

Treatment of Ankylosing Spondylitis with Medicated Moxibustion plus Salicylazosulfapyridine and Methotrexate —A Report of 30 Cases

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Objective: To evaluate the therapeutic effect of medicated moxibustion plus administration of salicylazosulfapyridine (SASP) and methotrexate (MTX) for treatment of active ankylosing spondylitis (AS). **Method:** Ninety cases of active AS were randomly assigned to Group A, B and C (N=30 in each group), and treated respectively with SASP and MTX, acupuncture plus SASP and MTX, and composite sulfur (tablet) moxibustion plus SASP and MTX for 3 successive courses (2 months each course with an interval of 5 days). **Results:** Improvement in sacroiliitis index, Schober test, occipital wall test, finger-ground distance, as well as the erythrocyte sedimentation rate (ESR) and the content of C-reactive protein (CRP) in Group B and C was far superior to that of Group A ($P<0.01$). **Conclusion:** Combined use of western medicine with acupuncture or with medicated moxibustion produces a better therapeutic effect than western medicine given alone.

With medicated moxibustion plus routine administration of salicylazosulfapyridine (SASP) and methotrexate (MTX), we treated from July 1998 to Dec 2003 30 cases of active ankylosing spondylitis (AS) with satisfactory therapeutic results. And the results were compared with that of the control groups. A report follows.

General Data

All the 90 eligible cases of active AS were from the in- and outpatient departments, who were randomly assigned to the following 3 groups.

In Group A of 30 cases, there were 22 males and 8 females, aged 15-49 years (mean, 22.6 ± 5.1), with a history of 0.5-20 years (mean, 4.3 ± 3.5). The X-ray examination showed grade I - IV of AS respectively in 3, 11, 14 and 2 cases.

In Group B of 30 cases, there were 23 males and 7 females, aged 14-48 years (mean, 22.0 ± 5.4), with a history of 0.5-20 years (mean, 4.4 ± 3.2). The X-ray examination showed grade I -IV of AS respectively

in 2, 13, 11 and 4 cases.

In Group C of 30 cases, there were 22 males and 8 females, aged 15-48 years (mean, 22.1 ± 5.3), with a history of 0.5-19 years (mean, 4.3 ± 3.4). The X-ray examination showed grade I - IV of AS respectively 3, 12, 13 and 2 cases. The general data were comparable among the three groups ($P>0.05$).

Methods of Treatment

1. For Group A, Methotrexate (MTX, a product of Wanma Pharmaceuticals, Zhejiang Province) was injected intravenously once a week, with a starting dosage of 5 mg per week, which was increased to 10-15 mg per week in a 3-week period. Simultaneously, salicylazosulfapyridine (SASP, a product of Sanwei Pharmaceuticals Ltd, Shanghai) was administered *tid* orally, with a starting dosage of 0.25g per week, which was increased to 0.75-1.0g per week in a 3-week period. Both medication lasted over 6 months.

2. For Group B, MTX and SASP plus acupuncture at bilateral Fengchi (GB20), Dazhui (GV14), bilateral Pishu (BL20), bilateral Geshu (BL17), Shenzhu (GV12), bilateral Shenshu (BL23), Mingmen (GV4), Yaoyangguan (GV3), bilateral Zusanli (ST36) and bilateral Taixi (KI3) were taken as the main therapeutic method. #28 filiform needles of 5 *cun* in length were inserted into the points when the patient was lying prone. The needles were retained for 30 minutes when a needling sensation was experienced, during which the needles were manipulated once every 10 minutes. Acupuncture was performed once every other day for 3 successive courses (2 months each course with an interval of 5 days).

3. For Group C, MTX and SASP plus composite sulfur (Tablet)-separated moxibustion (the points selected were the same as Group B) were given. The composite sulfur tablet is a product of Jiangxi Medical College, with Liu Huang (硫黄 Sulfur), Ru Xiang (乳香 Olibanum), Mo Yao (没药 Myrrha), Gui Zhi (桂枝 Ramulus Cinnamomi), San Qi (三七 Radix Notoginseng) and Xi Xin (细辛 Herba Asari) as the main ingredients. For each session of moxibustion, two cones of ignited moxa separated by one composite sulfur tablet (500mg/tablet, Ø 6mm) and a slice of ginger (2mm in thickness and a one-*yuan* coin in size) were given. The moxibustion therapy was given once every other day for three courses (2 months each course with an interval of 5 days).

Criteria for Therapeutic Effects

Clinically relieved: Disappearance of morning stiffness and the local swelling and pain, with resumed joint functions and normal ESR and CRP.

Markedly effective: Five or more items met with the

effective standard (improvement $\geq 50\%$) in morning stiffness, swollen and painful joints, chest expansion, Schober test, functional evaluation, ESR and CRP.

Improved: Three or more, but less than five items met with the effective standard.

Failed: Less than three items met with the effective standard.

