Literature Review on the Research Progress of common used acupuncture therapy in treating Wind-Stroke

by Schelbert Urs

Acupuncture therapy is common used for stroke rehabilitation in China and has also been investigated in the West. Acupuncture is effective for a wide range of conditions, such as pain, musculoskeletal disorders and several neurologic diseases.¹

There are many different treatment methods and techniques, such as traditional body acupuncture with or without moxibustion, different schools of scalp acupuncture, electro acupuncture and Xing Nao Kai Qiao acupuncture.

1. Body Acupuncture

The traditional body acupuncture is more focused on the Yang meridians rather then the Yin meridians. Frequently used acupoints are Quchi (LI 11), Jianyu (LI 15), Zusanli (ST 36), Hegu (LI 4), Baihui (GV 20), Kunlun (UB 60), Fengshi (GB 31), Yanglingquan (GB 34), Juegu (GB 39), Huantiao (GB 30), Jianjing (GB 21), Shousanli (LI 10), Yangfu (GB 38), Zhongzhu (TE 3), Fengchi (GB 20), Yangxi (LI 5), Weizhong (UB 40), Zhigou (TE 6), Qubin (GB 7), Xiajuxu (ST 39) Taichong (LR 3), Xingjian (LR 2), Shenque (CV 8), Guanyuan (CV 4), Fenglong (ST 40), Geshu (UB 17), Tongli (HT 5), Sanyinjiao (SP 6) and Danzhong (CV 17).²³⁴ Chen et al.⁵ reported that the most frequently prescribed master meridian in acupuncture therapy for vascular dementia is the Du meridian (Governor Meridian), followed by the gallbladder meridian, pericardium meridian, and extra-point meridians. However, the most commonly prescribed master meridians are Baihui (DU-20), followed by Fengchi (GB-20), Shenmen (HT-7), Renzhong (DU-26), and Dazhui (DU-14). The most frequently prescribed master meridians in body acupuncture therapy are the bladder meridian, followed by the stomach meridian, liver meridian, and gallbladder meridian. However, the most commonly prescribed master meridian was the bladder meridian, followed by the gallbladder meridian, stomach meridian, Fenglong (ST-40), Taichong (LR-3), Hegu (LI-4), and Sanyinjiao (SP-6). Acupuncture therapy targeted toward these meridian points for senile dementia was also shown to be effective, but there have been few systematic and objective reports on the curative effects of acupuncture on cognitive impairment in stroke patients. Therefore, this report presents the most common
forms of clinical acupuncture therapy for cognitive impairment associated with stroke along with a discussion of related clinical research.”[6]

2. International Scalp Acupuncture

For the international scalp acupuncture often used lines are the Anterior Oblique Line of the Vertex-Temporal (MS6), Lateral Line of Vertex (MS8) and Lateral Line 2 of Vertex (MS9). Needle technique: insert the needles 1.5 to 2 cun horizontally under the scalp and manipulate the needles with a fast rotation for 2 to 3 minutes, retain the needles for 30 minutes. During the retention of the needles, repeat the fast-rotating manipulation 2 to 3 times. The patients should be advised to move the affected limbs during the needling and retaining (Yun Dong Fa). For the early stage of hemiplegia, the duration of needle retention can be prolonged for up to a few hours. [2] “Liu and Liao [7] treated 15 cases on acupoints such as Middle Line of the Vertex on the uninjured side and Anterior and Posterior Oblique Lines of Vertex- Temporal and reported a total effective rate of 80 %.”[6] “Xu et al. [8] employed both scalp and body acupuncture for treatment of 22 patients with hemiplegic cognitive impairment in combination with physical therapy (PT), occupational therapy (OT), speech therapy (ST), and cognitive training (CT) for 4 weeks, while the control group received only PT, OT, ST, and CT, respectively. The results showed greater increases in scores on the Cognitive Capacity Screening Examination (CCSE) and the Loewenstein Occupational Therapy Cognitive Assessment Battery (LOTCA) in the combination therapy group than in the controls.”[6]

