

# Effectiveness of Acupuncture Care in Cases of Sided Facial Paralysis (Miantan): A Case Study at The Integration Polyclinic of Carolus Borromeus Hospital, Kupang, NTT

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## Abstract.

*Unilateral facial paralysis, also known as Miantan, refers to paralysis affecting one side of the face. One type of Miantan is Shi Syndrome, which is caused by pathogenic factors such as wind-cold and wind-heat. These factors lead to obstruction of the flow of Qi in the Yang Ming and Shao Yang meridians, resulting in a "wind-phlegm" syndrome. This condition manifests with various associated symptoms, including weakness of the facial muscles, and may lead to the characteristic clinical features of Bell's palsy. Bell's palsy is a peripheral facial nerve paralysis characterized by weakness or paralysis on one side of the face due to dysfunction of the seventh cranial nerve. This condition is characterized by inability to close the eyes completely, drooping of the mouth corners, and facial asymmetry. This study aimed to determine the effectiveness of acupuncture care in patients with Bell's palsy at the Integrative department of St. Carolus Borromeus Hospital Kupang. This study used a qualitative case study design. The participant was a 35-year-old female patient diagnosed with left-sided Bell's palsy. Data were collected using acupuncture diagnostic methods including observation (Wang), listening and smelling (Wen), questioning (Wen), and palpation (Qie). Acupuncture therapy was administered based on the established diagnosis of disease and syndrome. The results showed facial asymmetry on the left side, inability to raise the forehead, and incomplete eyelid closure. After several acupuncture therapy sessions, improvements were observed in facial muscle function, eyelid closure ability, and facial expressions. This study concludes that acupuncture therapy can improve facial nerve function and accelerate recovery in patients with Bell's palsy.*

**Keywords:** Bell's palsy; Acupuncture and facial paralysis.

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## I. INTRODUCTION

Bell's palsy is an acute paralysis of the peripheral facial nerve that causes impaired facial muscle function on one side. This condition is associated with damage to the 7th cranial nerve, which plays a role in facial expression, tear production, and taste sensation in the anterior two-thirds of the tongue. Globally, Bell's palsy is the most common cause of peripheral facial paralysis with an incidence of approximately 15–30 cases per 100,000 population each year. Clinical manifestations of Bell's palsy include an inability to close the eyes completely, difficulty raising the eyebrows, drooping corners of the mouth, and facial asymmetry. This condition can also be accompanied by taste disturbances and pain around the head and ears. Acupuncture is a complementary therapy that is widely used in the treatment of Bell's palsy because it can stimulate nerves, increase blood flow, and accelerate nerve regeneration and ultimately accelerate healing.

### Definition

Bell's palsy is a peripheral facial paralysis condition that causes weakness or paralysis on one side of the face. It is an idiopathic problem of the 7th cranial nerve in the face without any other neurological disease. This results in paralysis on one side of the face (Nurhaliza and Agustin, 2022). In Eastern medicine, there is a term known as Miantan, 面瘫 (miàn tān), which means facial nerve paralysis. From the perspective of Traditional Chinese Medicine (TCM), Bell's palsy is known as Miantan (面瘫) which is caused by disruption of qi flow in the facial meridian due to the invasion of wind pathogens that inhibit energy circulation in the Yang Ming and Shao Yang meridians.

## **Epidemiology**

The clinical presentation of this disorder is rapid, unilateral lower motor neuron type facial weakness accompanied by symptoms of post-auricular pain, dysgeusia, subjective changes in facial sensation and hyperacusis (Latuamury et al., 2023), occurring on one side of the face (unilateral) and in 80-90% of cases can experience improvement. The cause of this occurrence is still unknown. (Deni Ali Rahman 1, Ika Rahman 2. 2024). NCBI Bookshelf (StatPearls, 2024) says the incidence rate in the world Bell palsy is 15–40 per 100,000 people. (Hohman MH, Warner MJ, Varacallo MA., 2024) The WHO reports that Bell's Palsy is the most common cause of peripheral facial paralysis, with an incidence of approximately 15–30 cases per 100,000 population per year. This condition can occur at any age, but is more common between the ages of 15–45 years. It is said to occur frequently in pregnant women, patients with diabetes mellitus, or viral infections (Weekly and Record 2004). In Indonesia, the incidence of Bell's palsy is around 40-70% of all peripheral facial nerve paralysis, with an average prevalence of 10-30% per 100,000 people per year. Data collected from 4 hospitals in Indonesia shows that the frequency of Bell's palsy is around 23 cases, recovering within 1-2 months, which occurs in 8% of cases (Sofiaputri A, et al. 2021) (Munawwarah, Kurniawati, and Agustina 2021), while at St. Carolus Borromeus Hospital in Kupang, 15 patients were recorded out of 156 new patients from 2048 total patient visits at the Neurology polyclinic in 2025.

