

Therapeutic Effect of Xingnaotongdu Acupuncture Combined with Huoxuetongluo Decoction on Patients with Post-Stroke Cognitive Dysfunction

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Abstract: To investigate the efficacy of Xingnaotongdu Acupuncture Combined with Huoxuetongluo Decoction in the treatment of post-stroke cognitive dysfunction. Eighty-eight patients with post-stroke cognitive dysfunction were enrolled in our hospital from July 2016 to July 2018. The patients were randomly assigned to a total of 44 patients. The control group was treated with conventional western medicine. The experimental group was treated with Xingnaotongdu Acupuncture Method + Huoxuetongluo Decoction on the basis of the control group for 1 month. Statistical comparison was performed between the two groups before and after treatment (NCSE), serum heat shock protein (HSP70), cortisol (Cor), and daily living ability (ADL). Compared with the control group, the NCSE scores of the experimental group were higher after treatment ($P<0.05$). Compared with the control group, the serum HSP70 level was higher and the Cor level was lower ($P<0.05$). The ADL score of the experimental group was higher after treatment ($P<0.05$). Xingnaotongdu Acupuncture Combined with Huoxuetongluo Decoction in the treatment of post-stroke cognitive dysfunction can regulate serum Cor and HSP70 levels improve cognitive function and improve daily living ability.

1. Introduction

Stroke has replaced coronary heart disease as the main factor of adult disability and death in China. According to statistics, about 1.6 million people die of stroke each year. Even if the rescue is successful, some patients have different degrees of cognitive dysfunction. Physical and mental health and daily life have serious impacts [1]. At this stage, there is no specific measure for Western medicine to treat cognitive dysfunction after stroke. More and more researchers are turning the focus of research to Chinese medicine. Traditional Chinese Medicine believes that post-stroke cognitive dysfunction is a category of “dementia” and “stagnation syndrome”. It belongs to the certificate of the virtual standard. The basic pathogenesis is deficiency of kidney essence, qi stagnation and blood stasis. The treatment needs to follow the blood circulation. The principles of sputum, brain and kidney. By stimulating the brain, the acupuncture method promotes microcirculation blood flow, improves blood supply to the brain, and promotes language ability and memory recovery. Huoxue Tongluo Decoction is based on Tongqiao Huoxue Decoction, which can improve the nerve conduction ability and restore cognitive function by improving blood circulation around the lesion. In this study, Xingnao Tongduo acupuncture combined with Huoxue Tongluo Decoction was used for post-stroke cognitive dysfunction and achieved satisfactory results. Details are as follows.

2. Materials and Methods

2.1 Clinical Data

After review by the hospital ethics committee, 88 patients with post-stroke cognitive dysfunction from July 2016 to July 2018 were enrolled in the hospital, and 44 patients were randomly assigned

to each other. The experimental group consisted of 24 males and 20 females; aged 42-79 years old, mean (60.55 ± 8.46) years old; stroke type: 23 cases of cerebral hemorrhage, 21 cases of cerebral infarction; control group of 25 males and 19 females; age 42 ~ 80 years old, average (61.08 ± 7.59) years old; stroke type: 20 cases of cerebral hemorrhage, 24 cases of cerebral infarction. The clinical data of the two groups were balanced and the difference was not statistically significant ($P > 0.05$).

2.2 Selection Criteria

(1) Inclusion criteria: Western medicine refers to "internal medicine" [2], confirmed by cranial CT; Chinese medicine refers to "diagnostic criteria for the efficacy of traditional Chinese medicine syndrome" [3]; cognitive impairment occurs within 6 months of stroke, The duration of the disease is ≥ 2 months; the patient and the family know and sign the consent form; (2) the exclusion criteria: the drug-tolerant person in this study; the important organ-organic lesion; the cognitive dysfunction caused by other diseases; A person with a history of mental illness; is taking a drug such as donepezil or memantine.

