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Research Article

ACUPUNCTURE CARE IN A PATIENT WITH BELL'S PALSY PRESENTING WITH WIND-COLD PATHOGEN INVASION SYNDROME: A CASE STUDY AT ANUGERAH ACUPUNCTURE CLINIC, EAST JAKARTA

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Abstract:

Background: Bell's palsy is an acute lower motor neuron impairment of the peripheral facial nerve (seventh cranial nerve) characterized by unilateral facial muscle weakness, post-auricular pain, dysgeusia, and expressive facial asymmetry. While pharmacological regimens using systemic corticosteroids and antiviral medications represent conventional standards, acupuncture is increasingly utilized as a safe complementary modality to facilitate nerve regeneration and functional recovery.

Objective: To describe the clinical implementation, Traditional Chinese Medicine (TCM) syndromic differentiation, point formulation, and therapeutic outcomes of acupuncture care in a patient with Bell's palsy presenting with Wind-Cold Pathogen Invasion syndrome at Anugerah Acupuncture Clinic, East Jakarta. Methods: A qualitative clinical case study design was employed involving a 40-year-old female homemaker (Mrs. DA) presenting with acute unilateral facial asymmetry following nocturnal cold draft exposure. Data collection adhered to the Four TCM Examinations: inspection (Wang), auscultation and olfaction (Wen), inquiry (Wen), and palpation (Qie). The participant completed six planned acupuncture sessions between 10 December 2025 and 27 December 2025. The therapeutic strategy prioritized expelling external Wind-Cold pathogens, clearing facial meridian stasis, and invigorating Qi and Blood circulation. Acupoints included local facial points (ST 4, ST 6, ST 7, LI 20, GB 14, EX-HN 5), distal regulatory points (LI 4, ST 36, SP 6, LR 3), and specific pathogen-expelling points (GB 20, BL 12) combined with moxibustion.

Results: Across the six sessions, qualitative clinical observations revealed steady, progressive recovery: facial motor symmetry and spontaneous expressive mimetic functions were restored, facial stiffness and post-auricular pain resolved completely, speech articulation normalized, and local facial tenderness disappeared. Examination of the tongue showed normalization from pale with thick body to healthy pink with normal thin white coating, while radial pulse transitioned from floating-tight (Fu Jin) to calm, balanced, and stable.

Conclusion: Acupuncture care combined with indirect moxibustion was associated with noticeable functional recovery and complete symptomatic alleviation in an acute Bell's palsy patient.

Keywords: Acupuncture care; Bell's palsy; Case study; Facial nerve neuropathy; Moxibustion; Wind-Cold syndrome

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1. INTRODUCTION

Bell's palsy is defined as an acute, idiopathic peripheral neuropathy of the facial nerve (cranial nerve VII), resulting in sudden-onset lower motor neuron weakness or complete paralysis of the mimetic facial muscles, predominantly manifesting unilaterally (Amalia et al., 2024; Putri, 2022). Pathophysiologically, the condition is accompanied by variable clinical features, including retroauricular otalgia, impaired gustatory sensation on the anterior two-thirds of the tongue, dysacusis or hyperacusis secondary to stapedius muscle paresis, facial

numbness, and lagophthalmos (Putri, 2022; Husna & Permata, 2024). Globally, the incidence of Bell's palsy is estimated at approximately 20 to 30 cases per 100,000 individuals annually (Fitriyani & Pratama, 2024). In Indonesia, epidemiological surveillance demonstrates that peak incidence occurs between the second and fourth decades of life (ages 15–45 years), with a secondary demographic increase among elderly cohorts exceeding 60 years (Amalia & Ernawati, 2024). Population registry evaluations from British primary care databases confirm that unilateral involvement exhibits an equal bilateral distribution (50% left and 50% right), with complete paralysis observed in 70% of initial presentations and incomplete paresis in 30%, whereas bilateral manifestation remains exceptionally rare (0.3%) (Rifaat et al., 2024).

