Letter to the Editor

**Herbal medicine for treating Bell’s palsy: A retrospective chart review**

Treatment of acute Bell’s palsy (BP) with corticosteroids, antiviral agents, and physiotherapy is primarily aimed at speedy recovery.1,2 According to the Idiopathic Facial Paralysis Korean Medicine Clinical Practice Guideline, acupuncture treatment is “strongly recommended,” while herbal treatment is “experimentally recommended due to lack of clinical studies.”3 To date, no study has provided evidence of the efficacy of herbal medicine for treating BP.

Our research expands upon previous findings on acupuncture for treating BP by including herbal medicine treatment as an adjunctive therapy. Thus, this study investigated two hypotheses—(1) acupuncture with herbal medicine treatment enables faster recovery of patients with BP than acupuncture alone and (2) acupuncture with herbal medicine treatment enables a higher degree of recovery from BP than acupuncture alone.

This retrospective chart review was exempted from approval by the Institutional Review Board (IRB) of Daegu Haany University Korean Medicine Hospital (IRB No.: DHUMC-D-19009-PRO-01).

We categorized 856 facial palsy patients hospitalized between 2004 and 2019 into two treatment groups—those who received herbal medicine with acupuncture therapy (HM + AT group) and those who received only acupuncture therapy (AT only group). The inclusion criteria were (1) patients with idiopathic, peripheral facial paralysis, (2) ≤3 months from onset to first medical examination, and (3) treatment period ≥7 days. Exclusion criteria were as follows: (1) patients with only sensory or transitory facial palsy and (2) patients with incomplete medical records.

All patients received the same advice by a single Korean Medicine doctor with >20 years of clinical experience on leading a healthy lifestyle, diet, and exercise. The primary outcome measure was the speed of recovery, estimated using the duration from the onset of facial palsy to the date of initial recovery and the ratio of patients with initial recovery within 3 weeks from onset. The secondary outcome measure was the degree of recovery, rated according to the House–Brackmann facial grading scale at the end of treatment. A single observer performed all evaluations. SPSS version 26.0 was used to analyze all patient values and the results (Table 1).

The results of evaluations for the two groups were comparable at baseline, except the period from onset to first visit and the distribution of diabetes mellitus. With regard to the speed of recovery, the duration from BP onset to the date of initial recovery was 12.36 and 16.43 days (mean deviation: 4.07, 95% confidence interval: 0.90–7.25, p = 0.012) in the HM + AT and the AT only groups, respectively, while the ratios of initial recovery within 3 weeks of onset were 204/219 (93.2%) and 44/53 (83.0%) (χ² = 5.45, df = 1, p = 0.020) in the HM + AT and the AT only groups, respectively. The grades of recovery during the observation period in the HM + AT and AT only groups, respectively, were as follows: grade 1, 196/278 (70.5%) and grade 2 = 100418

**Table 1**

Baseline Characteristics and Effect of Herbal Medicines and Acupuncture for the Treatment of Bell’s Palsy

| Baseline characteristics | HM + AT (n = 278) | AT only (n = 83) | p value |
|--------------------------|------------------|----------------|---------|
| Male, N (%) | 160 (57.6) | 46 (55.4) | 0.731* |
| Age (yr) | 48.44 ± 15.35 | 49.11 ± 15.53 | 0.727* |
| Left facial palsy, N (%) | 131 (47.1) | 31 (37.3) | 0.197* |
| Severity at baseline, N (%) | | | |
| Complete paralysis | 191 (68.7) | 55 (66.3) | 0.675* |
| Partial paralysis | 87 (31.3) | 28 (33.7) | |
| Period from onset to first visit (d) | 4.96 ± 8.01 | 9.46 ± 13.05 | 0.004* |
| Treatment period (day) | 33.23 ± 31.39 | 29.08 ± 32.36 | 0.295* |
| Known risk factor, N (%) | | | |
| Hypertension | 56 (20.1) | 20 (24.1) | 0.438* |
| Diabetes mellitus | 33 (11.9) | 18 (21.7) | 0.024* |
| Obesity | 108 (38.8) | 23 (27.7) | 0.278* |
| Recurrence | 22 (7.9) | 14 (16.9) | 0.739* |
| Duration from onset to initial recovery (d) | 12.36 ± 9.43 (n = 219) | 16.43 ± 14.26 (n = 53) | 0.026* |
| N of initial recovery within 3 weeks (%) | 204 (93.2) | 44 (83.0) | 0.020* |
| N of overall improvement (%) | | | |
| | 238 (85.6) | 73 (88.0) | 0.770* |