3. Electro Acupuncture

Electro acupuncture is also common used. Choose two points on the upper, lower limbs or on both sides of the face. When the needles are inserted into the points and the needling sensation is obtained, connect the electro-stimulator to the needles. Select an intermittent wave or sparse wave and an appropriate strength to induce a slight muscular vibration, 20 to 30 minutes per session. [2] “Jin et al. [9] suggested that electroacupuncture therapy for VD would enhance cerebral cortex excitability, reduce blood viscosity, and improve microcirculation to enhance cerebral blood circulation and facilitate energy metabolism of degenerated neurons.” [2]
4. Xing Nao Kai Qiao (XNKQ)

Xing Nao Kai Qiao (XNKQ) is a relatively new acupuncture technique. It was invented by Dr. Shi Xue Ming of Tianjing TCM College in 1972. The meaning of XNKQ is awakening or activating brain and opening orifices. The XNKQ method is based on activating, restoring and calming the spirit, regulating Yin Yang and Qi Blood, dredging the channels and supplementing the Essence. The principles of traditional acupuncture treatment in stroke patients include "calming liver-yang and smoothing liver wind" in the acute period. "Smoothing meridians" is the main principle in stable cases and the sequela period. The points chosen were based on the theories of "using three yang meridians to treat wind" and "using Yang-Ming meridians to treat apoplexy." A comparison of clinical effects and research shows that the traditional acupuncture treatment for stroke patients has a definite effect in stabilizing the disease and improving physical function. However, to improve cerebral circulation and protect the brain cells, the changes in brain function are not obvious. Dr. Shi’s XNKQ mainly uses Yin meridians and the Du meridian to activate the brain and open the orifices and nourish the liver and kidney; smoothing the meridians is supplementary. The XNKQ use the basic acupoints Renzhong (DU 26), Neiguan (P 6), Sanyinjiao (SP 6), Chize (LU 5), Jiquan (HT 1), Weizhong (UB 40) and Hegu (LI 4). The needling technique plays an important roll in XNKQ. For Renzhong (DU 26) use sparrow pecking technique until tears come to the eyes. Renzhong (DU 26) open the orifices, arouses the original spirit, and regulates the bowels and viscera. For Neiguan (PC 6) use a reducing method for one minute. Neiguan (PC 6) is the luo-connecting point of the pericardium channel, it quiet the Heart, regulate the Blood, calm the spirit, and it improves the cardiac output of stroke patients and improves the supply of oxygen to the brain. Needling Sanyinjiao (SP 6) on the affected side with a strong manipulation until the leg twitches 3 times. Sanyinjiao (SP 6) supplements the three Yin channels of the leg, regulating Qi and Blood and calming the spirit. Weizhong (UB 40) is punctured on the affected side with lifting and thrusting method, until the leg twitches 3 times. Jiquan (HT 1) is punctured on the affected side, until the arm twitches 3 times. Chize (LU 5) is punctured with a flexed arm, stimulated until the arm twitches 3 times. Chize (LU 5), Jiquan (HT 1) and Weizhong (UB 40) smooth the channels and network vessels while moving Qi and Blood to improve movement of the limbs. Hegu (LI 4) is punctured with the tip of the needle in direction to the metacarpophalangeal head to make clenched fingers relax. “Shi examined the effects of Xingnnao Kaiqiao (inducing resuscitation) therapy
in a total of 9,005 stroke patients and reported that after 3–5 courses of treatment, 5,337 patients showed full recovery (59.27 %), 2,085 showed a beneficial effect (23.15 %), 1,453 showed improvement (16.14 %), 40 had no response (0.44 %), and 90 died (1.0 %). The total effective rate of acupuncture treatment was 98.56 %. Clinical laboratory tests for relevant indices indicated remarkable differences after compared with before therapy.\[6][11]