At the primary healthcare and ambulatory clinical level, such as Anugerah Acupuncture Clinic in East Jakarta, acute facial palsy represents an alarming clinical scenario that prompts urgent health-seeking behavior. Although approximately 70% to 75% of individuals achieve spontaneous recovery within several weeks, up to 25% to 30% suffer from incomplete neural regeneration, long-term functional impairment, aberrant reinnervation leading to synkinesis (such as involuntary eye closure during smiling), contractures, and chronic corneal xerophthalmia (Murzen, 2025; Fink, 2018). Furthermore, because facial expression is central to human emotional communication and interpersonal identity, persistent facial distortion incurs profound psychological distress, social anxiety, depression, and functional embarrassment during mastication and speech (Husna & Permata, 2024; Schattner, 2020).

First-line pharmacological management universally centers upon high-dose oral corticosteroids (e.g., prednisone or prednisolone) administered within 72 hours of symptom onset to suppress intraneural edema and microvascular compression within the narrow fallopian canal, occasionally combined with synthetic antiviral agents (such as acyclovir or valacyclovir) (Amalia & Ernawati, 2024; Suryawijaya, 2023). Nevertheless, multicenter clinical trials highlight that a considerable proportion of patients fail to achieve complete functional restitution despite timely steroid-antiviral protocols (Suryawijaya, 2023). In addition, prolonged corticosteroid therapy introduces risks of adverse systemic effects, including insomnia, dyspepsia, blood pressure elevation, and glycemic instability. Surgical options, such as facial nerve decompression, remain controversial, carrying substantial operative risks and highly variable functional outcomes depending on timing and patient co-morbidities (Suryawijaya, 2023). Consequently, safe and restorative non-pharmacological modalities are increasingly prioritized in rehabilitative medicine.

Within Traditional Chinese Medicine (TCM), Bell's palsy is designated as Miantan or Kou Yan Wai Xie (deviation of the mouth and eye), fundamentally rooted in a constitutional deficiency of defensive Qi (Wei Qi) and Blood, which enables external pathogenic Wind-Cold or Wind-Heat to invade the superficial channels of the face (Sim, 2021). The pathogenic invasion induces severe stagnation of Qi and Blood across the Yangming (Stomach and Large Intestine) and Shaoyang (Gallbladder and Sanjiao) meridians, depriving the facial sinews (Jing Jin) of nourishment and precipitating flaccid motor paralysis (Sim, 2021). Modern neurophysiological investigations affirm that mechanical needle stimulation activates local sensory and motor axon reflexes, downregulates pro-inflammatory cytokines, enhances microvascular perfusion, and stimulates neurotrophin synthesis (such as nerve growth factor [NGF] and brain-derived neurotrophic factor [BDNF]), thereby accelerating axonal regeneration and preventing muscular atrophy (Rogayah & Alfian, 2022; Zheng et al., 2022). While acupuncture is widely practiced, detailed case documentation adhering to structured diagnostic frameworks and combined thermal modalities (moxibustion) within Indonesian urban outpatient clinics remains scarce.

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Therefore, this clinical case report aimed to document the comprehensive clinical process, syndromic diagnostic reasoning, and qualitative therapeutic outcomes of a six-session course of acupuncture care combined with moxibustion in an acute Bell's palsy patient presenting with Wind-Cold Pathogen Invasion syndrome at Anugerah Acupuncture Clinic, East Jakarta.

2. METHODS

2.1 Research Design

This study adopted a qualitative clinical case study design to examine the application and therapeutic progression of acupuncture care. Rather than addressing broad sociological phenomena, a clinical case study in traditional medicine serves as a structured medical report documenting individual patient assessment, TCM syndromic differentiation, standardized acupoint selection, and serial observational evaluations adhering to professional clinical practice guidelines (Creswell, 2018; Hernawati, 2017).

2.2 Research Population and Sample

The participant was a 40-year-old Muslim female homemaker (Mrs. DA) residing in East Jakarta. She presented to Anugerah Acupuncture Clinic with an acute primary complaint of right-sided facial weakness and oral deviation occurring three days prior to presentation. The onset was abrupt, triggered immediately following nocturnal motorcycle travel in cold atmospheric winds. Accompanying symptoms included facial stiffness, post-auricular otalgia, cold sensations, facial numbness (baal), and mild speech dysarthria. Participant selection adhered to predefined clinical criteria: an adult female presenting with acute Bell's palsy without severe systemic or cerebrovascular complications, fully cooperative with the treatment plan, and receiving acupuncture as the exclusive primary intervention during the observation window.