## **Etiopathogenesis**

Five possible (hypothetical) causes of Bell's palsy are vascular ischemia, viruses, bacteria, hereditary, and immunological. The most common etiology of Bell's palsy is thought to be a viral infection. Herpes zoster virus (HZV) and herpes simplex virus (HSV) are the most frequently implicated human neurotropic alpha herpesviruses. Typically, herpes simplex (HSV) causes cold sores and genital herpes, while herpes zoster causes chickenpox and shingles. (Atha, Puspitasari, and Komala 2025). The inflammation and ischemia (lack of blood supply) of cranial nerve VII (Facial nerve) are caused by compression of the nerve as it passes through the geniculate ganglion in the facial canal. Secondary ischemia worsens nerve damage by increasing capillary permeability, leading to fluid accumulation, edema, and ultimately nerve compression. (Singh and Deshmukh 2022). The facial canal is a narrow passageway within the temporal bone that serves as the pathway for the facial nerve (cranial nerve VII) to pass from the skull to the face. It consists of efferent (motor and autonomic) and afferent (sensory) nerve fibers. At the end of the facial canal, the facial nerve exits the cranial cavity through the stylomastoid foramen. These motor fibers then innervate all the muscles of facial expression, such as the orbicularis oculi and orbicularis oris, occipitalis, buccinator, and frontalis; as well as the small stapedius, platysma, stylohyoid, and posterior digastric muscles.

Compression of this nerve causes facial muscle paralysis, loss of taste sensation, and headaches in the front and sides. In TCM theory, Bell's palsy is associated with blocks/obstructions in the flow of qi from the Yang Ming and Shao Yang meridians, which causes the syndrome of “wind phlegm”. Symptoms associated with this syndrome include weakness of the facial muscles and lead to the characteristic symptoms of Bell's palsy. (Jie, S, 2021). Based on their causes, they are divided into two groups: Xu (si) and Shi (se). Shi syndrome is caused by wind-cold and wind-heat pathogens. Xu syndrome is often caused by a weakened body due to a long-standing illness that drains Yin and Jin Ye. In TCM theory, Bell's palsy is associated with blocks in the flow of qi from the Yang Ming and Shao Yang meridians, resulting in a syndrome called "wind phlegm." Symptoms associated with this syndrome include facial muscle weakness and lead to the characteristic symptoms of Bell's palsy. Pathogens block the Luo meridians. Wind-like pathogens, along with cold, attack the Yang Ming and Shao Yang meridians. This disrupts the flow of qi within the meridians, resulting in inadequate nourishment of the Jing Jin (moving muscles), leading to facial muscle paralysis. Heat-based pathogens block the Luo meridians.

Excessive yang or overly passionate emotions facilitate the emergence of fire pathogens within the body. When the body is attacked by heat-based pathogens from outside, these pathogens will inhibit the Jing Jin (moving muscles) of Yang Ming and Shao Yang, causing them to relax and facial muscle paralysis. Hot and Dry Pathogens Drain Yin. If hot and dry diseases continue for a long time, they can drain Yin and

Xue/blood, so that Qi and Xue/blood become incompatible, too much Yang. Burning and wind-like pathogens will arise from within the body, then Jing Jin / facial muscles become tense, the face becomes tense and cannot be moved voluntarily. In the Miantan clinic, it can be divided into Han / cold syndrome, Re / heat and Xu syndrome. The cause of Han / cold syndrome is wind-like pathogens. In this syndrome, skin color generally does not change, accompanied by headaches and stiff neck, feelings of fear of wind and cold, pale tongue, thin white tongue coating, Fu / floating pulse and Jin / hard.

## II. METHODS

This study used a case study design with a qualitative approach to describe the implementation of acupuncture care in a patient with facial muscle paralysis. The study participant was a 35-year-old female patient with Bell's palsy on the left side of her face. She lives in a cold, hilly area with frequent rain and wind. Her work requires her to ride a motorbike throughout the day. The study was conducted at the Integration Polyclinic of St. Carolus Borromeus Hospital, Kupang, from April to May 2026.

Data collection was carried out using the acupuncture examination method, namely:

1. Observation (Wang)
2. Hearing and smell (Wen)
3. Interview (Wen)
4. Touch (Qie)

The data obtained is then analyzed to establish a diagnosis of disease and syndrome as a basis for preparing an acupuncture therapy plan.

## III. RESULT AND DISCUSSION

The patient in this study experienced frontal and lateral headaches upon waking in the morning, paralysis on the left side of her face, characterized by facial asymmetry, an inability to lift her forehead, and an inability to close her eyes completely. The left corner of her mouth felt heavy, and when rinsing her mouth, she couldn't hold it in, causing it to drip from the left corner. She also had difficulty speaking and eating.

