

Clinical Review of the Effects of *Hominis Placental* Pharmacopuncture in the Treatment of Facial Spasm Patients

Na-Young Jo, Jeong-Hyun Kim, Jeong-Du Roh*

Department of Acupuncture & Moxibustion, Semyung University College of Korean Medicine, Jecheon, Korea

Key Words

facial spasm, *Hominis Placental*, Korean medicine, pharmacopuncture

Abstract

Objectives: The main purpose of this research is to investigate the effect of treatment with *Hominis Placental* pharmacopuncture (HPP) for 32 patients with hemifacial spasm.

Methods: We treated facial spasm patients with acupuncture and HPP at Sabaek (ST2), Seung-eup (ST1), Gwallyeo (SI18), Chanjuk (BL2), Sajukgong (TE23), Hagwan (ST7), Hyeopgeo (ST6), Jichang (ST4), Wan-gol (SI4) and Yepung (TE17), and we investigated the effect by using Scott's scale. The data were analyzed by using the SPSS/10.0 for windows program with descriptive statistics, the paired *t*-test, and the Shapiro-Wilk normality test.

Results: After treatment, the grade of the spasm's intensity based on Scott's description were decreased significantly. About 72% of the patients felt that the combination treatment had produced excellent results.

Conclusion: These data suggested that HPP can be useful for treating facial spasm patients.

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1. Introduction

Hominis Placental is a dried placenta isolated from healthy pregnant women after delivery; it has been used to invigorate vital essences and blood in traditional medicines in East Asia [1].

Hominis Placental extracts have been used in traditional Oriental medicine to improve physiological function. Recently, there have been several reports that *Hominis Placental* pharmacopuncture (HPP) can be applied to pathologic conditions such as peripheral facial paralysis [2], osteoporosis [3], nerve injury [4] and anemia [5].

A hemifacial spasm presents as an involuntary contraction of the muscles on either side of the face [6], which occurs secondary to compression of the facial nerve by a vascular loop at the root exit zone [7, 8].

Traditionally, hemifacial spasm treatment includes several approaches such as anticonvulsant medications, and chemical or nerve decompression [9].

Hemifacial spasm is considered to be an eyelid convulsion in Oriental medicine literature and an eyelid convulsion, Anpojindo, Poyunjindo refers to a blepharospasm in Oriental medicine literature [10]. According to Oriental medicine, the treatment methods of Sopungsanhan (remove the pathogenic Qi), Bogigeodamsikpung (increase vitality and eliminate abnormal body fluids), Pyeonggansikpung (stabilize liver Qi and

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*Corresponding Author

Jeong-Du Roh, Department of Acupuncture & Moxibustion, Se-Myung University College of Oriental Medicine, 579 Sinwol-dong, Jecheon, Chungbuk, 390-711, Korea.
Tel: +82-43-649-1816 Fax: +82-43-649
E-mail: wsrohmi@hanmail.net

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remove the pathogenic wind Qi) and Soganigi (recover liver Qi) are usually used [11].

Research on Oriental medicine for treating facial spasms includes a literature investigation [12], an acupuncture study [13, 14] and a Soyeom Pharmacopuncture study [15], but no study of HPP has yet to be reported. In this study, we treated facial spasms with acupuncture and HPP, and we evaluated the effect by using Scott's scale [16].

2. Case report

2.1. Subjects

The research involved 32 patients who visited the Acupuncture & Moxibustion Department at Semyung University Hospital of Oriental Medicine for facial spasm treatment from March 1, 2012, to December 31, 2012. Exclusion criteria included the following: cerebrovascular accident (CVA), hypersensitivity or active skin disease, active infectious disease requiring medical care for the entire body, mental diseases and alcoholism and/or drug addiction.

2.2. Treatment methods

HPP was prepared by using the following protocol provided by the Korean Pharmacopuncture Institute; *Hominis Placental* was hydrolyzed with HCL at 101°C, and the extracts were heated at 80-100°C for 10 h, autoclaved, and filtered with a 0.1-µm filter membrane. The final product was kept refrigerated until usage.

With disposable 2-cc syringes (SIR Medical Co, Ltd.) and 30-G needles, the subjects were injected 0.1-0.2 cc and 1-2 cm deep, respectively, at each meridian point once a day, three times a week. Before acupuncture, the HPP procedures were mainly performed at the Sabaek (ST2), Seung-eup (ST1), Gwal-lyeo (SI18), Chanjuk (BL2), Sajukgong (TE23), Hagwan (ST7), Hyeopgeo (ST6), Jichang (ST4), Wan-gol (SI4) and Yepung (TE17) of the inconvenient part. The treatment was performed once a day, three times a week.