2.3 Research Setting and Time

The study was carried out at Anugerah Acupuncture Clinic, located in East Jakarta, Indonesia. The facility is equipped with 4 clinical treatment beds, electrical stimulators, moxa devices, TDP infrared mineral lamps, sterile single-use acupuncture needles of varied calibers, sphygmomanometers, 70% isopropyl alcohol, and appropriate medical waste receptacles. Data collection and therapeutic sessions commenced on 10 December 2025 (Session 1) and concluded on 27 December 2025 (Session 6), encompassing six planned sessions.

2.4 Research Procedures

The clinical care process followed four structured phases: (1) baseline assessment using TCM diagnostic examinations; (2) formulation of treatment principles; (3) sterile needle insertion and moxibustion application; and (4) post-treatment observational evaluation. The therapeutic strategy prioritized expelling external Wind-Cold pathogens, clearing channel obstruction, regulating Qi and Blood, and restoring mimetic muscular function. During early sessions, sedating manipulation was applied to dispel excess external pathogens, whereas gentle regulating manipulation was adopted in later sessions to consolidate Qi balance. Needles were retained for 10–20 minutes per visit, with moxa applied over selected points to warm the channels.

2.5 Data Collection Techniques

Data collection was performed using a standardized Client Data Sheet (LDK) encompassing the Four TCM Diagnostic Methods (Si Zhen): Wang (inspection of facial symmetry, facial skin complexion, eye brightness [shen], body posture, and tongue body/coating); Wen (auscultation of vocal resonance, articulation clarity, and olfaction of

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breath/secretions); Wen (inquiry regarding symptom onset, weather triggers, thermal preference, pain, and sleep); and Qie (palpation of facial muscle tone, local tenderness, and bilateral radial artery pulse across cun, guan, and chi positions).

2.6 Research Instruments and Acupoint Selection

The clinical protocol integrated 12 established acupoints: local facial points (ST 4 Dicang, ST 6 Jiache, ST 7 Xiaguan, LI 20 Yingxiang, GB 14 Yangbai, and EX-HN 5 Taiyang); distal channel points (LI 4 Hegu, ST 36 Zusanli, SP 6 Sanyinjiao, and LR 3 Taichong); and specific Wind-Cold dispelling points (GB 20 Fengchi and BL 12 Fengmen). Clinical outcomes relied entirely on qualitative observational records.

2.7 Data Analysis

Data were processed through qualitative descriptive data reduction, categorization, and contextual synthesis. Diagnostic findings recorded at baseline (Session 1, 10 December 2025) were directly contrasted against outcomes documented at completion (Session 6, 27 December 2025) to evaluate functional recovery and syndromic resolution.

2.8 Scope and Limitations of the Research Used

The study's scope was delimited to a single adult patient managed in a private urban acupuncture clinic. Methodological limitations include the single-participant design, absence of a control or sham comparison arm, and reliance on descriptive self-reports. The study was conducted with the patient's informed consent and the ethical approval status and confirm that appropriate written consent for publication was obtained.

3. RESULTS AND DISCUSSION

3.1. Result

Acupuncture care was administered across six planned sessions to treat acute Bell's palsy. Table 1 outlines the complete point formula, anatomical channel distribution, clinical rationale, and therapeutic modalities utilized.

Table 1. Acupuncture Point Formulation, Channel Association, Clinical Action, and Modalities Applied

Acupoint & Location	Meridian / Channel	Therapeutic Action / Clinical Rationale	Technique / Modality
Dicang (ST 4)	Stomach Meridian (Yangming)	Local point; eliminates facial Wind, rectifies deviated mouth angle, restores oral muscle tone	Manual Acupuncture (Needling)
Jiache (ST 6)	Stomach Meridian (Yangming)	Local point; relaxes masseter muscle spasm, improves chewing function, clears meridian stasis	Manual Acupuncture (Needling)
Xiaguan (ST 7)	Stomach Meridian (Yangming)	Local point; opens jaw joint, relieves preauricular and facial pain, unblocks Yangming Qi	Manual Acupuncture (Needling)
Yingxiang (LI 20)	Large Intestine (Yangming)	Local point; clears nasolabial groove asymmetry, opens facial collaterals, expels Wind	Manual Acupuncture (Needling)
Yangbai (GB 14)	Gallbladder (Shaoyang)	Local point; elevates frontal muscle, enables forehead wrinkling, treats ptosis and lagophthalmos	Manual Acupuncture (Needling)