Results of Treatment

1. Table 1 shows the therapeutic results of the 3 groups. The differences of the total effective rate between Group A and B and that between Group B and C were of no statistically significance ($P>0.05$), whereas that between Group A and Group C was significant ($P<0.05$). The clinical remission rate and marked effective rate were also higher in Group B and Group C than Group A ($P<0.05$). The times needed for reaching the clinical remission and remarked effect were shorter in Group B (87.8 ± 16.5 days and 89.2 ± 20.3 days) and in Group C (40.3 ± 14.7 days and 44.1 ± 17.2 days) than those in Group A (119 ± 20.3 days and 174 ± 12.3 days) ($P<0.01$). A one-year follow-up survey showed that no recurrence was found in the clinically relieved cases of Group B and Group C. However, all the 7 clinically relieved cases of Group A suffered from recurrence.

2. Table 2 shows that all the items, except the chest expansion ($P>0.05$), were significantly improved in Group B and Group C than Group A after treatment ($P<0.05$ or $P<0.01$).

3. Table 3 shows that there were significant improvements in the levels of ESR and CRP after treatment in all the three groups ($P<0.01$).

Table 1. Therapeutic results in the 3 groups

Group	n	Clinically relieved	Marked effective	Improved	Failed	Total effective rate
A	30	7 (23.33%)	11 (36.67%)	9 (30.00%)	3 (10.00%)	90.00%
B	30	12 (40.00%)	12 (40.00%)	4 (13.33%)	2 (6.67%)	93.33%
C	30	13 (43.33%)	12 (40.00%)	4 (13.33%)	1 (3.33%)	96.67%

Table 2. Improvement in the symptoms and signs ($\bar{x} \pm s$)

	Morning stiffness (min)	Swollen and painful peripheral joints (n)	Sacroiliitis index	Schober test (cm)	Chest expansion (cm)	Occipital wall test (cm)	Finger-ground distance (cm)
Group A (n=30)							
Before tr.	40.94±36.75	3.20±1.52	5.31±1.52	3.31±1.29	3.81±0.69	4.44±1.39	14.09±18.23
After tr.	9.70±6.21**	1.02±1.32**	2.82±1.49**	3.29±1.27	3.99±0.95	2.82±1.33**	10.23±11.10
Difference	30.57±29.78	2.38±0.39	2.99±0.19	0.63±0.11	0.27±0.31	1.97±0.11	4.19±8.36
Group B (n=30)							
Before tr.	41.12±36.78	3.03±1.54	5.29±1.70	3.30±1.37	3.77±0.71	4.49±1.41	14.23±17.11
After tr.	9.18±6.01*	1.01±1.39**	1.82±1.53**	3.88±1.99	3.90±0.87	1.12±1.37**	6.52±8.73*
Difference	31.97±30.17	2.41±0.39	4.03±0.21‡	1.02±0.72‡	0.29±0.18	3.37±0.31‡	9.10±9.07†
Group C (n=30)							
Before tr.	40.83±37.14	3.27±1.47	5.46±1.48	3.27±1.41	3.93±0.73	4.37±1.40	13.73±16.96
After tr.	9.32±5.91**	0.99±1.37**	1.72±1.30**	3.81±1.97	4.06±0.99	1.09±1.38**	5.62±9.40*
Difference	31.23±32.12	2.44±0.41	4.01±0.23‡	1.01±0.63‡	0.31±0.29	3.29±0.27‡	9.38±8.22†

In-group comparison: * $P<0.01$, ** $P<0.01$; between group comparison: C vs. A † $P<0.01$, ‡ $P<0.01$.

Table 3. Changes in ESR and CRP ($\bar{x} \pm s$)

	ESR (mm/h)	CRP (mg/L)
Group A (N=30)		
Before treatment	46.61±27.37	20.97±18.87
After treatment	18.93±14.71*	7.92±8.93*
Difference	29.39±4.17	14.41±11.69
Group B (N=30)		
Before treatment	46.77±26.57	20.90±18.92
After treatment	17.88±13.69*	6.91±8.03*
Difference	30.27±4.95	15.41±11.78
Group C (N=30)		
Before treatment	46.42±27.21	21.03±19.21
After treatment	17.82±13.78*	7.26±8.93*
Difference	30.12±5.62	15.37±12.03

In-group comparison, * $P<0.01$.

Comments

In the present study, Fengchi (GB 20) and Dazhui

(Du 14) are selected to dispel pathogenic wind and remove the obstruction in the channels and collaterals. Shenshu (BL23), Mingmen (GV4), Yaoyangguan (GV3) and Taixi (KI3) are taken to reinforce and invigorate the kidney-*yang*. Geshu (BL7), Pishu (UB20) and Zusanli (ST36) are used to supplement the spleen and strengthen the stomach so as to inhibit the gastrointestinal tract reactions to the anti-rheumatism agents.

The lab exams show similar results among the three groups. However, from the point of view of living quality improvement, or improvement in the symptoms and signs, the combined treatment, especially with the medicated moxibustion, was far superior to the simple medication of western drugs.

(Translated by Mao Shuzhang 毛树章)