

# Enhanced Recovery from Bell's Palsy with Acupuncture and Chinese Herbal Medicine: A Case Report

By: Jessica Cooper, Yong Deng and Jeffrey Langland

Keywords: Bell's palsy, acupuncture, Traditional Chinese Medicine, naturopathic medicine, alternative medicine

## Abstract

This case report demonstrates the ability of acupuncture to enhance the recovery of a patient suffering from symptoms associated with Bell's palsy where conventional treatment had failed. Prior to acupuncture intervention, the patient had experienced acute facial paralysis and had been prescribed conventional allopathic medical treatment, resulting in minimal resolution of symptoms. Due to symptom persistence, the patient sought acupuncture treatment. Following four weeks of treatment, consisting of a specific acupuncture protocol along with a Chinese herbal prescription, noticeable recovery was observed. The patient reported a decrease in symptoms including jaw pain, paraesthesia of the lips and right-sided mouth and eye deviation.

## Introduction

Bell's palsy, also known as idiopathic facial paralysis, is the most common cause of acute unilateral facial paralysis. It is a neurological disorder that affects the cranial nerves, primarily involving the lower motor neurons of the facial nerve.<sup>1</sup> Possible triggers for the development of Bell's palsy include exposure to cold temperatures or wind, autoimmune disorders, microvascular disease such as that which occurs in hypertension and diabetes mellitus, and infections such as Epstein Barr virus or Lyme disease. There is also increasing evidence that the reactivation of herpes simplex type 1 and herpes zoster in the cranial nerve ganglia may contribute to the development of this disorder<sup>1</sup>. Common clinical findings include acute onset of facial weakness, unilateral upper and lower facial paralysis, taste impairment, lacrimation difficulties, hyperacusis (increased sensitivity to certain frequencies or volume) with otalgia, ocular pain, blurred vision, numbness or tingling of the mouth or cheek, distortion of the mouth, flattening of the forehead and nasolabial fold on the affected side, and decreased eye closure.<sup>1,2</sup> It is observed more often in adults, individuals with diabetes, and pregnant women.<sup>3</sup> The mean time for recovery is estimated as six months, with or without treatment, although this may vary from person to person. Patients over the age of 60 are more likely to suffer from long-term complications, and recovery time can vary based on cause, severity of paralysis and pain severity at onset. Approximately 10 per cent of all patients with Bell's palsy experience permanent facial disfigurement or

other complications.<sup>2</sup>

Typical allopathic treatment for a patient with Bell's palsy involves corticosteroids with anti-viral treatment, if a virus is a suspected cause. The use of corticosteroids is believed to increase the recovery of facial nerve function and to decrease inflammation.<sup>1</sup> Acyclovir is the most common anti-viral agent prescribed, however it has not been shown to effectively treat Bell's palsy when given alone. The most effective conventional treatment therefore involves using a combination of corticosteroids with anti-viral treatment.<sup>1</sup> Facial decompression surgery is another option, but this has not been shown to be highly efficacious and its use remains controversial.<sup>1</sup>

As an alternative approach, several studies in China have supported the efficacy of acupuncture in the treatment of Bell's palsy. This case report demonstrates the resolution of Bell's palsy symptoms in an elderly patient treated with acupuncture and Chinese herbs.

## Presenting concerns

A 60-year-old female presented with a diagnosis of Bell's palsy. The patient had been diagnosed four weeks prior at a local emergency room (ER), after experiencing an acute episode of right-sided facial weakness. The patient reported difficulty in closing the right eyelid with noticeable deviation of the right eye and right side of the mouth, along with frontal headache, jaw pain and paraesthesia of the lips. In the ER, the patient had been prescribed a regimen of acyclovir (lasting 14 days) and prednisone (lasting six

