

鍼治療에 의한 末梢性 顔面神經麻痺의 臨床的 觀察

ABSTRACTS

Clinical Observation of Bell's Palsy

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Forty four patients with Bell's palsy were treated with acupuncture from onset and clinical observation was carried on from March 1994 through February 1995.

Acupuncture treatment was done 3 times per week and the acupuncture points were LI4 Hapkok, ST36 Choksamni, LI20 Yonghyang, BL2 Ch'anjuk, TE17 Yep'ung, ST4 Chich'ang, ST6 Hyopko, GV26 Sugu, CV24 Sungjang, GB14 Yangbaek and Ex-HN4 Oyo. They were inserted to a depth of 0.5 to 1.0 cm. After insertion, manipulation was carried on until the patients felt strong numbness or De Qi sensation induced by rotating or twisting needles. Through-needling in lengths varying from 2.0 to 3.5 cm was also applied from ST4 Chich'ang to ST6 Hyopko, from GV26 Sugu or CV24 Sungjang to ST4 Chich'ang and from GB14 Yangbaek to Ex-HN4 Oyo.

The mean age was 39.3 and 63.6 % of the patients were women, including one pregnant woman. There was no recurrent palsy in this study.

By applying the House-Brackmann facial nerve grading scales, patients were evaluated weekly from the first treatment to judged recovery or the 7th week of the treatment. 86.4 % of the patients were recovered completely within 7 weeks and the average healing period was 3.7 weeks.

Key words: Bell's palsy, acupuncture, House-Brackmann facial nerve grading scales

* 본 논문은 Canada Edmonton에서 세계침구연합(WFAS)주최로 개최된 The 3rd World Congress of Medical Acupuncture and Natural Medicine (1995. 8. 8. - 8. 12.) 에서 구연발표한 논문을 전 문게제한 것임.

※ 본 논문은 1995년 9월 22일 대한한의학회에 제출된 논문임.

I. Introduction

Bell's palsy is a unilateral weakness (palsy) or paralysis of the face, which is the result of acute peripheral facial nerve dysfunction^{2,8,15,16}. Charles Bell called the disfigurement secondary to facial paralysis "Bell's palsy" in 1821. This term indicates the idiopathic acute-onset type which is the most common type among the facial paralyses. Bell's palsy seems to have no relation to age or racial predilection, and the incidence is slightly higher in female than in male, with a ratio of 1.5:1¹³.

Suspect causes of Bell's palsy include ischemia or vasospasm, viral inflammation, and hereditary predisposition. In the process, the most accepted current theory is that paralysis is caused by viral inflammatory process. Herpes simplex has been implicated as a viral agent. Trauma and autoimmune disease are also involved in this palsy^{2,8,16,17}. Since the etiology and pathogenesis are not completely understood, the mode of treatment is still controversial^{8,15,16}.

Acupuncture, moxibustion, herbal medicines, massage and suction cupping are the common methods of treatment in Oriental medicine⁹. Among them, acupuncture has been the most widely applied method for the treatment of Bell's palsy^{4,12,10,18}.

The aim of the present study is to

evaluate the effect of acupuncture to the treatment of Bell's palsy.

II. Materials and methods

1. Materials

Patients with Bell's palsy were clinically observed between March 1994 and February 1995. Among them, 44 patients within 7 days of onset of the disease, with unilateral palsy and the first episode were studied. Patients with herpes zoster oticus, trauma or tumor were excluded from this study.

The patients were continuously examined from onset, every week until judged full recovery or until the 7th week of treatment. Past history, family history, ear disease, pregnancy, diabetes mellitus, and cardiovascular disease were examined. Concerning the palsy, acute onset, exposure to chill, postauricular pain, headache, neck pain, vertigo, taste disturbance, hearing loss, hyperacusis, lacrimation and dry eye were checked.

