Clinical Observation on Treatment of Genual Osteoarthritis
By Needle-Warming Therapy plus Chinese Herbal Drugs

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Abstract Purpose: To observe the clinical effect of combination of acupuncture and Chinese herbal drugs for genual osteoarthritis. Methods: 138 cases of the patients were randomly divided into the treatment group of 85 cases treated by electric acupuncture and moxibustion plus Chinese herbal drugs and the control group of 53 cases treated by oral administration of medications. The patients stopped treatment for one month after the treatment for one month, then the therapeutic effects were observed and compared. Results: The total effective rate was 89.4% in the treatment group and 56.6% in the control group, with extremely significant difference (P < 0.01) between the two groups. Conclusion: Electric acupuncture and moxibustion plus Chinese herbal drugs have a marked and irrefutable therapeutic effect on genual osteoarthritis.

Key Words Acupuncture and Moxibustion; Acupuncture Medication Combined; Osteoarthritis; Knee Joint; Randomized Control Trials

Genual osteoarthritis is clinically manifested by local pain, stiffness, limited activity of the knee joint, deformed enlargement of the whole joint, and even nodules. We have treated this disease by acupuncture plus Chinese herbal drugs.

Clinical Materials

1. Diagnostic criteria
The diagnostic criteria are stipulated upon Diagnostic Basis and Criteria of Cure and Improvement of Clinical Diseases[1].

① Often seen in those with high age and traumatic injury in the joint, or with static dysfunction, change of bone nutrition, and existence of the factors of body figure and occupation.
② Slow onset, without general symptoms.
③ Stiffness, pain and limited motion, cracking sound during motion in the joints, or accompanied by joint deformity and hydrops in the articular cavity.
④ X-ray photography shows stenosis in the articular space, sclerosis in articular surface, cystic change of the spongy bone at the joint end, corpus liberum in the joint.

2. General materials
Totally, 138 cases of the outpatients in the acupuncture clinic were recruited and divided randomly into the treatment group and control group by drawing lots. Among 85 cases in the treatment group, there were 32 males and 53 females, with the age ranging from 52 to 80 years old, at the average age of 61.7 years old, and with the duration ranging from one year to 20 years, at the average of 6.72 ± 5.34 years. Among 53 cases in the control group, there were 20 males and 33 females, with the age ranging from 48 to 73 years old, at the average age of 58.3 years old, and with the duration
ranging from 2 years to 15 years, at the average of 5.14 
± 2.53 years. All the cases were strictly screened, with 
rheumatoid factor and anti- "O" test being all negative 
in the laboratory tests. There was no significant 
difference and in sex, age and duration between the two 
groups.

**Therapeutic Methods**

1. **Treatment group**

   Main acupoints: Yinlingquan (SP 9), Zusanli (ST 36), 
   Neixiyan (Ex-LE 4), Dubi (ST 35), Xuehai (SP 10) and 
   Liangqiu (ST 34) in the sick side.

   Additional acupoints: Weizhong (BL 40), Yaoyangguan 
   (GV 3). Shenshu (BL 23), Zhishi (BL 52), Zhaohai (KI 
   6) and Taixi (KI 3) were added for insufficiency of the 
   liver and kidney. Pishu (BL 20), Geshu (BL 17) and 
   Sanyinjiao (SP 6) were added for deficiency of qi and 
   blood.

   Operation: After routine disinfection, the filiform needles 
   0.35 mm in diameter and 40 mm in length were selected. 
   After the needles were inserted and the needling sensation 
   was obtained, one piece of moxa stick in length of about 
   2-3 cm was put on the needle handle and ignited. After 
   moxibustion, G6805 Electric Acupuncture Apparatus 
   was connected and switched on for 30 min, by sparse 
   and dense wave, with the intensity of stimulation within 
   the patient's tolerance. The treatment was given once 
   every day, with 10 times as one course of the treatments. 
   Totally, three courses of the treatments were given, and 
   the therapeutic effects were observed one month after 
   the treatment.

   Chinese herbal medicine was taken every day, modified 
   basically upon “Pubescent Angelica and Loranthus 
   Decoction”, composed of *Radix Angelicae Pubescentis* 
   (独活), *Ramulus Loranthi* (寄生), *Rhizoma Pinelliae* 
   (半夏), *Radix Puerariae* (葛根), *Radix Clematidis* ( 威 
   灵仙), *Fructus Chaenomelis* (木瓜), *Radix Notoginseng* 
   (川七), *Aegisyrodon* (蕲蛇), *Radix Pseudostellariae* 
   (太子参), *Radix Astragali* (黄芪), *Rhizoma 
   Atractylodis Macrocephale* (白术), *Fructus Oryzae 
   Germinatus* (谷芽) and *Radix Glycyrrhizae* (炙甘草).

   Three doses were taken every week. One week made 
   one course of the treatments and totally four courses of 
   the treatments were given. One month after taking herbal 
   decoction, the therapeutic effects were observed.

2. **Control group**

   Indomethacin was taken orally, 25 mg each time, three 
   times a day, and Fenbid was taken orally, 500 mg each 
   time, twice a day, totally for one month.

**Therapeutic Effects**

1. **Criteria of therapeutic effect**

   In reference to the criteria of the therapeutic effect on 
   genual osteoarthritis by ACR, the criteria were stipulated 
   in the following.

   - **Clinical control**: Pain disappeared, with the deformity 
     corrected and the joint functions basically restored.
   - **Remarkable effect**: Pain was remarkably relieved, 
     with the deformity basically corrected and the joint 
     functions improved.
   - **Improvement**: Pain was alleviated and the joint 
     functions were improved.
   - **Failure**: No change in the symptoms and no 
     improvement in the joint functions.

2. **Therapeutic results**

   **Table 1. Comparison of therapeutic effects between two 
   groups**

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>CC</th>
<th>RE</th>
<th>Improvement</th>
<th>Failure</th>
<th>TER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>85</td>
<td>46</td>
<td>26</td>
<td>4</td>
<td>9</td>
<td>89.4%</td>
</tr>
<tr>
<td>Control</td>
<td>53</td>
<td>16</td>
<td>10</td>
<td>4</td>
<td>23</td>
<td>56.6%</td>
</tr>
</tbody>
</table>

   *Notes: CC, clinical control; RE, remarkable effect; TER, total effective rate.*

   By statistic management, there was significant 
   difference \( P < 0.01 \) in the clinical control rate and the 
   total effective rate between the treatment group and the 
   control group, and the therapeutic effect was better in 
   the treatment group than in the control group.

3. **Case example**

   The patient, female, 66 years old, Canadian overseas 
   Chinese, first visit on Nov. 9th, 2002, had pain in both 
   knees for over 10 years, in constant attacks and aggravated 
   after the joint activity, without redness and swelling and 
   deformity, and the pain could not be alleviated effectively 
   by rest and medications. The knee activity was obviously