5. Research Progress on Acupuncture therapy for Wind-Stroke

Acupuncture is not generally accepted in Western countries due to lack of convincing and prove of efficacy, but it also more frequently applied in stroke patients.\[12-14]\ “Positive results have been reported in studies with different designs and treatments from 24 hours to 8 years after stroke onset.”\[14-19]\ “Experimental studies have demonstrated that acupuncture has effects in common with physical exercise on the release of transmitters and peptides in brain and spinal cord.”\[14]\ “Studies have indicated that acupuncture therapy can increase the blood flow in ischemic areas and that it shows protective effects upon post-cerebral ischemia neuronal damage.”\[6][13]\ Acupuncture therapy can also help to increase the microcirculatory blood flow of infarction patients, enhance blood flow, increase tissue perfusion, ameliorate the supply of blood and oxygen for cells around foci of infection (these cells are in a partial ischemic state during the early pathological period), and activate their remaining functions to compensate for functions of ischemia-induced necrotic cerebral cells, such as language competence, memory, orientation force, and ability to perform complex tasks.”\[6][24]\n
6. Summary

Many studies have shown that acupuncture has the potential to treat the symptoms follow a Wind Stroke and “acupuncturists who treat patients on a daily basis regularly see obvious benefits resulting from the treatments they provide. Their conviction that acupuncture ‘works’ is based on careful observation and experience.”\[25]\ “Available data indicate that acupuncture might have a positive effect on the stroke prevention and rehabilitation, but the evidence is not strong enough. Although large numbers of clinical trials were
conducted, most of them were small-sampled, single-centered”\textsuperscript{[26]} and the methodological quality many of those studies remain poor. Most of those studies missing very important information. For example the style of acupuncture, depth of insertion, needle stimulation, needle retention time, needle type etc. A good tool to improve the studies would be the STAndards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA).

“These set out reporting guidelines for the acupuncture rationale, the details of needling, the treatment regimen, other components of treatment, the practitioner background and the control or comparator interventions. In addition, and as part of this revision process, the explanations for each item have been elaborated, and examples of good reporting for each item are provided. In addition, the word ‘controlled’ in STRICTA is replaced by ‘clinical’, to indicate that STRICTA is applicable to a broad range of clinical evaluation designs, including uncontrolled outcome studies and case reports. It is intended that the revised STRICTA checklist, in conjunction with both the main CONSORT statement and extension for non-pharmacological treatment, will raise the quality of reporting of clinical trials of acupuncture.”\textsuperscript{[27]}” The STRICTA recommendations have been adopted by several participating journals that regularly publish in the field of acupuncture research. They have all agreed to recommend the STRICTA guidelines in their Instructions for Authors.”\textsuperscript{[28]}

### STRICTA Checklist

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<th>Intervention</th>
<th>Item</th>
<th>Description</th>
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| Acupuncture rationale   | 1    | Style of acupuncture  
Rationale for treatment (e.g. syndrome patterns, segmental levels, trigger points) and individualisation if used  
Literature sources to justify rationale                                                                 |
| Needling details        | 2    | Points used (unilateral)  
Numbers of needles inserted  
Depths of insertion (e.g. skin or tissue level)  
Responses elicited (e.g. de qi or twitch response)  
Needle stimulation (e.g. manual or electrical)  
Needle retention time  
Needle type (gauge, length, and manufacturer or material) |
| Treatment regimen       | 3    | Number of treatment sessions  
Frequency of treatment                                                                                                                                   |
| Co-interventions        | 4    | Other interventions (e.g. moxibustion, cupping, herbs, exercises, lifestyle advice)                                                                                                  |
| Practitioner background | 5    | Duration of relevant training  
Length of clinical experience  
Expertise in specific condition                                                                                                                         |
| Control intervention(s) | 6    | Intended effect of control intervention and its appropriateness to research question and, if appropriate, binding of participants (e.g. active comparison, minimally active penetrating or non-penetrating sham, inert)  
Explanations given to patients of treatment and control interventions  
Details of control intervention (precise description, as for Item 2 above, and other items if different)  
Sources that justify choice of control |

Checklist of items to include when reporting on the interventions in a randomized controlled trial of acupuncture.

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Bibliography