2. Acupuncture treatment⁴

Acupuncture was performed with disposable stainless steel needles(0.25×40 mm), applying the bilateral acupuncture points of LI4 Hapkok and ST36 Choksamni and affected site points of LI20 Yonghyang, BL2 Ch'anjuk, TE17 Yep'ung, ST4 Chich'ang,

ST6 Hyopko, GV26 Sugu, CV24 Sungjang, GB14 Yangbaek and Ex-HN4 Oyo. They were inserted to a depth of 0.5 to 1.0 cm. After insertion, manipulation was carried on until the patients felt strong numbness or De Qi sensation induced by rotating or twisting needles. Through-needling in lengths varying from 2.0 to 3.5 cm was also applied from ST4 Chich'ang to ST6 Hyopko, from GV26 Sugu or CV24 Sungjang to ST4 Chich'ang and from GB14 Yangbaek to Ex-HN4 Oyo. The needles were retained for 15-20 minutes with infra-red heat stimulation at the same time. Acupuncture treatment was done three times per week.

3. Assessment^{6,7)}

The patient's facial nerve recovery was assessed by the House-Brackmann facial nerve grading scales. Use of the House-Brackmann facial nerve grading scale provided an objective measurement of starting point, as well as end point for defining recovery; in addition, it allowed comparison of the treatment groups based on this level of improvement. In 1985, the House-Brackmann facial nerve grading system was developed to provide a uniform set of criteria for classifying the degree of facial paralysis. This system involves making measurements of the movement of the

forehead and eyebrow and corner of the mouth and comparing the results with those on the unaffected side. A scale with 0.25 cm divisions is used for the measurement. There is a total possible score of 8 (4, or 1 cm, for the mouth and 4, or 1 cm, for the eyebrow). These results can easily be converted to the six-point scale. In this system, grade I identifies normal function and grade VI indicates total flaccid paralysis; grade II and V describe progressively worse functional and cosmetic deficits (Table 1, 2, Figure 1).

Patients were evaluated weekly from the first treatment to judged recovery or the 7th week of the treatment.

III. Results and Discussion

1. The affected site

Among 44 patients, 63.6 % in this study were women, which is similar to the Lundgren's report¹¹⁾. Even though Adour reported a majority of palsy are left-sided¹⁾, there is no difference between left-sided palsy which is 43.2 % and right-sided palsy which is 56.8 % in this study (Table 3). It has been reported that there was a high risk of facial palsy during pregnancy⁵⁾ but in this study the lone pregnant case implied no increased incidence of Bell's palsy.

Table 1. Facial nerve grading systems by House-Brackmann.

Grade	Description	Characteristics
I	Normal	Normal facial function in all areas.
II	Mild dysfunction	Gross: Slight weakness noticeable on close inspection ; may have very slight synkinesis. At rest: normal symmetry and tone. Motion Forehead: moderate to good function Eye: complete closure with minimum effort Mouth: slight asymmetry
III	Moderate dysfunction	Gross: obvious but not disfiguring difference between two sides ; noticeable but not severe synkinesis, contracture, and/or hemifacial spasm At rest: normal symmetry and tone. Motion Forehead: slight to moderate Eye: complete closure with effort Mouth: slightly weak with maximum effort
IV	Moderately severe dysfunction	Gross: obvious weakness, and/or disfiguring asymmetry At rest: normal symmetry and tone. Motion Forehead: none Eye: incomplete closure Mouth: asymmetric with maximum effort
V	Severe dysfunction	Gross: only barely perceptible motion At rest: asymmetry Motion Forehead: none Eye: incomplete closure Mouth: slight movement
VI	Total paralysis	No movement

Table 2. Facial nerve grading system by House-Brackmann.