The acupuncture needles were disposable, stainless-steel filiform needles (0.30 mm x 40 mm) from Dongbang Acupuncture, Inc. Following the meridian points, the needles were

inserted 5~10 mm deep once a day, three times a week. The treatment was at Sabaek (ST2), Seung-eup (ST1), Gwal-lyeo (SI18), Chanjuk (BL2), Sajukgong (TE23), Hagwan (ST7), Hyeopgeo (ST6), Jichang (ST4), Wan-gol (SI4) and Yepung (TE17) of the inconvenient position and Hapgek (LI4), Taechung (LR3), Haeng-gan (LR2) and Pungnyung (ST40) of the convenient part. Combined symptoms (neck or shoulder pain) were also treated by acupuncture at trigger points. The acupuncture needle's retaining times were 15 min. The treatment was performed by a clinical specialist with more than 2-yr experience.

Physiotherapy (Infrared Ray (I.R.), Silver Spike Point (S.S.P.) at face, Hot Pack (H/P) at neck and shoulder) were applied as additional treatment. All the patients understood and agreed to these treatments. They also signed a consent form that we have provided.

2.3. Analytical and treatment valuation method

To determine the general characteristics of the patients and to evaluate the effect of HPP, we investigated the following: 1) gender and age, 2) areas affected by the facial spasm, 3) other combined symptoms, 4) timing onset of the facial spasm, 5) Scott's grade (Table 1) before treatment, 6) number of treatment, and 7) treatment results (change in Scott's grade [16], and improvement results). According to Scott's grade, an eyelid spasm has five degrees from normal to serious, the latter causing problems with reading, driving, walking, etc.

The data were analyzed by SPSS/ 10.0 for windows program with descriptive statistics, paired *t*-test, Shapiro-Wilk normality test. Improvement were described as excellent (improvement of more than 70%), improved (improvement of 30 to 70%), mildly improved (improvement of less than 30%), or failure (no improvement). In order to minimize the bias, practitioners also evaluated the degree of the eyelid spasm by using Scott's grade.

2.4. Results

The 32 patients in this study were composed of 11 men and 21 women, and the age distribution is shown in (Table 2). The facial spasm was located on the left (Lt) side in 24 patients and on the right (Rt) side in 8 patient; the distribu-

Table 1 Grade of the spasm's intensity classified by using Scott's description [16]

Grade	Description
0	0
1	Increased blinking caused by external stimuli
2	mMild noticeable fluttering : not incapacitating
3	Moderate very noticeable spasm : mildly incapacitating
4	Severely incapacitating (unable to drive, read, etc.)

Table 2 Distributions of gender and age

Age	Male	Female	Total
21~30	1	3	4
31~40	1	6	7
41~50	4	7	11
51~60	3	3	6
61~	2	2	4
Total	11	21	32

Table 3 Distribution of areas affected by the facial spasm

Age	Lt.	Rt.	Total
Eye	10	5	15
Cheek	2	2	4
Mouth	6	1	7
Eye + Cheek	3	0	3
Cheek + Mouth	2	0	2
Eye + Mouth	1	0	1
all lesions	0	0	0
Total	24	8	32

Table 4 Distribution of other combined other symptoms

Symptoms	Lt.	Rt.	Total
Only facial spasm	11	4	15
+ neck or shoulder pain (on the same side)	9	3	12
+ neck or shoulder pain (on opposite sides)	4	1	5
Total	24	8	32

Table 5 Comparison of Scott grade change comparison before and after treatment

Grade of before treatment	Grade of after treatment				
	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Grade 1 (20)	20				
Grade 2 (7)	4	3			
Grade 3 (5)	1	3	1		
Total (32)	25	6	1		

tion of locations is shown in Table 3.

Fifteen patients complain of only facial spasm, 12 patients of neck or shoulder pain on the same side, and 5 patients of neck or shoulder pain on the opposite side (Table 4). The onset of facial spasm was less than 1 month in 18 patients, 1~3 months in 8 patients, and more than 3 months in 6 patients.

The Scott's grade at the first, was grade 1 in 20 patients, grade 2 in 7, and grade 3 in 5. Fourteen patients were treated fewer than 4 times, 13 patients were treated 4 ~ 8 times, and 5 patients were treated more than 8 times.

According to the improvement results, 23 patients reported their condition as excellent, 8 as improved and 1 as mildly improved.