Acupuncture Points	Actions <sup>3,4</sup>
Tongzilliao GB-1	Eliminates wind and clears heat, benefits the eyes, treats eye and mouth deviation.
Yangbai GB-14	Eliminates wind, benefits eyes and head, and alleviates pain
Fengchi GB-20	Eliminates wind, benefits the eyes.
Yanglingquan GB-34	Benefits sinews, decreases muscular contraction, spreads Liver qi, extinguishes Liver wind, activates the channel and alleviates pain.
Sibai ST-2	Eliminates wind, treats facial paralysis and pain.
Dicang ST-4	Eliminates wind, treats facial paralysis and mouth deviation, relieves pain.
Jiache ST-6	Eliminates wind, benefits the face and jaw.
Xiaguan ST-7	Removes obstruction, treats facial paralysis and benefits the jaw.
Zusanli ST-36	Tonifies qi and nourishes blood, activates the channel and alleviates pain.
Tiaokou ST-38	Eliminates wind-damp and alleviates pain.
Hegu LI-4	Expels wind, regulates the face, eyes and mouth, activates the channel and alleviates pain.
Taichong LIV-3	Spreads Liver qi and extinguishes wind, promotes free-flow of Liver qi, clears the head and eyes.
Sanyinjiao SP-6	Harmonises the Liver, activates the channel and alleviates pain.
Zanzhu BL-2	Eliminates wind and clears heat, benefits the eyes.
Quanliao SI-18	Eliminates wind and alleviates pain, clears heat and reduces swelling.
Scalp: Lower 1/3 of Motor and Sensory Line	For motor and sensory facial symptoms .
Jiachengjiang M-HN-18	Eliminates wind, activates qi and blood, alleviates pain, corrects deviation of mouth and eyes, alleviates facial pain and paralysis.

Table 1: Acupuncture points and modes of action.

days). The patient had finished the conventional treatment without experiencing resolution of symptoms. After an additional two weeks of symptom persistence, the patient sought acupuncture treatment. At the initial intake, the patient's symptoms included right eye deviation causing difficulty closing the right eyelid, deviation of the right side of the mouth with jaw pain, and paraesthesia of the lips contributing to difficulty in drinking from a cup and being able to properly brush her teeth. These findings supported the fact that no resolution of symptoms had occurred since their onset four weeks previously.

### Intervention

During the initial assessment, the patient was diagnosed with the traditional Chinese medicine (TCM) pattern of 'external wind invasion stirring up internal Liver wind'. The treatment method was therefore aimed at eliminating external wind, calming Liver wind, and removing obstruction from the channels involved. Acupuncture was performed by a licensed acupuncturist/traditional Chinese medical doctor (OMD) trained at the Chengdu University of Traditional Chinese Medicine (China). Acupuncture points chosen involved local facial points and distal points on the Gall Bladder, Stomach, Small Intestine, Liver and

Bladder channels, as well as scalp motor and sensory points (see Table 1).<sup>4</sup> The specific protocol was chosen to relieve pain and paralysis and increase normal function of the eyes and mouth by decreasing deviation. Acupuncture needles were left in place for 30 minutes with additional electrical stimulation at a frequency of 43 hertz at Dicang ST-4, Qianqu SI-2, Yingxiang L.I.-20 and Jiachengjiang M-HN-18. A Chinese herbal formula, *Gastrodia 9* (by Seven Forests, based on traditional and modern formulas used for the treatment of spasm and pain<sup>5</sup>), was also prescribed based on the same treatment goals (see Table 2). The patient received acupuncture once a week for four weeks, took a two-week break due to a vacation, and then resumed treatment the following month, receiving one treatment every other week.

### Outcomes

The patient was assessed at each acupuncture treatment for right-sided eye and mouth deviation, jaw pain and paraesthesia of the lips, which she rated on a scale of one to 10 (10 being the most severe). The patient assessed these symptoms upon their initial onset (week minus four), following prednisone and acyclovir treatment alone (at initial acupuncture intake, week zero), and then after two

Chinese	Pharmaceutical	Actions/Indications <sup>5,14</sup>
Tian Ma Mi Han Jun	Armellaria mellara Gastrodiae	Calms Liver wind, extinguishes wind, controls spasms; treats internal movement of Liver wind, symptoms of pain and paraesthesia.
Chan Tui	Periostracum Cicadae (cicada moultings)	Disperses wind and clears heat; treats eye conditions.
Tian Nan Xing	Rhizoma Arisaematis	Disperses wind; treats facial paralysis and pain.
Qiang Huo	Radix et Rhizoma Notopterygii	Releases exterior; treats pain.
Fang Feng	Radix Ledebouriellae	Releases exterior and expels wind; treats pain.
Jiang Can	Bombix Batryticatus (silkworm)	Extinguishes exterior wind and Liver wind; treats spasms and pain.
Gui Ban Jiao	Trionycis Carapax (turtle shell)	Calms Liver wind; treats facial spasm.
Fu Zi	Radix Aconiti Praeperata	Restores yang qi; treats pain.
Gan Cao	Radix Glycyrrhizae	Tonifies qi; treats spasm and alleviates pain.