All data are presented as mean ± standard deviation unless otherwise stated.

* Pearson’s χ² test.
† Student’s t-test.
‡ mean deviation: 4.07, 95% confidence interval: 0.90–7.25.
§ χ² = 5.45, df = 1.
¶ Grade 2 or higher on House–Brackmann facial grading scale.
** χ² = 0.524, df = 2.

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58/83 (69.9%); grade 2, 42/278 (15.1%) and 15/83 (18.1%); grades 3 or 4, 39/278 (14.0%) and 10/83 (12.0%), and grade 5, 1/278 (0.4%) and 0/83 (0.0%). No statistical significance was found ($\chi^2 = 0.524$, df = 2, $p = 0.770$).

These results suggest that in terms of recovery speed, combined treatment with acupuncture and herbal medicine had superior efficacy for treating BP than acupuncture alone. In addition, herbal medicine treatment may shorten the time required for initial recovery from BP. However, despite the early initial recovery in the HM + AT group, both groups showed no significant difference in the degree of recovery during the observation period. Because early recovery is a good prognostic factor for BP, the significance of this outcome is unclear. In general, the total follow-up period in facial palsy studies is approximately ≥6 months, whereas the observation period in this study was approximately 1 month. The short observation period may have been inadequate to sufficiently reflect the differences in treatment effect between the two groups.

Because this was not a controlled study, these results require careful interpretation. While empirical evidence substantiate the effectiveness of herbal medicine for treating BP, this is the first case series to investigate the clinical effect of herbal medicine treatment for BP. Further well-designed and prospective controlled trials with a longer observation period are needed to confirm these findings.

**Author contributions**

Conceptualization: H-CS. Methodology: D-EJ. Software: D-EJ. Validation: D-EJ. Formal Analysis: D-EJ. Investigation: G-HC, S-YJ, Y-SJ, and D-EJ. Resources: H-CS. Data Curation: H-CS. Writing – Original Draft: D-EJ. Writing – Review & Editing: D-EJ and H-CS. Visualization: D-EJ. Supervision: H-CS. Project Administration: H-CS. Funding Acquisition: H-CS.

**Conflicts of interest**

The authors declare no conflict of interest.

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**Ethical statement**

This study was a retrospective chart review and was exempted from approval by the Institutional Review Board (IRB) of Daegu Haany University Korean Medicine Hospital (IRB No.: DHUMC-D-19009-PRO-01).

**Data availability**

Data will be made available upon request.

**Supplementary material**

Herbal formular for Gagamshunqitang (modified Shunqitang) can be found in the online version, at doi:10.1016/j.imr.2020.100418.

**References**

1. Phan NT, Panizza B, Wallwork B. A general practice approach to Bell’s palsy. *Aust Fam Phys* 2016;45:794–7.
2. Somasundara D, Sullivan F. Management of Bell’s palsy. *Aust Prescr* 2017;40:94–7.
3. Lee JA, Kim JU, Choi J, Jun JH, Choi TY, Yook TH, et al. Clinical practice guidelines of Korean medicine for facial palsy: an evidence-based approach. *Eur J Integr Med* 2016;8:176–81.
4. Finsterer J. Management of peripheral facial nerve palsy. *Eur Arch Otorhinolaryngol* 2008;265:743–52.
5. Jabor MA, Gianoli G. Management of Bell’s palsy. *J La State Med Soc* 1996;148:278–83.

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