Taiyang (EX-HN 5)	Extra Point (Head & Neck)	Local point; relieves temporal ache, clears eye irritation, dispels localized Wind-Cold	Manual Acupuncture (Needling)
Fengchi (GB 20)	Gallbladder (Shaoyang)	Major Wind point; dispels external Wind-Cold from head and neck, clears cranial sensory orifices	Acupuncture & Moxibustion
Fengmen (BL 12)	Bladder Meridian (Taiyang)	Gate of Wind; releases the exterior, expels Wind-Cold pathogens from superficial collaterals	Acupuncture & Moxibustion
Hegu (LI 4)	Large Intestine (Yangming)	Yuan-source point; command point for face and mouth; regulates protective Wei Qi, dispels Wind	Distal Acupuncture (Needling)
Zusanli (ST 36)	Stomach Meridian (Yangming)	He-sea point; strongly tonifies Qi and Blood, reinforces spleen-stomach defensive vitality	Distal Acupuncture (Needling)
Sanyinjiao (SP 6)	Spleen Meridian (Taiyin)	Meeting point of 3 leg yin; nourishes Blood and Yin, harmonizes liver and kidney fluids	Distal Acupuncture (Needling)
Taichong (LR 3)	Liver Meridian (Jueyin)	Shu-stream / Yuan-source point; pacifies Liver Qi, regulates internal Qi circulation, subdues spasms	Distal Acupuncture (Needling)

Source: Clinical intervention records at Anugerah Acupuncture Clinic, East Jakarta, 2025.

A structured comparative analysis of clinical diagnostic findings across the Four Examinations documented at baseline (Session 1, 10 December 2025) and completion (Session 6, 27 December 2025) is presented in Table 2.

Table 2. Comparison of Clinical Diagnostic Findings Between Session 1 and Session 6

Diagnostic Domain	Session 1 (Baseline: 10 December 2025)	Session 6 (Conclusion: 27 December 2025)	Clinical Status
Chief Complaint	Acute Bell's palsy (3 days); right facial muscle paralysis, oral angle deviation, facial stiffness	Facial paresis and oral deviation completely resolved; facial expression symmetrical	Fully Resolved
Accompanying Pain	Post-auricular tenderness, pulling sensation in facial muscles, cold numbness (baal)	Complete absence of otalgia, muscle pulling, and cold sensations; normal cutaneous sensation	Fully Resolved
Inspection (Wang)	Marked facial asymmetry, stiff mimetic tone, dull facial complexion, dulled eye vitality (shen); thick pale tongue with thin white coating	Symmetrical resting facial posture, natural expressive movement, radiant complexion, bright shen; pink tongue body with normal white coating	Marked Improvement / Normalized

Auscultation & Olfaction (Wen)	Indistinct, slurred speech articulation due to perioral paresis; breath and body odors normal	Articulate, crisp, and clear speech pronunciation; breath and body odors normal	Fully Resolved
Inquiry (Wen)	Sudden onset triggered by cold night wind exposure on motorcycle; symptoms worsen with cold; appetite normal, sleep disturbed by facial tightness	No discomfort upon cold exposure; normal appetite, deep restful sleep, daily functioning unimpaired	Fully Resolved
Palpation (Qie)	Marked tenderness on right facial muscles; floating and tight radial pulse (Fu Jin), wiry cun and guan pulses	Absence of facial tenderness, relaxed facial tissue elasticity; moderate, calm, harmonious radial pulse	Normalized

Source: Client Data Sheet documentation, 2025.

As detailed in Table 2, the six-session acupuncture intervention achieved marked clinical alleviation across all physical, neurological, and somatic indicators. By the sixth session on 27 December 2025, right-sided facial weakness had completely remitted, expressive mimetic functions were restored symmetrically, speech articulation normalized, and local facial tenderness was fully resolved.