Table 2: *Gastrodia* 9 ingredients and modes of action.

and four weeks of acupuncture/herbal treatment (week two and week four). The patient reported right-sided eye and mouth deviation of eight out of 10 at initial onset (week minus four) and seven out of 10 at initial intake prior to implementing acupuncture/herbal treatment (week zero). Following two weeks of treatment, the patient reported that the deviation had significantly decreased in severity to five out of 10 at week two, and further reduced to two out of 10 at week four (see Figure 1A). The patient also assessed lip paraesthesia on the same severity scale. The severity of lip paraesthesia was assessed as eight out of ten at week minus four and week zero, suggesting that conventional treatment had made no impact on resolution of this symptom. After two weeks of acupuncture/herbal treatment, the severity of lip paraesthesia decreased to four out of ten, and reduced further to two out of ten at week four (see Figure 1B). At the onset of symptoms (week minus four) the patient assessed jaw pain at eight out of 10, while at the initial intake (week zero) she reported that the jaw pain had slightly increased to nine out of 10. At week two, following two weeks of acupuncture/herbal treatment, jaw pain severity decreased to five out of 10, and at week four post-treatment jaw pain continued to decrease to two out of 10 (Figure 1C). Due to the patient's lack of symptom improvement with conventional treatment and noticeable benefit with acupuncture/herbal treatment, the patient continued to receive acupuncture treatments bi-weekly with continued improvement.

## Discussion

Bell's palsy is an acute disorder involving the facial nerve that commonly results in unilateral facial paralysis with associated symptoms of pain, taste abnormalities, hearing difficulties, and possible facial disfigurement.<sup>7</sup> Facial paralysis can vary from partial to complete.<sup>6</sup> The facial

nerve provides parasympathetic fibres to the lacrimal and submandibular glands, as well as motor innervation to facial musculature, which is why paralysis is observed in areas of facial nerve dysfunction.<sup>8</sup> Although there is no clear aetiological cause for Bell's palsy, there is increasingly more evidence that viral reactivation within the nerve ganglia and resulting inflammation and oedema of the facial nerve are involved.<sup>7</sup> It has been postulated that up to 30 per cent of cases diagnosed as idiopathic Bell's palsy are in fact due to other pathologies and for this reason infection, stroke, tumours or autoimmune disease must be ruled out during diagnostic evaluation.<sup>6</sup>

The most agreed upon standard treatment guidelines involve the use of corticosteroids within 72 hours of symptom presentation, as this will often decrease the severity of symptoms related to inflammation of the facial nerves, as well as decreasing long-term sequelae.<sup>6,7,10</sup> Antiviral treatment, such as acyclovir, is also used in combination with steroid treatment if a viral cause is suspected.<sup>12,13</sup> Prior literature indicates that patients with partial weakness and mild symptoms are expected to recover within three weeks with or without treatment.<sup>6</sup> However, many patients, especially the elderly, can be left with residual symptoms for months. The goal of corticosteroid treatment is aimed at increasing the chance of complete recovery occurring within three to nine months.<sup>7,11</sup> Studies suggest that motor function can often recover within six months without treatment.<sup>9,13</sup> The variability in these findings leads to questions about which factors significantly impact recovery time and prognosis, how effective current treatment guidelines are, and whether treatment should relate more specifically to individual symptoms and their severity, so as to improve long-term recovery.