Grade	Description	Measurement	Function(%)	Estimated function(%)
I	Normal	8/8	100	100
II	Slight	7/8	76-99	80
III	Moderate	5/8-6/8	51-75	60
IV	Moderately severe	3/8-4/8	26-50	40
V	Severe	1/8-2/8	1-25	20
VI	Total paralysis	0/8	0	0

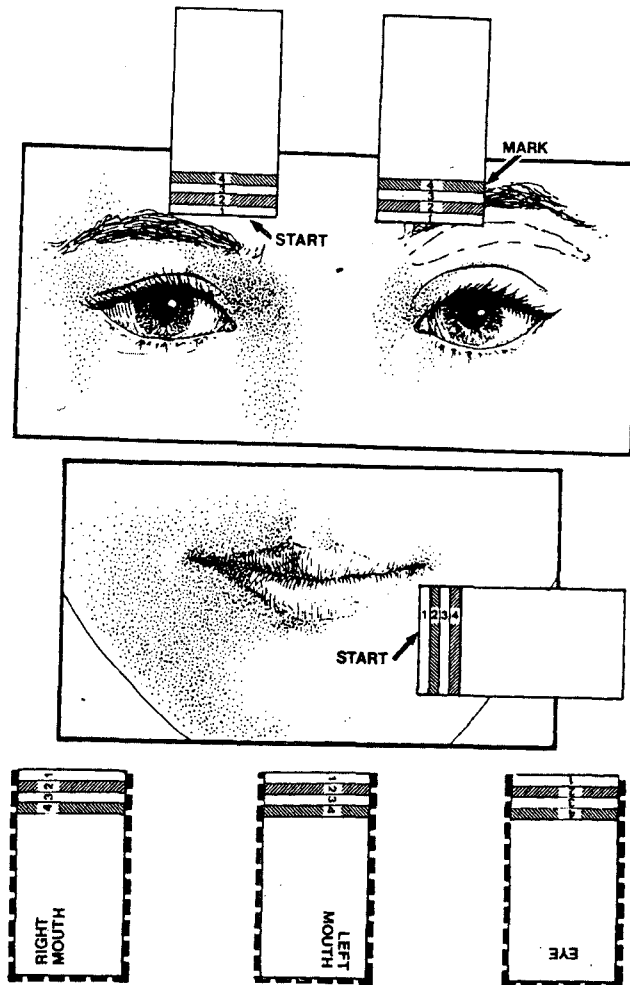


Figure 1. Measurement of facial nerve function with 1 cm scale divided into four equal parts (designed by House-Brackmann).

Table 3. The affected site of Bell's palsy

Site	Male (%)	Female (%)	Total (%)
Right (%)	8 (18.2)	17 (38.6)	25 (56.8)
Left (%)	8 (18.2)	11 (25.0)	19 (43.2)
Total (%)	16 (36.4)	28 (63.6)	44 (100.0)

2. Season of onset

They were developed in spring (March-

May) 29.5%, summer (June-August) 20.5%, fall (September-November) 22.7% and winter (December-February) 27.3% (Table 4). This means that there is no evidence of any seasonal variation. Yanai also reported that the occurrence was not correlated with the mean temperature, mean humidity or mean atmospheric pressure¹⁹⁾.

Table 4. Season of onset of Bell's palsy

Season	Male	Female	Total (%)
Spring	5	7	12 (29.5)
Summer	3	6	9 (20.5)
Fall	2	8	10 (22.7)
Winter	6	6	12 (27.3)
Total	16	28	44 (100.0)

3. The age distribution.

Moore reported that people of all ages are affected, but the syndrome occurs most commonly in those aged 15 to 45, with the incidence peaking in the third decade¹⁴. In this study, the mean age of the whole group was 39.3 years old (40.1 for women and 38.5 for men) and the highest incidence was shown between the 30's and 40's. There were no patients under 10 and rare cases beyond the 70's (Table 5).

Table 5. Age distribution of Bell's palsy

Age	Male	Female	Total (%)
10-19	1	4	5 (11.4)
20-29	4	3	7 (15.9)
30-39	2	8	10 (22.7)
40-49	5	6	11 (25.0)
50-59	3	2	5 (11.4)
60-69	1	4	5 (11.4)
70-79	0	1	1 (2.2)
Total	16	28	44 (100.0)

4. The subjective cause

Fatigue was shown as cause in 37.7 % of the cases studied, exposure to chill 27.9 %, after sleeping 14.7 %, nervousness or tension 13.1 % and after drinking 6.6 % (Table 6). This means that Bell's palsy is closely

related to the condition of patient and environmental factors.