After treatment, 25 patients were Scott's grade 0, 6 were Scott's grade 1, 1 was Scott's grade 2, and none was Scott's grade 3. A comparison of the Scott's grades before and after treatment showed that 20 patients changed from grade 1 before treatment to grade 0 after treatment. Of the 7 patients with grade 2 before treatment, 4 changed to grade 0 and 3 changed to grade 1. Of the 5 patients with grade 3 before treatment, 1 changed to grade 0, 3 changed to grade 1, and 1 changed to grade 2 after treatment (Table 5).

After treatment, the Scott's grade 1 group was given an average of grade 0, the Scott's grade 2 group was given an average of grade 0.47, and the Scott's grade 3 group was given an average of grade 1 (Fig. 1).

The results of Shapiro-Wilk normality test showed that, the data followed a normal distribution. Before treatment, the Scott's grade average was 1.53 ± 0.664 , but after it was 0.25 ± 0.39 ($P = 0.003$). In the paired *t*-test, the Scott's grade decreased significantly.

2.5. Conclusion

The results of this investigation were found to be clinically significant and are as:

The facial spasms occurred mainly on one side. The spasms occurred more frequently on the left side, with the left side to right side ratio being about 19:8. A large number of facial spasm patients have other symptoms at the same time. More than half of the patients had a comorbidity such as neck or shoulder pain. Patients tended to visit the hospital soon after the onset of symptoms. Approximately 56% of the patients visited the hospital within one month after the onset, 25% of the patients visited the hospital 1-2 months after the onset, and 19% of the patients visited the hospital three months or more after the onset.

After only four times treatments, 14 patients reported improved symptoms and did not visit anymore. Of the remaining patients, 13 patients received treatment 4-8 times and only five patients received treatment more than 8 times. About 72% of patients reported excellent improve-

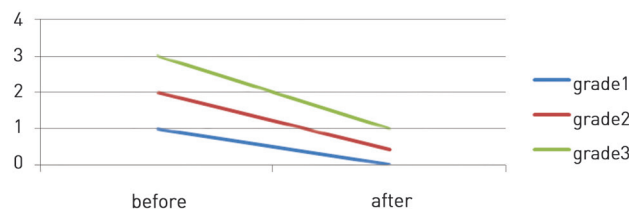


Figure 1 Comparison of the Scott grade before and after treatment.

ment with the combination treatment. In Scott grade, 25 patients (78%) were improved to grade 0, and 6 (18%) to grade 1. Only one patient (3%) was improved to grade 2. According to the statistical analysis of the effects of HPP treatment, symptoms decreased significantly, and HPP combination therapy had a great effect on patients with severe symptoms.

3. Discussion

Pharmacopuncture is an oriental treatment method in which certain amounts of ingredients extracted from Oriental medicine herbs are injected into meridian points or reaction points on the body's surface after a diagnosis of the patient's physical constitution and disease status has been established. This therapy has clinical advantages in exhibiting both acupuncture and drug effects [17].

HPP is one of the most widely used herb-acupunctural materials to replenish vital essence and blood in Oriental traditional medicine [18]. Many studies have reported on the therapeutic effectiveness of HPP. HPP as a treatment has effects on peripheral facial paralysis [2], the capacity to regulate bone resorption [19], protection against osteoporosis [3], protection against radiation enteropathy [20], and the growth-promoting activity of nerve regeneration [4].

Facial spasms usually occur on one side of the face, and abnormal muscle spasms occur around the eyes, mouth, and platysma muscle. They usually occur at ages from 40 to 50 and more often in women. They usually begin around the eyes and move to around the mouth. They are worsened by stress or fatigue, and can accompany some facial muscle weakness, but there is no paresthesia [21].

Hemifacial spasm is considered to be an eyelid convulsion in Oriental medicine literature, and eyelid convulsion, Anpojindo, Poyunjindo, refers to a blepharospasm in Oriental medicine literature [10]. According to Oriental medicine, the treatment methods of Sopungsanhan (remove the pathogenic Qi), Bogigeodamsikpung (increase vitality and eliminate abnormal body fluids.), Pyeong-gansikpung (stabilize liver Qi and remove the pathogenic wind Qi), and Soganigi (recover liver Qi) are usually occur

with facial spasm [22].

In this study, we treated facial spasm with acupuncture and HPP, and we found the following: Thirty-two patients visited the Acupuncture & Moxibustion Department at Semyung University Hospital of Oriental Medicine for facial spasm treatment from March 1, 2012, to December 31, 2012. The patients included 11 men and 21 women; 4 were 21~30 yr old, 7 were 31~40 yr old, 11 were 41~50 yr old, 6 were 51~60 yr old, and 4 were more than 61 yr old (Table 2). There were no significant differences in the demographic characteristics (Table 2).

