Effects of the Combined Therapy of Acupuncture with Herbal Drugs on Male Immune Infertility
— A Clinical Report of 50 Cases

Fu Bing 符冰,1 Lun Xin 伦新 2 & Gong Yuzhuo 宫育卓 2

1Department of Acupuncture, the Second Guangdong Provincial Worker's Hospital, Guangzhou 510720, China
2Department of Acupuncture, the First Affiliated Hospital of Guangzhou University of Traditional Chinese Medicine, Guangzhou 510405

To study the clinical effects of the combined therapy of acupuncture with herbal drugs on male immune infertility and on antisperm antibody (AsAb), 100 male cases of infertility with positive AsAb were divided randomly into two groups, each consisting of 50 cases. The acupuncture-drug group was treated with acupuncture on Ganshu (BL 18), Shenshu (BL 23), Taichong (LR 3), Taixi (KI 3), Xinshu (BL 15), Geshu (BL 17), Shenmen (HT 7), and Xuehai (SP 10), combined with oral medication of Liuwei Dihuang Wan (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae). The control group was treated with oral prednisone. The clinical therapeutic effects and the impact on AsAb were observed in the two groups. The results showed that the total effective rate in the acupuncture-drug group was 90%; while that of the control group was 64%, the comparison showing a statistically significant difference (P<0.05). The positive rate of blood serum and/or AsAb in both the two groups decreased in varying degrees, but the negative-turning rate of AsAb in the acupuncture-drug group was more obvious, the comparison showing also a significant difference (P<0.05). Conclusion: The combined therapy of acupuncture with herbal drugs has definite therapeutic effects on male immune infertility, which can regulate AsAb and raise the immunity of the patients.

Along with the development of the researches on genital immunology, infertility caused by immune factors is drawing more and more attention. The use of the immunomodulator prednisone, for example, in the treatment of male immune infertility is a commonly used method in clinic. Owing to the toxic side effects of this kind of drugs, they are limited in use. However, the TCM treatment can give quite good therapeutic effects for male immune infertility. The authors of this essay has treated male immune infertility of the deficiency type by electric needling at the Yuan (source) and Shu (stream) points, in combination with oral administration of Liuwei Dihuang Wan (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae), with quite good therapeutic results reported in the following.

Clinical Data

In this study, the diagnostic criteria adopted were those described in the Guiding Principles for the Clinical Research on New Chinese Patent Drugs4, based on which the cases selected were the child-bearing-age couples with a marital life for more than 2 years but with no pregnancy, and the couples with a history of pregnancy but with no more pregnancy in the last 2 years. Excluded were the cases who had the following causative factors responsible for infertility, such as endocrine disorder,
hereditary problem, abnormal sexual function, congenital maldevelopment, and their titer of blood serum or AsAb was beyond the normal reference value (75U/ml). The TCM diagnostic criteria were developed by referring to the criteria for the kidney-deficiency syndrome set in the Reference Criteria for TCM Differentiation of Deficiency Syndrome. The main accompanying symptoms and signs were soreness and weakness in the waist and knee joints, dizziness and tinnitus, night sweating, insomnia, pale red or slightly red and dry tongue proper with scanty coating, and thread-rapid pulse.

All the 100 cases were selected from the patients at the Acupuncture Department for Infertility of the Second Guangdong Provincial Worker’s Hospital and the Acupuncture Department of First Affiliated Hospital of Guangzhou University of Traditional Chinese Medicine, with positive blood serum and/or AsAb. They were randomly divided into two groups, each consisting of 50 cases. The average age and duration of illness in the acupuncture-drug group were respectively 30.3 ± 4.5 years, and 4.3 ± 1.8 years; and those in the control group were 29.4 ± 3.2 years, and 3.9 ± 1.6 years. The two groups showed no differences in age, duration of illness and the disease condition (P>0.05), and therefore comparable.

Methods of Treatment

1. For the acupuncture-drug group:
The acupoints were selected based on the principle of tonifying the liver and kidney, and nourishing yin and promoting blood circulation. The main points selected were Ganshu (BL 18), Shenshu (BL 23), Taichong (LR 3), and Taixi (KI 3), with Xinshu (BL 15), Geshu (BL 17), Shenmen (HT 7), and Xuehai (SP10) as the adjunct points. Operation: After routine sterilization, the needles were inserted 1.0-1.5 cun deep with the routine method. After quick insertion, the needles were quickly pushed downward and rotated, followed by flicking-poking manipulation for 1 minute upon the arrival of qi. Then, the needles were manipulated by the twirling-reducing method for 2 minutes at a frequency of 180-200/per minute with the intensity within the patient’s endurance. Ten minutes later, the same manipulation was repeated once again. Then, the adjunct points were needled with the routine method. After the arrival of qi, both the main points and adjunct points were connected to an electric-needle meter of G-6815 type (produced in Shanghai), and given an irregular wave at a frequency of 14-26 /per minute, with the intensity enough to make the patient have a soreness, numbness, or distending needleling sensation, which was within the patient’s endurance. The treatment was given once a day, 30 minutes each time. At the same time, oral medication of Liuwei Dihuang Wan (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae) was administered at the dosage of 6g each time, tid. One therapeutic course was 2 months. The patient was treated for at most 2 courses. During the treatment, the patient could have normal sexual life, but should use the condoms. Two weeks before the treatment, all the other measures were discontinued.

2. For the control group:
Oral medication of pridnisone was given 5mg each time, bid. The courses of treatment were the same as in the treatment group.