Table 6. Subject cause of Bell's palsy

Subject cause	Male	Female	Total (%)
Fatigue	8	15	23 (37.7)
Exposure to chill	6	11	17 (27.9)
Drinking	4	0	4 (6.6)
Nervousness	2	6	8 (13.1)
After sleeping	4	5	9 (14.7)

5. Initial symptoms

Table 7 shows the relevant symptoms and signs at the first investigation in this study. Complaint of postauricular pain and lacrimation as the initial symptom were respectively shown in 23.8 % of the cases, taste disorder 16.8 %, headache 11.9 %, hyperacusis 9.0 %, neck pain 7.1 %, facial pain 4.0 % and dry eye 3.0 % in that order. But Adour¹¹ reported that the most common accompanying symptoms were postauricular pain (60%), taste disorder (57%), hyperacusis (30%), and dry eye (17%) in a review of Bell's palsy.

Table 7. Initial symptoms of Bell's palsy

Initial symptoms	Total	%
Postauricular pain	30	23.8
Facial pain	5	4.0
Headache	15	11.9
Neck pain	9	7.1
Taste disorder	21	16.8
Hyperacusis	12	9.0
Hearing loss	0	0.0
Lacrimation	30	23.8
Dry eye	4	3.0

6. The length of healing period

It was reported that the Bell's palsy treated by western medicine reaches complete recovery with 75 %, satisfactory recovery with 15 % and poor recovery with 10 %¹⁴⁾. But in this study, 47.7 % of the patients were completely recovered within 3 weeks, 68.1 % within 5 weeks and 86.4 % within 7 weeks, without any sequelae of the palsy. In addition, 13.6 % of the patients showed definite signs of improvement but were not fully recovered within 7 weeks (Table 8). The average length of the healing period was 3.7 weeks.

Table 8. The length of healing period of Bell's palsy

Healing period	Male	Female	Total (%)
1 week	0	0	0 (0.0)
2 weeks	5	4	9 (20.4)
3 weeks	4	8	12 (27.3)
4 weeks	3	5	8 (18.2)
5 weeks	1	0	1 (2.2)
6 weeks	1	4	5 (11.4)
7 weeks	1	2	3 (6.9)
NFR	1	5	6 (13.6)

(* NFR: not fully recovered.)

IV. Conclusion

It is evident that acupuncture has a good effect on Bell's palsy. But in addition, the mechanism of acupuncture and its efficacy are not fully understood. To solve these problems, a well-controlled, single-blind clinical

study is highly recommended.

Acknowledgement

We thank Mrs Joan Riemer for help with this manuscript.

국문초록

鍼治療에 의한 末梢性 顔面神經麻痺의 臨床的 觀察

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1994년 3월부터 1995년 2월까지 1년동안 말초성 안면신경마비로 경희의료원 한방병원 침구1과에 침치료를 받기 위하여 내원한 환자중 발병한지 1주일이내로 耳部 帶狀疱疹이나 종양 또는 외상을 당하지 않은 초발환자 44명을 대상으로 일주일에 3회씩 合谷(LI4), 足三里(ST36), 迎香(LI20), 攢竹(BL2), 翳風(TE17), 地倉(ST4), 頰車(ST6), 水溝(GV26), 承漿(CV24), 陽白(GB14)과 魚腰(Ex-HN4)를 選穴하여 자침하고 치료경과를 관찰하였다. 地倉에서 頰車, 水溝와 承漿에서 地倉, 陽白에서 魚腰로는 투자법을 실시하였다.

환자의 평균연령은 39.3세이었고, 여성이 63.6%를 차지하였고 그중 한 명은 임신중이었다.

안면신경마비의 회복판정 척도는 House-Brackmann facial nerve grading scales를 사용하여 초진부터 초진후 7주까지 또는 7주이내

완전히 회복될 때까지 매주마다 평가하였다. 86.4%의 환자가 초진후 7주 이내에 완전히 회복되었으며, 회복되는데 걸리는 기간은 평균 3.7주로 관찰되었다.

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