Clinical Study on Kidney-Nourishing and Governor Vessel-Regulating Acupuncture Therapy for Apoplexy Sequela

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Abstract Objective: To observe the clinical efficacy of kidney-nourishing and governor vessel-regulating therapy for apoplexy sequela. Methods: Sixty subjects were equally randomized into observation group and control group, and respectively treated for 35 days. The scores of survival quality, interleukin-6 (IL-6), interleukin-8 (IL-8) and tumor necrosis factor (TNF) were measured, and the clinical efficacy were compared between two groups. Results and Conclusion: After treatment, all the observational items were improved, with better results in observation group than in control group. This therapy has better effects than regular method in the treatment of apoplexy sequela.

Keywords Stroke; Acupuncture; Tumor necrosis factor; Interleukin-6; Interleukin-8

CLC Number: R246.1

Document Code: A

Apoplexy sequela is a common and frequent disease in China. It is clinically manifested by failure of involuntary movement of unilateral limbs or numbness on one side of the body, wry tongue and mouth, slurred speech and so on. Its disability rate reaches 70% in apoplexy sequela patients and its recurrence rate amounts up to about 30%, bringing about great burdens to the family and society. Therefore, in the treatment of apoplexy sequela, preventing cerebral re-infarction and improving survival quality become particularly important. To seek a more effective treatment method, we treated 60 cases of apoplexy sequela by kidney-nourishing and governor vessel-regulating therapy or conventional acupuncture in two groups; the patients’ consciousness, speech, muscular strength, the score of survival quality, interleukin-6 (IL-6), interleukin-8 (IL-8), tumor necrosis factor (TNF) and clinical efficacy were observed. The results are reported as follows.

General Data

All subjects were diagnosed in accordance with Diagnostic and Therapeutic Effects Assessment Criteria for Stroke stipulated by State Administration of Traditional Chinese Medicine in January 1996 and confirmed by head CT scan. On Chinese medical syndrome differentiation, the apoplexy sequela was of...
qi deficiency and blood stasis or wind-phlegm obstructing collaterals; its scores were between 6-40; the patients’ ages ranged from 40 to 65 years old. All the subjects were randomized in visiting sequence into two groups. Among 30 cases in observation group by kidney-nourishing and governor vessel-regulating therapy, 19 cases were men and 11 cases were women; their ages ranged from 40 to 65 years old, averaging 61.8; the shortest duration was 7 days and the longest was 5 months, averaging 1.5 months. Of 30 cases in control group by conventional acupuncture, 17 cases were men and 13 cases were women; their ages ranged from 40 to 65 years old, averaging 62.7; the shortest duration was 5 days and the longest was 4 months, averaging 1.3 months.

Treatment Methods

1. Observation group
   Acupoints: Baihui(GV 20), Fengfu(GV 16), Dazhui (GV 14), Jinsuo(GV 8), Mingmen(GV 4), Shenshu (BL 23) and Taixi(KI 3).
   Needling operation: The needles were rapidly inserted into the acupoints. Shenshu(BL 23), Taixi(KI 3) and Mingmen(GV 4) were given reinforcing techniques, other acupoints even reinforcing-reducing techniques. The needles were retained for 30 min and manipulated once 5 min for 1 min.

2. Control group
   Acupoints: For the upper limb dysfunction, Jianyu(LI 15), Quchi(LI 11), Shousanli(LI 10), Waiguan (TE 5) and Hegu(LI 4) were selected. For lower limb dysfunction, Huantiao(GB 30), Yanglingquan (GB 34), Zusanli(ST 36), Jiexi(ST 41) and Kunlun(BL 60) were selected. For slurred speech, Yamen(GV 15), Lianquan(CV 23) and Tongli(HT 5) were added.
   Needling operation: The needles were rapidly inserted into the acupoints and manipulated with even reinforcing-reducing techniques. The other operations were the same as those in observation group.

All the patients were observed from the perspectives of clinical efficacy, score of survival quality, IL-6, IL-8 and TNF before and after treatments. The kits were provided by Beijing Chemclin Biotech Co. Ltd and the experiments were done by full-time laboratorians on the Instructions. The treatment was carried out once a day and six treatments made up one course. There was a one-day interval between any two courses. After total five-course treatments, the observational indexes were reexamined. The results were expressed by $x\bar{r} \pm s$ and analyzed by $t$ test in SPSS11.0 statistical software.

Therapeutic Outcomes

1. Criteria for therapeutic outcome assessment
   The clinical efficacy was expressed by the percentage of the difference between pre-treatment score minus post-treatment score divided by pre-treatment score. The life of quality was determined by the quality of life scale by World Health Organization (WHOQOL-100)[2]. The higher score is, the better quality of life is.

   Basic recovery(BR): $\geq 81\%$, less than 6 scores
   Marked improvement(MI): $\geq 56\%, <81\%$
   Improvement(IM): $\geq 36\%, <56\%$
   Slight improvement(SI): $\geq 11\%, <36\%$
   No change(NC): $<11\%$
   Deterioration(DE): below zero

2. Treatment results
   Table 1. Comparison of clinical efficacy between two groups(Cases)
<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>BR</th>
<th>MI</th>
<th>IM</th>
<th>SI</th>
<th>NC</th>
<th>Total effective rate(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>30</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>93.3</td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>80.0</td>
</tr>
</tbody>
</table>

   Table 2. Comparison of score of quality of life between two groups ($x\bar{r} \pm s$)
<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>30</td>
<td>68.5 $\pm$ 5.98</td>
<td>76.3 $\pm$ 6.58$^{(1)(3)}$</td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>67.7 $\pm$ 5.84</td>
<td>70.9 $\pm$ 6.21$^{(2)}$</td>
</tr>
</tbody>
</table>

   Notes: comparison within one group, 1)$P<0.01$, 2)$P<0.05$; comparison between two groups, 3)$P<0.01$.
   Same below

   Table 3. Comparison of IL-6, IL-8 and TNF between two groups ($x\bar{r} \pm s$)
<table>
<thead>
<tr>
<th>Group</th>
<th>Treatment</th>
<th>N</th>
<th>IL-6(pg/ml)</th>
<th>IL-8(pg/ml)</th>
<th>TNF(ng/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>Pre</td>
<td>30</td>
<td>230.3 $\pm$ 43.6</td>
<td>0.8 $\pm$ 0.1</td>
<td>2.3 $\pm$ 0.5</td>
</tr>
<tr>
<td>Control</td>
<td>Post</td>
<td>30</td>
<td>172.8 $\pm$ 30.5$^{(1)(3)}$</td>
<td>0.7 $\pm$ 0.1$^{(1)(3)}$</td>
<td>1.7 $\pm$ 0.4$^{(1)(3)}$</td>
</tr>
<tr>
<td>Pre</td>
<td>30</td>
<td>228.4 $\pm$ 42.8</td>
<td>0.85 $\pm$ 0.1</td>
<td>2.4 $\pm$ 0.6</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>30</td>
<td>203.1 $\pm$ 36.2</td>
<td>0.8 $\pm$ 0.1$^{(2)}$</td>
<td>2.0 $\pm$ 0.5$^{(2)}$</td>
<td></td>
</tr>
</tbody>
</table>

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