Treatment of Post-Stroke Ankylosis by Warm-Needling

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Ankylosis is one of the post-stroke sequelae that hampers seriously the daily activities of the patients. Since 1996, the author has adopted warm needling for treatment of post-stroke ankylosis and obtained excellent therapeutic results. The statistical findings have shown that this therapeutic method can exert an important action in improving the joint spasm for patients with post-stroke sequelae. Especially, a better effect can be expected when it is used at the points of yin channels. A report follows.

Clinical Data

The 60 cases in this series were randomly assigned to a treatment group (17 males and 13 females, aged 46-71 years, with a history of illness ranging from 3-18 months) and a control group (15 males and 15 females, aged 45-65 years, with a history of illness ranging from 3-17 months). The sex, age, disease course and the degree of ankylosis were comparable between the two groups ($P>0.05$).

Methods of Treatment

Insert the needle routinely until a needling sensation is elicited. Then, attach an ignited moxa stick (1.5-2.0 cm in length) to the handle of the needle for 30 minutes, once a day.

1. The point prescription for the treatment group (using mainly the points of yin channels):

Chize (LU 5) and Shaohai (HT 3) were selected for the elbow joint; Neiguan (PC 6), Daling (PC 7) and Yangxi (LI 5) penetrating to Yanggu (SI 5) for the wrist joint; Xuehai (SP 10), Weizhong (BL 40) and Yinlingqu (SP 9) for the knee joint; and Sanyinjiao (SP 6) and Taixi (KI 3) for the ankle joint. In addition, Yanglingquan (GB 34) was used as the adjunct joint.

2. The point prescription for the control group (using mainly the points of yang channels): Quchi (LI 11) and Shousanli (LI 10) were selected for the elbow joint; Waiguan (TE 5), Hegu (LI 4) and Yangxi (LI 5) for the wrist joint; Liangqiu (ST 34), Dubi (ST 35) and Zusanli (ST 36) for the knee joint; and Xuanzhong (GB 39), Jiexi (ST 41) and Fenglong (ST 40) for the ankle joint. In addition, Yanglingqu (GB 34) was used as the adjunct point.

Therapeutic Results (see the Table below)

After treatment for 3 months, the improvement of ankylosis was evaluated. The statistical analysis showed that the difference in improvement of ankylosis before and after treatment in both the treatment and control groups was very significant ($P<0.01$), suggesting that the warm-needling was effective, no matter what acupoints pertaining to yin channels or yang channels were selected.

In comparison of the therapeutic effects between the treatment group and the control group, the difference was also statistically significant ($P<0.01$). A better improvement of ankylosis in the treatment group suggested that warm-needling at the points of yin channels was superior to that at the points of yang channels.
Table. Improvement of ankylosis before and after treatment ($\bar{x} \pm s$)

<table>
<thead>
<tr>
<th>Cases</th>
<th>Elbow</th>
<th>Wrist</th>
<th>Knee</th>
<th>Ankle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment group</td>
<td>Before tr.</td>
<td>30 51.47±11.07</td>
<td>37.67±8.93</td>
<td>57.63±8.33</td>
</tr>
<tr>
<td></td>
<td>After tr.</td>
<td>30 13.37±5.77*†</td>
<td>10.83±3.27*†</td>
<td>19.77±5.59*†</td>
</tr>
<tr>
<td>Control group</td>
<td>Before tr.</td>
<td>30 48.10±9.95</td>
<td>34.80±5.46</td>
<td>57.83±7.09</td>
</tr>
<tr>
<td></td>
<td>After tr.</td>
<td>30 24.23±3.63*</td>
<td>18.10±3.17*</td>
<td>26.50±3.49*</td>
</tr>
</tbody>
</table>

* In-group comparison ($P<0.01$), † between-group comparison ($P<0.01$)

Comment

Enlightened by the fact that needling the points of yin channels may soften the tendons and muscles, the author scheduled the procedure to treat post-stroke ankylosis; and the therapeutic effects achieved by warm-needling is superior to that of the conventional acupuncture with only filiform needles. The present study has further proved that the therapeutic effects achieved by warm-needling at the points of yin channels is superior to that obtained at the points of yang channels. The abundant local blood vessels, nerves and tendons of the flexor muscles of the former may offer an anatomical basis to explain the reason why warm-needling at the points of yin channels may bring about better results.

References

1. 邱茂良 主编. 针灸学 (教材). 上海：上海科学技术出版社, 1985; 22-166.

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