Up to one-third of patients with Bell's palsy suffer

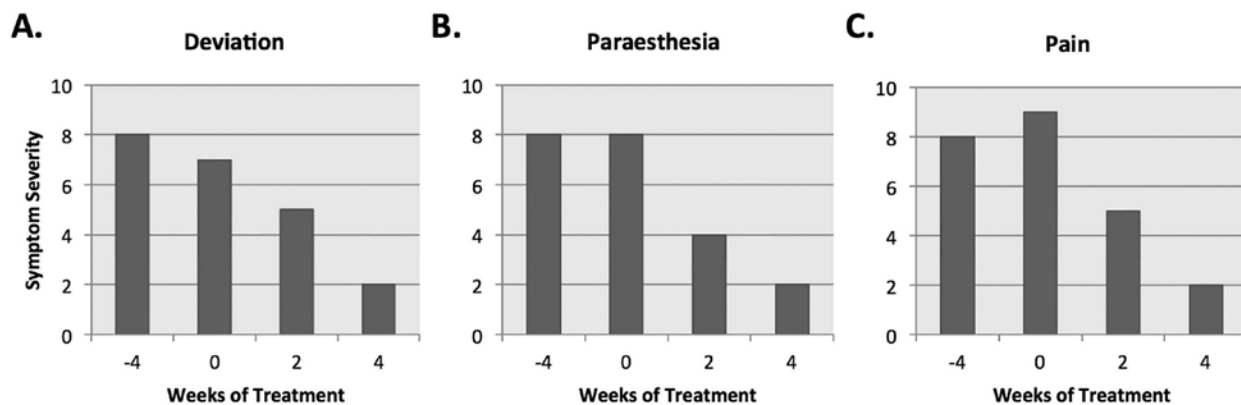


Figure 1: Patient symptom severity over time. The patient's Bell's palsy symptoms were assessed at the indicated times. Week -4 is symptom onset; Week 0 is at initial acupuncture intake (following prednisone and acyclovir treatment); Week 2 is following two weeks of acupuncture/herbal treatment; and Week 4 is after four weeks after acupuncture/herbal treatment. A) Symptom severity of right-sided eye and mouth deviation on a scale from 0-10 (10 being most severe). B) Symptom severity of lip numbness on a scale from 0-10 (10 being most severe). C) Symptom severity of jaw pain on a scale of 0-10 (10 being most severe).

from residual symptoms or sequelae.<sup>6</sup> Potential factors contributing to delayed recovery include complete facial palsy at onset, advanced age, hypertension, diabetes mellitus and viral aetiology, as well as lack of diagnosis and early medical intervention.<sup>6,8</sup> With incomplete recovery, a patient may experience persisting symptoms of paralysis, muscle contracture, facial spasm and disfigurement, difficulty with eating, drinking and speaking due to facial asymmetry, tearing of the ipsilateral eye during chewing, and closure of the ipsilateral eyelid with opening of the jaw.<sup>8,9,13</sup> It is important to note that although corticosteroid treatment at the onset of symptoms has been shown to decrease the occurrence of sequelae, it is not used as treatment for sequelae per se.<sup>9</sup> Other treatments for residual symptoms and sequelae include facial decompression surgery, which lacks evidence for its efficacy and has been shown to increase the risk of seizures and unilateral hearing loss.<sup>8</sup> Sequelae and residual symptoms have also been treated with exercise, biofeedback, laser and electrotherapy, however substantial evidence for the efficacy any of these therapies is reportedly lacking.<sup>13</sup>

The importance of the case presented here is due to the profound effects of the treatment in accelerating the recovery of an elderly patient with Bell's palsy. It adds to current literature indicating the effectiveness of acupuncture and herbal medicine in the treatment of this disorder.

According to TCM, Bell's palsy stems from an attack on the channels by external wind. External wind invasion refers to invasion of an external pathogen into a superficial part of the body.<sup>11</sup> For this specific patient, the TCM diagnosis was 'external wind stirring up internal wind' indicating the pathological factor had led to a functional disturbance of the zang-fu organs. Therefore, the acupuncture treatment goals for this patient were to dispel wind and treat the channels associated with the affected zang-fu organs, along with local facial points for paraesthesia, deviation and pain. The overall goal

of treatment was to restore normal facial function by addressing the patient's individual symptom presentation.

Although the use of corticosteroids is reported to lead to improvement in Bell's palsy symptoms, in this particular case, the patient experienced no significant relief following conventional treatment. This lack of resolution may have been associated with the patient's advanced age, severity of symptoms or other aetiological factors. Following acupuncture and TCM therapy, the patient reported a 50 per cent reduction in symptoms within two weeks, and a 75 per cent reduction after four weeks. These outcomes demonstrate that a combination of acupuncture treatment and Chinese herbal medicine can accelerate recovery time and decrease common residual symptoms, and therefore should be considered as a treatment option for patients with Bell's palsy. Bell's palsy symptom presentations are variable, and prognosis varies depending on symptom presentation. Treatments such as acupuncture, which cater to the specific presentation of the individual patient, can therefore have a profound impact on their recovery and long-term prognosis.

---

*Dr. Jessica Cooper is a board-certified Naturopathic Doctor in the state of New Hampshire and Arizona. She received her Bachelor of Science with a focus in Biology at Lebanon Valley College in Annville, PA. Immediately following her undergraduate education, Dr. Cooper enrolled at the Southwest College of Naturopathic Medicine where she graduated with honors and earned her Doctorate of Naturopathic Medicine. Upon graduation, she completed an accredited one-year residency program at the Southwest Naturopathic Medical Center. Dr. Cooper's preferred therapeutics include botanical medicine, acupuncture and traditional Chinese medicine, mind-body medicine, nutrition, bio-therapeutic drainage, homeopathy and hydrotherapy. Her focus is in general family medicine, women's health, mental health, endocrine and digestive disorders, and acute/chronic illness. Dr. Cooper is currently a member of the American Association of Naturopathic Physicians (AANP), the New Hampshire Association of Naturopathic Doctors (NHAND), and the Pennsylvania Association of Naturopathic Physicians (PANP).*