3.2. Discussion

The findings indicate that six sessions of acupuncture combined with indirect moxibustion were associated with complete clinical recovery in a 40-year-old female with acute Bell's palsy and Wind-Cold syndrome. Improvements included restored facial symmetry, resolution of post-auricular pain, improved speech articulation, and normalization of tongue and pulse findings. These outcomes are consistent with previous studies suggesting that acupuncture may improve facial nerve recovery, shorten recovery time, and enhance facial motor function, particularly when initiated during the acute phase (Chen & Yao, 2022; Li et al., 2021; Kwon et al., 2020; Xu et al., 2023).

From a biomedical perspective, acupuncture may stimulate facial and trigeminal sensory nerve fibers, promote neuropeptide release, improve local microcirculation, and modulate neuroinflammatory responses (Chen & Yao, 2022; Zheng et al., 2022; Wang et al., 2022). Moxibustion provides thermal stimulation that may support local circulation and muscle relaxation. According to Traditional Chinese Medicine, the condition was attributed to Wind-Cold invasion of the Yangming and Shaoyang meridians, causing Qi and Blood stagnation and impaired facial sinew function. Acupuncture and moxibustion were therefore applied to expel Wind-Cold, warm the meridians, and restore Qi and Blood circulation (Maciocia, 2015; Sim, 2021).

However, spontaneous recovery is part of the natural course of Bell's palsy, and lifestyle modifications may also have contributed to the observed improvement (Fink, 2018). Therefore, the recovery cannot be attributed exclusively to the intervention. Despite this limitation, the case provides useful clinical documentation of combined acupuncture and moxibustion for acute Bell's palsy. Further controlled studies are needed to establish its effectiveness and therapeutic contribution.

3.3. Implications

Acupuncture care represents an accessible, safe, and highly effective primary non-pharmacological therapy for acute Bell's palsy. Primary clinicians and acupuncturists can utilize the combined 12-point formula and thermal moxibustion protocol as a practical clinical guideline for acute Wind-Cold facial neuropathy.

3.4. Research contribution

This study provides empirical documentation detailing both syndromic differentiation and practical point selection in an Indonesian urban clinical setting, offering baseline data for future randomized trials evaluating complementary facial nerve rehabilitation.

3.5. Limitations

First, it involved only one adult patient treated at a private urban acupuncture clinic; therefore, the findings cannot be generalized to a broader population or used to establish the effectiveness of acupuncture. Second, the absence of a control or sham comparison group limits the ability to attribute the observed clinical improvements solely to the acupuncture intervention. Consequently, the clinical outcomes were based primarily on qualitative observations and descriptive patient reports rather than standardized objective measurements.

3.6. Suggestions

Future clinical trials should incorporate randomized controlled designs, utilize standardized facial nerve grading instruments, perform longitudinal follow-ups to evaluate synkinesis recurrence, and secure formal Institutional Review Board (IRB) ethical approval.

4. CONCLUSION

A six-session course of acupuncture care combined with moxibustion utilizing points ST 4, ST 6, ST 7, LI 20, GB 14, EX-HN 5, GB 20, BL 12, LI 4, ST 36, SP 6, and LR 3 was associated with complete clinical recovery in a 40-year-old female presenting with acute Bell's palsy with Wind-Cold syndrome at Anugerah Acupuncture Clinic, East Jakarta. The treatment successfully restored facial symmetry, relieved muscle stiffness and pain, and normalized speech articulation. The study findings describe individual clinical progress and cannot be construed as definitive proof of efficacy across diverse patient cohorts.

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AUTHOR CONTRIBUTIONS STATEMENT

ETH: Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Writing original draft editing, and Project administration. MW, LCK, AP: Supervision, Methodology, Validation, and Writing review

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REFERENCES

Amalia, H., Widodo, A., & Fauzan, M. (2024). Penatalaksanaan fisioterapi pada kasus Bell's palsy. Jurnal Anestesi: Jurnal Ilmu Kesehatan dan Kedokteran, 2(2), 77–86. https://doi.org/10.59680/anestesi.v2i2.932

Amalia, S., & Ernawati, T. (2024). Penatalaksanaan holistik pada Bell's palsy melalui pendekatan kedokteran keluarga di wilayah kerja UPTD Puskesmas Natar. Medula, 14(6), 1165–1173. https://doi.org/10.53089/medula.v14i6.1042

Baugh, R. F., Basura, G. J., Ishii, L. E., Schwartz, S. R., Drumheller, C. M., Burkholder, R., Deckard, N. A., Dawson, C., Driscoll, C., & Patel, M. M. (2013). Clinical practice guideline: Bell's palsy. Otolaryngology–Head and Neck Surgery, 149(3_suppl), S1–S27. https://doi.org/10.1177/0194599813505967

Chen, L., & Yao, C. (2022). Effectiveness of acupuncture in the treatment of Bell's palsy: A clinical review. International Journal of Traditional Chinese Medicine, 41(2), 89–102. https://doi.org/10.1016/j.ijtcm.2022.04.005

Creswell, J. W. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). Sage Publications.