As to the areas affected by the facial spasms, the Lt eye was involved in 10 patients, the Rt eye in 5, the Lt cheek in 2, the Rt cheek in 2, the Lt mouth in 6, the Rt mouth in 1, the Lt eye and cheek in 3, the Lt cheek and mouth in 2, and the Lt eye and mouth in 1 (Table 3). More patients had facial spasms on left side spasm had them on the right side (Table 3). Fifteen patients complained of only facial spasm, 12 of neck or shoulder pain on the same side, and 5 of neck or shoulder pain on the opposite side. More than half the patients appealed combined of other symptoms (Table 4). The onset of facial spasm was less than 1 month in 18 patients, 1~3 months in 8, and more than 3 months in 6 patients. More than a half of patients visited within one month of the onset. Because they were worried about serious CVA diseases, so visited earlier.

As to the Scott's grade before treatment at the first time visit, 20 patients were in grade 1, 7 in grade 2, 5 in grade 3 and none in grade 4. In this study, the number of grade 1 patients was more than the numbers of patients with other grades. The number of treatments was, fewer than 4 in 14 patients, 4 ~ 8 times in 13, and more than 8 times in 5. Usually when the patients themselves thought that the symptoms had improved, they did not visit any more.

After treatment, results were reported as excellent by 23 patients, improved by 8 and mildly improved by 1. In this study, most patients reported excellent or improved results. After treatment, 25 patients were in Scott's grade 0, 6 in Scott grade 1, 1 in Scott 1, grade 2, none in Scott's grade 3. In this study, after treatment, most patients were improvement in Scott's grade 0 or 1. A comparison of the Scott's grades before and after treatment showed that 20 patients changed from grade 1 before treatment to grade 0 after treatment. Of the 7 patients with grade 2 before treatment, 4 change to grade 0 and 3 changed to grade 1. Of the 5 patients with grade 3 before treatment, 1 changed to grade 0, 3 change to grade 1, and 1 changed to grade 2 after treatment (Table 5). Facial spasms of all grade 1 patients before treatment were improved to grade 0, but those of grade 2 and 3 patients, although improved, were not all patients improved to grade 0; there was a tendency that high grade spasms were less improved than low grade spasms

(Table 5).

After treatment, the Scott's grade-1 group was given an average of grade 0, the grade-2 group an average of grade 0.47 grade, and the grade-3 group an average of grade 1 (Fig. 1). Before treatment, the Scott's grade average was 1.53 ± 0.664 , but after it was 0.25 ± 0.39 ($P = 0.003$). In the paired *t*-test, the Scott's grade decreased significantly.

Cho *et al.*'s study [13] used only acupuncture treatment on a hemifacial spasm. Four of the 5 patients had had the affliction for more than a year and did not show any remedial effect. One case (relatively short period of disease) showed an effect of treatment (reduction to Scott's grade 0), auricular acupuncture treatment.

In Kim *et al.*'s study [14], Dong's acupuncture treatment was applied. The study involved three patients, and all had had the affliction for more than a year. With these cases, the treatment was acupuncture with Ceuksamri, Ceukhasamri. One case involved 15 treatments with acupuncture and herbal medicine of unknown duration. Another case involved 56 acupuncture treatments (28 Dong's acupuncture and 28 acupuncture) and herbal medicine for 28 days. For the other case, no precise treatment count was reported, but the treatment period was 50 days. These three patients showed improvement from Scott's grade 3 to 1 or 0.

In the research of Heo *et al.* [15], general acupuncture and Soyeom pharmacopuncture treatment only at Pungji (G20) were used in 10 cases. In this research, 3 cases showed excellence results, 4 cases showed improvement, 2 cases showed little improvement, and 1 case showed no sign of change. The facial spasm grades were as follows: Scott's grade 0 : 2 cases, grade 1 : 3 cases, grade 2 : 3 cases, grade 3 : 1 case and grade 4 : 1 case.

Comparing exactly existing papers with our study is difficult, however, we conclude that it would be better in medical treatment to use acupuncture accompanied with HPP, to use the Wan-gol (SI4), and the Yepung (TE17) acupuncture points around the neck, and to treat neck or shoulder pain.

In summary, we treated 32 facial spasm patients with acupuncture and HPP, and the facial spasms of most patients were greatly improved. However, this study included relatively few participants, so the statistical analysis was difficult. Thus, further studies are required to investigate the efficacy of treating facial spasms with HPP.

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