2.3 Methods

Treatment method The control group was treated with conventional western medicine, namely oral atorvastatin calcium tablets (Zhejiang Xindonggang Pharmaceutical Co., Ltd., Guoyao Zhunzi H20133127), 20 mg/time, oral aspirin (Bayer Health Care Co., Ltd.) , Chinese medicine Zhunzi J20130078), 100 mg / time, intravenous infusion of 30 mg edaravone (Kunming Jida Pharmaceutical Co., Ltd., national medicine quasi-word H20080495), both times / d; experimental group on the basis of the control group Give Xingnao Tongduo acupuncture method + Huoxue Tongluo Decoction, Huoxue Tongluo Decoction group: red peony 3 g, peach kernel 6 g, musk 0.15 g, safflower 9 g, jujube 5, ginger 9 g, Chuanxiong 3 g 250 ml of rice wine, 6 g of old onion, boiled with water, boiled to 300 ml, divided into two times in the morning and evening; the mind is activated by the method of acupuncture: select the god, the gods, the brain, the Neiguan, Sishencong, Huatuo Jiaji points, brain households, Baihui and other acupuncture points, acupuncture Neiguan points, straight thorns about 0.6 inches, Shiyan turn diarrhea, the god, brain, Shangxing, Shenting, Baihuishunpi along the meridian Sting, small amplitude and high frequency twirling technique, Sishencong needle tip penetrates the Baihui point into the needle about 0.5 inch, flat fills the diarrhea method, Hua Wei Method serpentine ridge vertical piercing about 1.4 inches, to get gas reinforcing-reducing, needle time was 20 min, 1 times / d. The two groups were treated continuously for 1 month.

Detection method Collect 4 ml of fasting elbow vein blood in the morning, centrifuge for 10 min, take the supernatant and store in -20°C environment for testing. Serum heat shock protein (HSP70) and cortisol (Cor) were determined by double-antibody sandwich enzyme-linked immunosorbent assay. The kit was produced by Guangzhou Yidenu Biotechnology Co., Ltd., and was completely referred to the kit instructions.

2.4 Observation Indicators

(1) Cognitive function of the two groups before and after treatment. The neurobehavioral cognitive state checklist (NCSE) was selected from the aspects of language ability, spatial structure ability, computational ability, consciousness level, and concentration ability. The higher the score, the higher the cognitive function. (2) Serum HSP70 and Cor in the two groups before and after treatment. (3) Daily living ability of the two groups before and after treatment. The daily living activity scale (ADL) was used for evaluation. The score ranged from 0 to 100. The higher the score, the better the daily living ability.

2.5 Statistics

By SPSS22.0 treatment, the measurement data were expressed as ($\pm s$), and the t test, $P < 0.05$ showed that the difference was statistically significant.

3. Results

3.1 NCSE Scores

After treatment, the NCSE scores of the two groups were higher than those before treatment, and the increase of the experimental group was significantly higher than that of the control group ($P<0.05$). See Table 1.

Table 1 NCSE score comparison ($\pm s$, minutes)

| Group | n | Before treatment | After treatment | <i>t</i> | <i>P</i> |
|---------------|----|------------------|------------------|----------|----------|
| test group | 44 | 38.51 \pm 5.28 | 58.99 \pm 4.26 | 20.024 | 0.000 |
| Control group | 44 | 39.11 \pm 4.67 | 51.67 \pm 5.97 | 10.991 | 0.000 |
| <i>t</i> | | 0.564 | 6.620 | | |
| <i>P</i> | | 0.573 | 0.000 | | |

3.2 Serum HSP70, Cor Levels

After treatment, the levels of serum HSP70 and Cor were improved compared with those before treatment, and the HSP70 level in the experimental group was higher than that in the control group, and the Cor level was lower than that in the control group ($P<0.05$). See Table 2.

Table 2 Comparison of serum HSP70 and Cor levels ($\pm s$)

| Group | n | HSP70 (ng/ml) | | Cor (nmol/L) | |
|---------------|----|------------------|------------------|--------------------|--------------------|
| | | Before treatment | After treatment | Before treatment | After treatment |
| test group | 44 | 24.89 \pm 4.09 | 37.45 \pm 5.16 | 378.44 \pm 78.31 | 274.56 \pm 51.88 |
| Control group | 44 | 25.12 \pm 3.64 | 30.44 \pm 4.91 | 380.51 \pm 77.25 | 340.18 \pm 52.42 |
| <i>t</i> | | 0.278 | 6.528 | 0.124 | 5.901 |
| <i>P</i> | | 0.781 | 0.000 | 0.901 | 0.000 |

3.3 ADL Score

After treatment, the ADL scores of the two groups were higher than those before treatment, and the increase of the experimental group was significantly higher than that of the control group ($P<0.05$). See Table 3.