### Observation

Facial asymmetry with the left cheek drooping and slightly swollen, moderate pain, and unclear speech. The patient appears to lack confidence. The left forehead droops, unable to frown, the left eyebrow is lower, the smile line on the left side droops and is not visible, and the left lip droops when smiling.

1. Tongue Muscles / Tongue Body
  - Shape: thick
  - Color: slightly pale
  - Movement: the tongue tends to tilt to the right when stuck out.
  - Pulse Under Tongue: not enlarged
2. Tongue membrane / moss
  - Thickness: slightly
  - Humidity: slightly humid
  - Cleanliness (greasy, rotten): no
  - Shape (peeled, glass, map, etc.): glass
  - White

### Palpation

- Palpation of the affected area:  
(tenderness/tenderness, tension, lumps, increase/decrease in temperature)  
Tenderness in GB 2 Tinghui, GB 20 Fengchi, BL 2 Left Zanzhu, Li 4 Hegu.  
Pulse check:  
Pulse palpation: floating pulse, slightly weak on the right cun.

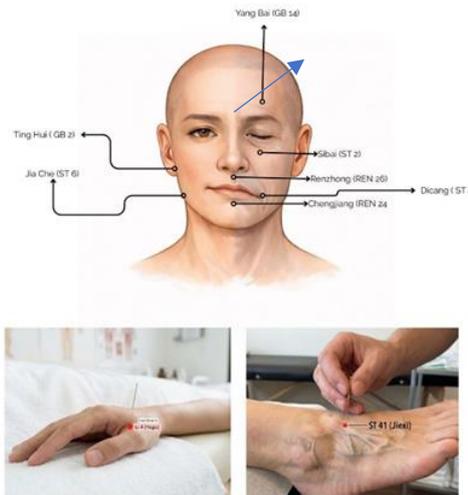
**Therapy**

Based on acupuncture diagnosis, this condition is related to the disruption of the flow of qi in the facial meridians due to the invasion of wind-cold pathogens.

The following acupuncture points are inserted:

Point Name	Location	Benefit
GB14 (Yangbai)	Eliminate wind on the face, pain between the eyebrows and eyes, severe headaches due to wind using the combination: Yangbai GB-14, Jiexi ST-41 and hegu (LI 4) (Classic of the Jade Dragon).	Located on the forehead, 1 cun above the middle of the eyebrow arch, a vertical line in line with the pupil when the eye looks forward.
ST-41 (Jiexi)	Headache accompanied by severe pain, pain in the eyebrows and eyes. Along with points GB-14, LI 4.	Located on the lateral side of the ankle crease (precisely between the tendons of m. extensor hallucis longus and m. extensor digitorum longus),
BL2 (Zanzhu)	Expelling external pathogens wind	Location: medial tip of the eyebrow just above the canthus of the eye, in the notch in the supraorbital margin.
ST4 (Dicang)	with penetrating needling to Jiache (ST6) for facial muscle paralysis	Lateral to the corner of the mouth, straight below the pupil of the eye when facing forward.
ST6 (Jiache)	Pain and deviation of the mouth.	Located 1 cun in front of the upper angle of the mandible, in the indentation when biting hard.
Renzhong Ren-26	facial muscle paralysis (miantan)	In the upper third of the philtrum, between the nose and upper lip, right on the midline of the face.
Chengjiang REN-24	Deviation of mouth and eyes	Located in the middle of the indentation under the lower lip
Tinghui GB-2	Smooths Qi in the facial meridians, helps treat facial paralysis	In front of the ear, in the depression in front of the tragus, the point will be more obvious when the mouth is opened.
Feng Chi (GB 20) Wind pool	Eliminates wind, especially in the head area. Opens the luo/meridians.	At the bottom of the occipital bone, in the groove between the bases of the Sternocleidomastoid and Trapezius muscles
Hegu (LI 4)	Expelling wind from the head accompanied by severe pain, pain in the eyebrows and eyes. Together with GB 14, ST 41.	In the middle of the metacarpal to 2.

**Table 1.** Acupuncture points used in therapy



**Fig 1.** Location of acupuncture points

Visiting schedule 3 times a week for 3 weeks

Recommendations and Suggestions:

Avoid wind, especially cold wind, sleep a maximum of 10 pm, 7 – 8 hours, eat nutritious food (increase vegetables, nuts, reduce fried / grilled food to avoid increasing blockage of qi flow or reduce inflammation), drink plenty of fluids.