3. The items observed were 1) Clinical therapeutic effects; and 2) Changes in the blood serum and/or AsAb.

Criteria for Therapeutic Effects

Cured: The patient’s wife became pregnant. Markedly effective: After a 2-4 month treatment, although there was no pregnancy, the number and activity of the sperms showed normal, with the titer of AsAb decreased by 1/2. Improved: Although the function of the sperms was abnormal, the number of the sperms increased with the activity improved, and the titer of AsAb decreased by 1/3. Failed: No obvious improvement was found after the treatment,
with no change shown in the titer of AsAb.

**Results of Treatment (see Table 1 and 2)**

Table 2 shows that after the treatment, there was decrease of varying degrees in the positive level of blood serum and/or AsAb in both the groups ($P<0.05$); and the negative-turning rate of blood serum and/or AsAb in the acupuncture-drug group showed a more marked decrease than in the control group ($P<0.05$), suggesting that electric acupuncture combined with Liuwei Dihuang Wan (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae) can give quite good therapeutic effects.

**Table 1. Comparison of the therapeutic effects**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Cases</th>
<th>Cured</th>
<th>Markedly effective</th>
<th>Improved</th>
<th>Failed</th>
<th>Total effective rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acup.-drug group</td>
<td>50</td>
<td>20 (40%)</td>
<td>23 (46%)</td>
<td>2 (4%)</td>
<td>5 (10%)</td>
<td>90%*</td>
</tr>
<tr>
<td>Control group</td>
<td>50</td>
<td>5 (10%)</td>
<td>22 (44%)</td>
<td>5 (10%)</td>
<td>18 (36%)</td>
<td>64%</td>
</tr>
</tbody>
</table>

*Compared with the control Group, $P<0.05$

**Table 2. Comparison of the Changes in positive blood serum and/or AsAb between the two groups**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Cases</th>
<th>Blood serum</th>
<th>AsAb</th>
<th>Blood serum/AsAb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acup.-drug Group</td>
<td>Before treatment</td>
<td>50</td>
<td>19 (38%)</td>
<td>19 (38%)</td>
</tr>
<tr>
<td></td>
<td>After treatment</td>
<td>50</td>
<td>2 (4%)$^*$</td>
<td>1 (2%)$^*$</td>
</tr>
<tr>
<td>Control Group</td>
<td>Before treatment</td>
<td>50</td>
<td>21 (42%)</td>
<td>18 (36%)</td>
</tr>
<tr>
<td></td>
<td>After treatment</td>
<td>50</td>
<td>7 (14%)*</td>
<td>8 (16%)</td>
</tr>
</tbody>
</table>

*Comparison with that before treatment, $P<0.05$; $^*$Comparison with the control group after the treatment, $P<0.05$  

**Discussion**

At present, immunomodulators are used for the treatment of immune infertility. But administration of a large dose of such drugs may induce severe side effects. Moreover, there may appear rebound phenomenon after withdrawal of such drugs, therefore the clinical administration is limited. Based on the TCM pathogenesis, most of such patients may have kidney-deficiency. The authors have adopted electric needling at the **Yuan** (source) and **Shu** (stream) points, in combination with administration of Liuwei Dihuang Wan (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae) to treat this disease. Besides, the use of the front **Ma** and back **Shu** points can give the effects of inducing **yang** from **yin**, and inducing **yin** from **yang**, and regulating qi in channels and collaterals. The combination of Ganshu (BL 18) with Taichong (LR 3), and Shenhu (BL 23) with Taixi (KI 3) can give the joint effects of tonifying the liver and kidney, strengthening the body resistance and reinforcing the premordial qi, and bring the body’s defensive power into play to raise immunity of the body and the stability of immunity. The combined use of Xinshu (BL 15) and Shenmen (H 7) can regulate the Heart Channel, and when the heart-qi is abundant, qi and blood are sure to circulate smoothly. The combination of Geshu (BL 17) with Xuehai (SP 10) can give the effects of promoting blood circulation, removing blood stasis, improving the hypoxia state of the local tissues and enhancing the cellular physiological metabolism, so as to raise the immunity of the human body. It has been proved that acupuncture can give the effects of adjusting and enhancing immunity of the human body and can have a double-phase regulation of the specific and non-specific immunity of the human body.5, 6 It can also act on the nerve-endocrine- immunity net work, improve the internal environment of reproduction, eliminate the exogenous sensitizing agent, and
produce antigenic reaction and anti-allergic reaction.

*Liuwei Dihuang Wan* (六味地黄丸 Bolus of the Six Drugs Including Rehmanniae) has the action of nourishing the kidney-yin. Modern pharmacological researches have proved that* Di Huang (地黄 Radix Rehmanniae) and Shan Yao (山药 Rhizoma Dioscoreae) have the effects of raising the T cell CD4/CD8 ratio, and regulating the disturbed immune function of the human body; *Shan Zhu Yu (山茱萸 Fructus Corni) and Fu Ling (茯苓 Poria), having the double-phase effects on immunity, can activate the cellular immunity and inhibit the humoral immunity; and Mu Dan Pi (牡丹皮 Cortex Moutan) may have the effects of promoting blood circulation, accelerating the metabolism of antigen-antibody complex, and promoting disappearance of antibody.

Both the clinical studies and modern laboratory experiments have proved that acupuncture combined with *Liuwei Dihuang Wan* (六味地黄丸 Bolus of Six Drugs Including Rehmanniae) have the effects of regulating immunity of the human body, inhibiting the production of AsAb and promoting the metabolism, so the authors use it clinically for treatment of male immune infertility.

**References**

5. 林文注. 实验针灸学. 上海: 上海科学技术出版社 1999, 150-152.

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