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ACUPUNCTURE AT JINGMING, CHENGQI AND TAICHONG POINTS FOR FACIAL NEURITIS COMPLICATED WITH EPIPHORA: A NARRATIVE REVIEW

Isroiljonov Behruz

Li Yong Kai

Xinjiang Medical University, Urumqi, China

Abstract

Facial neuritis, also known as Bell's palsy, is the most common cause of acute unilateral peripheral facial paralysis. When the orbicularis oculi muscle or the lacrimal apparatus is affected, epiphora can develop through several routes. These include a failed blink-driven lacrimal pump, reflex tearing from lagophthalmos, synkinetic crocodile tears, and lower-lid ectropion. In Chinese medicine, this condition is often treated with acupuncture at Jingming (BL1), Chengqi (ST1) and Taichong (LR3). The first two are periocular points, and Taichong is a distal Liver-channel point. We found no study that tested this combination or used epiphora as an outcome. This narrative review therefore summarizes the adjacent evidence, based on randomized trials, systematic reviews and meta-analyses, neuroimaging studies and case reports on acupuncture for peripheral facial paralysis and its ocular sequelae, published mainly between 2021 and 2026. Acupuncture, and electroacupuncture in particular, shows a consistent but modest benefit for facial paralysis overall. Most of this evidence, however, is of low or very low certainty, and no retrieved study used a validated lacrimal outcome. The literature supports the anatomical and theoretical rationale of the three-point combination. It does not support an efficacy claim. A prospective, assessor-blinded trial with objective lacrimal measures is the necessary next step.

Keywords

facial neuritis, Bell's palsy, epiphora, acupuncture, Jingming, Chengqi, Taichong.

Introduction

Facial neuritis, most often seen as idiopathic Bell's palsy, accounts for roughly 70–75% of acute peripheral facial paralysis, with reported annual incidence between

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11.5 and 53.3 per 100,000 across cohorts [1,2]. The usual explanation is reactivation of a latent neurotropic virus in the geniculate ganglion: herpes simplex virus type 1 in most cases, varicella-zoster virus in Ramsay Hunt syndrome. Inflammatory oedema follows, and the nerve is compressed and rendered ischaemic inside the narrow fallopian canal [2,3]. Patients present with effaced forehead lines, incomplete eyelid closure (lagophthalmos), a flattened nasolabial fold and an oral commissure pulled toward the healthy side.

The eye often causes the most distress, and its pathophysiology is messier than clinical descriptions imply. A weak orbicularis oculi spoils the blink, and with it the pump that normally drives tears through the canaliculi into the lacrimal sac. Tears stagnate, and stagnation can itself provoke reflex hyperlacrimation. Lagophthalmos adds a second driver: the exposed cornea dries and becomes irritated, and the eye floods in protective response. One patient can therefore suffer poor drainage and excess production at the same time. A third mechanism arrives late. As facial nerve axons regrow, parasympathetic fibres meant for the submandibular gland may be misrouted to the lacrimal gland. The result is gustatory lacrimation, the classic "crocodile tears", which appears months after onset rather than during the acute event. Epiphora after facial neuritis is thus not one clinical entity. That matters for how an acupuncture protocol should be designed and evaluated, and we return to the point in the Discussion.

Conventional acute management rests on oral corticosteroids, with or without antivirals, ideally started within 72 hours of onset [2]. Most patients recover substantially on their own, and Peitersen's series of 2,500 palsies remains the standard reference for the spontaneous course [23]. A minority do not. They are left with incomplete recovery, persistent synkinesis or ocular sequelae that erode quality of life long after the inflammatory window has closed [1]. This residual burden, and the limited reach of drug therapy at that stage, explains the continuing clinical interest in acupuncture as an adjunctive or rehabilitative option.

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In traditional Chinese medicine (TCM), facial neuritis is understood as invasion of the Yangming and Taiyang channels by pathogenic Wind. Point selection combines local, peri-lesional points with distal points chosen by syndrome differentiation. Jingming (BL1), at the medial canthus where the Bladder channel meets several other meridians, and Chengqi (ST1), directly below the pupil on the Stomach channel, sit closest to the orbicularis oculi and the lacrimal apparatus. They are the two points best placed to influence periocular muscle tone and tear drainage. Taichong (LR3), the Yuan-source point of the Liver channel on the dorsum of the foot, is traditionally used to "extinguish Liver wind". It appears in protocols for tremor and dizziness and, in some facial paralysis protocols, as an adjunct beside Hegu (LI4) and other distal points [3]. The triad is therefore coherent on paper: two points address the local periocular mechanism, one addresses the wider channel pattern in which facial paralysis is classically placed.