Prognosis: good

### **Evaluationdevelopment of therapy results**

Visit 2: Complaints: left eye still difficult to open, mouth opening is limited, tongue stiffness interferes with eating, decreased appetite. Left side of face feels heavy. Headaches have decreased although not gone. Sleep quality is better at night. Points pricked: Li 4, ST 4, ST 6, GB14, GB 2, Ren 26, Ren 24, ST 41, BL 2, GB 20  
3rd visit, April 7, 2026

Complaints: Left eye still difficult to open, mouth opening limited, appetite slightly better, not as severe as previous complaints. Sleeping better again. Appetite improved.

4th visit, April 9, 2026

Complaints: Swallowing and chewing are more comfortable, although they still seem crooked. I'm eating more. When gargling, the water spray is more focused and the angle is not too far to the edge. The paralysis of my left face has decreased. The swelling and stiffness of my left cheek have been significantly reduced. I can now frown or raise my eyebrows, although not perfectly. I'm sleeping very well, and I've gained weight.

5th visit, April 11, 2026

Complaints: I feel a little less stiff, eating is normal, sleeping well. My face still looks a little asymmetrical. Talking and laughing feel easier.

6th visit on April 14, 2026.

Conditions are better, sufferers feel more comfortable.

Visit 7. The patient felt his body was back to normal, although others still noticed a slight asymmetry in his face. His activities were back to normal, his appetite was normal, and he was riding his motorcycle as usual.

### **Discussion**

Bell's palsy occurs due to inflammation and edema of the facial nerve, which disrupts the transmission of nerve impulses to the facial muscles. This condition can lead to weakness or paralysis of the facial muscles on the affected side. From a TCM perspective, this condition is caused by the invasion of wind pathogens that block the flow of qi in the facial meridian. Acupuncture therapy aims to eliminate the pathogens, improve the flow of qi and blood, and stimulate facial nerve function. The patient is a 35-year-old woman who lives in a cold, humid, and windy area and whose job requires her to ride a motorcycle every day, even into the night. One of the causes of Bell's palsy is exposure to cold winds. The symptoms felt are when the patient wakes up feeling a headache in the front of the head, the left eye, the left cheek feels stiff and heavy to move without any initial symptoms. The left cheek feels thick and swollen when looking in the mirror.

The left forehead cannot be lifted when frowning, the left eyelid feels thick and cannot close completely compared to the right eye. When gargling water sprays on the right side, while on the left side it only flows. Headache in the left front and side of the head. Symptoms that appear: the face tilts (asymmetrically) towards the healthy side, the forehead muscles on the affected side appear to drop, the smile line on the affected side disappears, the eye on the affected side does not close completely when both eyes are closed and the tongue on the affected side tilts towards the healthy side when protruded. The eye on the affected side often tears. In his writing S Jie, 2021 the disease occurs suddenly, often appearing when waking up, the face feels numb and stiff, headache on the affected side, especially in the parietal and temporal areas, the face cannot be moved voluntarily, the eyelids and Jin are tight and cannot be closed completely, the face is tilted towards the healthy side. tears come out (Jie S, 2021) Tongue examination: The color is slightly pale, the movement tends to tilt to the right when extended, the tongue coating is white and thin, slightly moist.

Pulse examination: floating pulse, slightly weak on the right cun.

In his writing, S Jie, 2021, said that when examining the tongue and pulse of a person with miantan due to cold wind, the tongue is pale, the tongue coating is white, the pulse is Fu / floating and Jin / hard, The acupuncture points given by the therapist are Li 4, GB 20, ST 4, ST 6, GB14, GB 2, Ren 26, Ren 24, ST 41, ST 2. Analysis by S Jie, 2021. The Tai Yang meridian controls the Biao area / surface, which is the body's defense area. The body is attacked by cold wind pathogens from outside, the first to be affected is the Tai Yang meridian, resulting in headaches. In the facial area, the Luo / Yang Ming and Shao Yang meridians are spread. The attack of cold wind pathogens causes the flow of Qi in these meridians to be disrupted, so

that Jing Jin / muscle movement does not receive enough nutrition, so the face cannot be moved voluntarily, resulting in Miantan / facial muscle paralysis with all its symptoms. Therefore, the principle of therapy is to expel the cold wind pathogen, revive the Luo or meridian and straighten the face. Meanwhile, the points for this purpose are given to patients as listed in Table 2..After gradual acupuncture therapy, there was an improvement in facial muscle function, marked by an increased ability to close the eyes, improved facial symmetry, and a reduction in patient complaints.

#### IV. CONCLUSION AND SUGGESTION

##### conclusion

Acupuncture treatment for patients with Bell's palsy can help improve facial nerve function and gradually increase facial muscle strength. Acupuncture therapy can be an effective complementary or integrated therapy in the treatment of facial nerve paralysis.

##### Suggestion

It is hoped that further research will involve a larger sample size so that it can provide stronger scientific evidence regarding the effectiveness of acupuncture therapy in cases of Bell's palsy.

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