Clinical Observations on the Treatment of Pseudobulbar Paralysis by Combined Scalp and Body Acupuncture

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Abstract

Objective: To investigate the efficacy of scalp acupuncture in combination with body acupuncture for treating pseudobulbar paralysis. Methods: Eighty patients were randomly divided into treatment and control groups, 40 cases each. The control group was treated by the routine method of Western medicine and the treatment group by combined scalp and body acupuncture on the basis of the former. The curative effect was evaluated after treatment in both groups. The influence of the treatment on mean blood velocity (MBV) in anterior, middle and posterior cerebral arteries was observed by transcranial Doppler (TCD) in both groups. Results: The total efficacy rate was 97.5% in the treatment group and 12.5% in the control group. The recovery rate was 75% in the treatment group and 0% in the control group. There was a significant difference between the two groups (P < 0.01). TCD showed that blood velocity in cerebral arteries was significantly increased and the unbalanced stasis of the right and left cerebral blood flow changed in the treatment group. A comparison of MBV between pretreatment and posttreatment showed P < 0.01. Conclusion: Scalp acupuncture in combination with body acupuncture has a good effect on pseudobulbar paralysis.

Key Words: Acupuncture Therapy; Pseudobulbar Paralysis; Ultrasonography, Transcranial Doppler

Clinical Data

1. Diagnosis criteria

Based on the Criteria of Diagnosis and Therapeutic Effect of Stroke edited by the Natuinal Committee of Science and Technology in 1995, if the patient has two symptoms of the five main complaints (hemiplegia, dottiness, difficulty in language, paraesthesia and wry mouth and tongue) and dysphagia, he/she could be diagnosed as pseudobulbar paralysis.

2. General data

All patients were in-patients, who were diagnosed with cerebral infarct or cerebral hemorrhage with CT scan, and were randomized into treatment group and control group with method of drawing lots. The general data were displayed in the table 1. There are comparability between the groups' clinical data with statistical analyses (P > 0.05).

Treatment Methods

1. Control group

Patients in the control group were treated with...
breathing oxygen, lowering blood pressure, rectifying electrolyte disturbance and acid-base imbalance and expectant treatment, and patients with high encephalic pressure were intravenously dripped with mannite.

2. Treatment group

Except the methods used in the control group, scalp and body acupuncture were also used in the treatment group. Middle Line of Vertex (MS 5, line between Baihui, GV 20, and Qinding, GV 21), Oblique Line 1 of Vertex (line 1.5 cun in length 45° oblique to Baihui, GV 20), Lateral Line 2 of Vertex (MS 9, 2.25 cun apart from MS 5, line between Chengling, GB 18, and Zhengying, GB 17), Oblique Line 2 of Vertex (a line 1.5 cun in length 45° lateral to Chengling, GB 18) were punctured with stainless steel needles 0.38 mm in diameter and 40 mm in length, into galea aponeurotica with an angle of 15° and 30 mm in depth along the skin. The needles were handled with lifting and thrusting manipulations with a small amplitude in inserting and a big amplitude in lifting for 30 seconds in every acupoint. During manipulations, the patient was asked to move the affected part. Once the qi arrived, the needles were connected with the KWD 808 II electroacupuncture instrument with intermittent wave, frequency of 3.3 Hz and tolerable intensity, and retained for 30 min. Both Fengchi (GB 20) and Yifeng (TE 17), the needle was inserted 2.5 cun towards the laryngeal prominence, Lianquan (CV 23), Jinjin (Ex-HN 12) and Yuye (Ex-HN 13) were needled with even reinforcing and reducing methods after Deqi, and the needles were also retained for 30 min. The treatments were given twice daily, acupoints at the affected side were needle in the morning, and the healthy side in the afternoon.

3. Observation methods

All patients in the both groups were examined with Medsonic transcranial Doppler ultrasonography instrument (made in USA), and the probe with MHZ was placed at pillow, temple and eye windows to detect the mean blood velocity (MBV) of the anterior cerebral artery (ACA), middle cerebral artery (MCA) and posterior cerebral artery (PCA). The recovery degrees of swallow and speech were also observed. Fifteen days made up a course of treatment, and after two courses the therapeutic effects were analyzed with chi-test.

### Therapeutic Effects

#### 1. Criteria of therapeutic effects

- **Clinical cure**: the patients recovered swallow ability, normal diet, clear pronunciation, and good speech.
- **Marked effect**: the patients had basic swallow ability, choked by chance in eating or drinking, and could pronounce with hoarseness.
- **Effectiveness**: the patients had improved swallow ability, could get enough food without nasal feed, and could not speak well with severe hoarseness.
- **Failure**: the symptoms had no change after treatment.

#### 2. Treatment results

Table 2. Comparison of the treatment results between the two groups (Cases)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Clinical cure</th>
<th>Marked effect</th>
<th>Effectiveness</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>40</td>
<td>13</td>
<td>14</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Treatment</td>
<td>40</td>
<td>30</td>
<td>0</td>
<td>5</td>
<td>35</td>
</tr>
</tbody>
</table>

There were significant differences in comparison with the therapeutic effects between the two groups, indicating the combined methods of scalp and body acupuncture had a good effect in treating pseudobulbar paralysis.

#### 3. Observation of the results test with TCD between the two groups’ patients

It could be seen from the table 3, patients in the treatment group had a markedly improved results of

<table>
<thead>
<tr>
<th>Artery</th>
<th>Side</th>
<th>N</th>
<th>Before treatment</th>
<th>After treatment</th>
<th>N</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACA</td>
<td>Left</td>
<td>40</td>
<td>38.75 ± 5.26</td>
<td>45.53 ± 8.25</td>
<td>40</td>
<td>37.65 ± 5.96</td>
<td>39.53 ± 8.47</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>40</td>
<td>40.12 ± 8.96</td>
<td>46.32 ± 10.53</td>
<td>40</td>
<td>40.97 ± 8.01</td>
<td>41.34 ± 10.12</td>
</tr>
</tbody>
</table>