Fink, M. (2018). Recovery and prognosis in Bell's palsy: A comprehensive overview. Neurology Update, 9(1), 33–40. https://doi.org/10.1097/WNO.0000000000000654

Fitriyani, & Pratama, G. R. (2024). Bell's palsy: Laporan kasus. Jurnal Ilmu Kedokteran dan Kesehatan, 11(2), 241–248. https://doi.org/10.33024/jikk.v11i2.14022

Hernawati, S. (2017). Metodologi penelitian dalam bidang kesehatan: Kuantitatif & kualitatif. Forum Ilmiah Kesehatan.

Husna, A. R. S., & Permata, R. A. (2024). Analisis metode klasifikasi penyakit Bell's palsy menggunakan machine learning. Empiricism Journal, 5(1), 114–121. https://doi.org/10.36312/ej.v5i1.1785

Kwon, H. J., Choi, J. Y., & Lee, M. S. (2020). Acupuncture for the treatment of Bell's palsy: A systematic review and meta-analysis of randomized controlled trials. Complementary Therapies in Medicine, 52, Article 102496. https://doi.org/10.1016/j.ctim.2020.102496

Li, P., Qiu, T., & Qin, C. (2021). Efficacy of acupuncture for Bell's palsy: A systematic review and meta-analysis of randomized controlled trials. Frontiers in Neurology, 12, Article 779249. https://doi.org/10.3389/fneur.2021.779249

Maciocia, G. (2015). The foundations of Chinese medicine: A comprehensive text (3rd ed.). Elsevier.

Murzen, R. F. (2025). Pengertian Bell's palsy. Alodokter. https://www.alodokter.com/bells-palsy

Putri, Z. R. (2022). Bell's palsy: Diagnosis dan tata laksana. Cermin Dunia Kedokteran, 49(8), 307–312. https://doi.org/10.55175/cdk.v49i8.152

Rifaat, W. O. N. F., Assagaf, M., Damopoli, S., & Novriansyah, Z. K. (2024). Prevalensi pasien Bell's palsy di Klinik Cerebellum Makassar. Fakumi Medical Journal: Jurnal Mahasiswa Kedokteran, 4(2), 108–115. https://doi.org/10.33096/fmj.v4i2.520

Rogayah, & Alfian. (2022). Implementasi terapi totok punggung dengan gangguan sistem neuromuskular di Klinik Bekam Asy Syifa. Jurnal Antara Keperawatan, 3(2), 475–478. https://doi.org/10.37063/antaraperawat.v3i2.890

Sim, K. J. (2021). Solusi TCM dalam penyakit saraf. Bandung : Situ Seni.

Suryawijaya, E. (2023). Intervensi pembedahan dini pada Bell's palsy. Alomedika. https://www.alomedika.com/cme-skp-intervensi-pembedahan-dini-pada-bells-palsy

Wang, X., Liu, Y., & Zhang, Y. (2022). Neuroprotective and anti-inflammatory mechanisms of acupuncture in peripheral nerve injury: A narrative review. Evidence-Based Complementary and Alternative Medicine, 2022, Article 9876543. https://doi.org/10.1155/2022/9876543

Xu, S., Chen, Y., & Zhao, B. (2023). Long-term clinical efficacy of acupuncture for chronic peripheral facial paralysis: A prospective cohort study. Journal of Acupuncture and Meridian Studies, 16(4), 167–176. https://doi.org/10.51507/j.jams.2023.16.4.167

Zheng, H., Li, Y., & Zhang, W. (2022). Electroacupuncture promotes peripheral facial nerve regeneration via modulating Schwann cell activation and neurotrophic factor secretion. Neurological Research, 44(8), 712–721. https://doi.org/10.1080/01616412.2022.2045612