effect on ameliorating learning and memory ability of Alzheimer's rats.
2. The acupuncture therapy of activating brain and regaining consciousness can improve learning and memory function of Alzheimer's disease rats through up-regulating the Bcl-2 and down-regulating the Bax and Caspase-3.

Key words: AD; acupuncture therapy of activating brain and regaining consciousness; learning and memory ability; cell apoptosis

References:

- [1] Li Yujuan, Wang Fei, Liu Chuliang, et al. JNK pathway May be involved in isoflurane-induced apoptosis in the hippocampi of neonatal rats [J]. *Neuroscience Letters*, 2013, 545(5): 17-22.
- [2] Tao Tao, Liu Yan, Zhang Jingyue, et al. Therapeutic hypercapnia improves functional recovery and attenuates injury via antiapoptotic mechanisms in a rat focal cerebral ischemia/reperfusion model [J]. *Brain Research*, 2013, 1533(33):52-62.
- [3] Herrup K. Reimagining Alzheimer's disease—an age-based hypothesis [J]. *The Journal of Neuroscience: the Official Journal of the Society for Neuroscience*, 2010, 30(50):16755-16762.
- [4] Ritchie K, Lovestone S. The dementias [J]. *Lancet*, 2002, 360(9347):1759-1766.
- [5] Thibault Mura. How many dementia cases in France and Europe Alternative projections and scenarios 2010-2015[J]. *Eur J Neurol*, 2010, 17(2): 252-259.

SCALP ACUPUNCTURE REGULATES TUMOR NECROSIS FACTOR ALPHA AND NUCLEAR FACTOR-KAPPA B PROTEIN EXPRESSION IN A RAT MODEL OF HEMORRHAGIC STROKE

Wei Zou¹, Hao Liu², Xueping Yu¹, Xiaowei Sun¹, Xiaohong Dai¹, Wei Teng¹

1 First Affiliated Hospital, Heilongjiang University of Chinese Medicine, Harbin, Heilongjiang Province, China. Email: kuangzou1965@163.com

2 Tongde Hospital of Zhejiang Province, Hangzhou, Zhejiang Province, China

Abstract Background Hemorrhagic stroke is associated with high morbidity and mortality. Studies suggested that scalp acupuncture could facilitate functional recovery after cerebral hemorrhage.

Methods Adult male Sprague-Dawley rats received autologous blood (50 μ l) into the right caudate nucleus on the right side under pentobarbital anesthesia, and then received scalp acupuncture or sham acupuncture. Western blot was used to detect the content of tumor necrosis factor alpha (TNF- α) and nuclear factor-KappaB (NF κ B) protein expression.

Results Scalp acupuncture regulated the brain content of TNF- α and NF- κ B ($p < 0.01$ for both).

Conclusions Scalp acupuncture regulates tumor necrosis factor alpha and nuclear factor-KappaB protein expression in a rat model of hemorrhagic stroke.

1. Introduction Acupuncture is widely used as an alternative treatment of stroke patients in China. Acupuncture has multiple biological responses, including circulatory and biochemical effects. 1 The effects are mediated mainly by sensory neurons to many structures within the central nervous system. 2 These past studies indicated that SA could alleviate neurological deficits after hemorrhagic stroke. In this study, we used a rat model of hemorrhagic stroke to examine the potential mechanism of SA on neurological functions.

2. Materials and Methods Rats were anesthetized and fixed on a stereotactic frame. Autologous blood (50 μ L) was injected into the right caudate putamen at the following coordinates: AP: -0.24 mm, L: 3.5 mm, D: 6 mm. Starting from the second day after the surgery, rats received SA (DU20 through GB7 on the lesion side; distance: 1.5 cm) or sham SA (from 1 cm to the right of DU20, for 1.5-cm along the nostril direction). Two sessions (each lasting for 30 min) were conducted daily for 7 consecutive days. For each 30-min session, needling (approximately 180-200 r/min) was carried out for 3 bouts, each lasting for 5 min. Western blot assay was described in Liu's article 3.

2.3 Statistical analysis Data were analyzed with SPSS 22.0 software. Protein expression was analyzed using one-way ANOVA followed by the Tukey's test. Data are represented as mean \pm SD for protein expression. $p < 0.05$ have statistical significance.

3. Results SA treatment decreased TNF- α expression ($p < 0.01$ vs. rats in the model and sham group). SA treatment decreased NF κ B expression ($p < 0.01$ vs. rats in the model and sham group).