**Dr. Yong Deng, OMD, LAc**, is an international expert in Chinese medicine and acupuncture. He earned his medical degree from and is former faculty of Chengdu University of Traditional Chinese Medicine in China. He has been teaching and practicing at medical schools in China and the United States for more than 33 years with a concentration in Traditional Chinese Medicine for a wide range of diseases and conditions. Due to his extensive knowledge, Dr. Deng was invited to SCNM in 1996 and currently serves as the chair and professor within the Department of Acupuncture and Oriental Medicine. Dr. Deng is a licensed acupuncturist in Arizona and works with MDs in hospitals and several fertility treatment centres within the Phoenix area. He is a member of the State of Arizona Acupuncture Board of Examiners and has published over 30 papers and several books including the *Encyclopedia of Chinese and U.S. Patent Herbal Medicines*.

**Dr. Jeffrey Langland, PhD**, received his doctorate degree from Arizona State University in the area of virology in December 1990. His area of interest at that time and still today is investigating and understanding the complex cellular defenses against microorganisms. After graduating from Arizona State, he was a post-doctoral fellow at UC Davis studying oncolytic viruses, followed by a post-doctoral position at the University of Wyoming comparing similarities between plant and human defenses against viruses. In 1995, he returned to Arizona State University as a Research Assistant Professor. In this capacity he has instructed several courses including *General Virology and The Biology of AIDS*. In August 2007, Dr. Langland became the first joint faculty member at Southwest College of Naturopathic Medicine, maintaining his position at ASU and becoming the instructor for *Medical Microbiology and Concepts in Research* courses. Dr. Langland is chair of the Research Department at SCNM bringing new insight and a fresh approach to research for the students and to the field of naturopathic medicine.

**Corresponding author:** Jeffrey Langland. Mail to [j.langland@scnm.edu](mailto:j.langland@scnm.edu)

## References

1. Taylor, D.C. & Zachariah, S.B. "Bell Palsy: Practice Essentials, Background, Anatomy", Medscape, See <<http://emedicine.medscape.com/article/1146903-overview>>
2. Simon, R.P., Greenberg, D.A. & Aminoff M.J. (2012). "Bell Palsy." In *Clinical Neurology*. 8th ed. p. 535. Lange Medical/McGraw-Hill: New York
3. Kuoch, D.J. (2011). *Acupuncture Desk Reference: Your Guide to Complete Knowledge*. Acumedwest: San Francisco
4. Deadman, P., Al-Khafaji, M. & Baker, K. (2007). *A Manual of Acupuncture*. Journal of Chinese Medicine Publications: Hove
5. Dharmananda, S. (2004). "Gastrodia 9 by Seven Forests (ingredients of Chinese herbal formula)" in *A Bag of Pearls: The Institute for Traditional Medicine Formulary*. ITM: Portland
6. Holland, J., & Bernstein, J., (2011). "Bell's palsy", *BMJ Clin Evid*, pii: 1204.see <<http://clinicalevidence.bmj.com/x/systematic-review/1204/overview.html>>
7. Patel, D.K., (2015). "Bell Palsy: Clinical Examination and Management", *Cleve Clin J Med*, 82(7):419-26.
8. Zandian, A., Osiro, S., Hudson, R., et al. (2014). "The neurologist's dilemma: A comprehensive clinical review of Bell's palsy, with emphasis on current management trends", *Med Sci Monit*, 20: 83-90.
9. Kwon, H.J., Kim, J.L., Lee, M.S. et al. (2011). "Acupuncture for sequelae of Bell's palsy: a randomized controlled trial protocol", *Trials*, 12:71.
10. Gagyor, I, Madhok, VB, Daly, F, et al. (2015). "Antiviral treatment for Bell's palsy (idiopathic facial paralysis)", *Cochrane Database Syst Rev*, (11):CD001869. doi: 10.1002/14651858.CD001869.pub8.
11. Xinnong, C. & Deng, Y. (2010). *Chinese Acupuncture and Moxibustion*. 3rd ed. Foreign Languages Press: Beijing.
12. Sullivan, F.M., Swan, I.R., Donnan, P.T. et al. (2007). "Early treatment with prednisolone or acyclovir in Bell's palsy", *N Engl J Med*, 357(16):1598-607.
13. Murthy, J.M. & Saxena, A.B. (2011). "Bell's palsy: Treatment guidelines", *Ann Indian Acad Neurol*, 14(Suppl1): S70-S72.
14. Bensky, D., Gamble, A., & Kaptchuk, T.J., (1993). *Chinese Herbal Medicine: Materia Medica*. Eastland Press: Seattle