Table 3 ADL score comparison ($\pm s$, minutes)

| Group | n | Before treatment | After treatment | <i>t</i> | <i>P</i> |
|---------------|----|------------------|------------------|----------|----------|
| test group | 44 | 54.33 \pm 5.61 | 67.46 \pm 8.13 | 8.817 | 0.000 |
| Control group | 44 | 53.78 \pm 6.17 | 61.38 \pm 7.94 | 5.013 | 0.000 |
| <i>t</i> | | 0.437 | 3.548 | | |
| <i>P</i> | | 0.662 | 0.000 | | |

4. Discussion

After stroke, it is prone to cerebral hypoperfusion, which damages brain tissue and causes central nervous system hypoxia-ischemia. During this process, a large number of active peptides are produced, which have morphine-like inhibition, which can aggravate central nervous system damage and induce recognition. Know dysfunction [4]. According to relevant statistics, 72.5% of stroke patients have cognitive dysfunction, and its prevention and treatment has caused widespread clinical attention [5]. The curative effect of conventional western medicine is limited, and the

disease is easy to recur after withdrawal, and the clinical application is limited.

Traditional Chinese Medicine believes that the disease is located in the brain, and the function of the brain has always been recorded. "Lingshu•": "The brain is the sea of the marrow", the marrow is more than enough, it is light and powerful, since its own If the marrow is not enough, the brain turns to tinnitus, the sputum is sloppy, and nothing can be seen. If you are slack, you will have cognitive dysfunction. The doctors of the past dynasties advocated the theory that "the lesion is in the brain and the first is taken from the Du Meridian" to guide the clinical practice of acupuncture. Du Meridian is the only meridian of the fourteen meridians and the meridians of the brain. Regulating the Du Meridian can effectively improve the blood circulation of the brain, establish a collateral circulation, and restore the central nervous system function [6]. Shenting Point is the place where the gods are stored, and it has the power to refresh the brain. The acupuncture of the Huaji Jiaji points can regulate the function of the brain and the organs. The Baihui point is the Sanyang Wuhui, which has the effect of refreshing and refreshing.

With the clinical pathogenesis of this disease, some scholars believe that regardless of hemorrhagic stroke or ischemic stroke, can lead to qi stagnation and blood stasis, the veins are impassable, the five internal organs are deficiencies, and cannot be raised. "", thereby inducing cognitive dysfunction [7]. Based on this, this study introduces Huoxue Tongluo Decoction, Fangzhong Chishen Huoxue Sanyu; peach kernel and safflower pass through blood circulation; musk Kaishuo awakens, promotes blood stasis; Chuanxiong promotes blood circulation and relieves pain. Multi-drug cooperation to play the role of promoting blood circulation to remove phlegm and collaterals. In this study, Xingnao Tongdu Acupuncture and Huoxue Tongluo Decoction were combined for post-stroke cognitive dysfunction. The results showed that the NCSE score and serum HSP70 level in the experimental group were higher than those in the control group, and the serum Cor level was lower than the control. The group ($P<0.05$) was similar to the results of Jia Yunzhe et al [8]. The results suggest that combined application can improve blood circulation, reduce brain tissue damage, regulate serum Cor and HSP70 levels, and improve cognitive function. In addition, the study also showed that the ADL score of the experimental group after treatment was higher than that of the control group ($P<0.05$), suggesting that the combined application can improve the daily living ability of patients.

In summary, Xingnao Tongdu Acupuncture Combined with Huoxue Tongluo Decoction in the treatment of post-stroke cognitive dysfunction can regulate serum Cor and HSP70 levels, improve cognitive function, and improve daily living ability.

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