Coherence on paper is not evidence. Despite a large and growing trial literature on acupuncture for peripheral facial paralysis, we know of no published study that has evaluated Jingming, Chengqi and Taichong as a defined three-point protocol. We know of none that has used epiphora, rather than global facial nerve grading, as a primary or secondary outcome. This review therefore cannot summarize protocol-specific trials, because there are none. It synthesizes the adjacent evidence instead: the general efficacy of acupuncture for peripheral facial paralysis, periocular acupuncture for ocular sequelae, the thin empirical basis for including Taichong, and the central and peripheral mechanisms proposed to underlie acupuncture's effect. Our aim is to establish what is known, what is merely plausible, and what a dedicated trial would have to measure.

Methods

No randomized trial isolating the Jingming–Chengqi–Taichong combination could be identified, so a systematic review with meta-analysis and risk-of-bias pooling was not feasible. We wrote a narrative review instead. We examined clinical and mechanistic publications on acupuncture for peripheral facial paralysis and its

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ocular sequelae, published mainly between 2021 and 2026 in Frontiers in Neurology, Frontiers in Medicine, Frontiers in Neuroscience, Frontiers in Pain Research, PLOS ONE, Journal of Pain Research, Trials, Internal and Emergency Medicine and related indexed venues. We admitted randomized trials and their protocols, systematic reviews and meta-analyses (including one overview of reviews and one network meta-analysis), resting-state functional MRI studies, a retrospective biomarker cohort, a bibliometric analysis and case reports. We excluded studies of central (supranuclear) facial palsy and studies in which acupuncture was not among the evaluated interventions. The search was not designed to be exhaustive or reproducible in the systematic-review sense, a limitation we address in the Discussion.

With no defined trial base for the intervention itself, we organized the material thematically rather than pooling it. Four domains structured the synthesis. The first covers the overall efficacy and safety of acupuncture, including electroacupuncture, for peripheral facial paralysis, drawn from meta-analyses and an overview of reviews. The second covers periocular acupuncture for ocular sequelae. The third covers the theoretical and empirical basis for including Taichong in facial paralysis protocols. The fourth covers mechanistic and neuroimaging evidence on how needling at facial-region points might work. Within each domain we report point estimates and, where the original authors supplied them, quality ratings (AMSTAR-2, GRADE). We did not re-extract or re-analyse primary data, because the aim is synthesis and gap identification, not independent quantitative pooling.

Results

General efficacy of acupuncture for peripheral facial paralysis

Across the retrieved meta-analyses, point estimates favour acupuncture, and electroacupuncture in particular, over non-acupuncture comparators. The certainty behind those estimates is uneven. A meta-analysis of 18 randomized trials (1,119 participants) found electroacupuncture superior to non-electroacupuncture treatment for total effective rate (RR 1.23, 95% CI 1.17–1.31, $I^2 = 0\%$) and cure rate (RR 2.04, 95% CI 1.70–2.44, $I^2 = 0\%$). No adverse events were reported in any included trial.

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Every included study, however, carried some risk of bias [5]. A second meta-analysis, of 19 trials (1,436 participants) on Jingjin (meridian-sinew) needling, reported an odds ratio of 3.93 for overall effectiveness and a relative risk of 1.69 for cure relative to conventional care, with better Facial Disability Index and Portmann scores. GRADE ratings ran from very low to moderate, and the physical- and social-function subscales showed heavy heterogeneity (I^2 = 89% and 83%) that subgroup and sensitivity analyses could not explain [6]. A network meta-analysis of 22 trials (1,814 participants) ranked acupuncture plus tuina above acupuncture alone for the Modified House-Brackmann score and for cure time, with a SUCRA value of 100% on both. That figure describes rank, not effect size, and rankings in sparse networks are fragile. The authors themselves judged the underlying evidence insufficient [7].

The sobering picture comes from an overview of 17 systematic reviews spanning 2005 to 2024. By AMSTAR-2, three reviews were rated low and fourteen critically low in methodological quality. Only two reached high reporting quality by PRISMA criteria. Of 39 GRADE-assessed outcome items, two (5.1%) were moderate-certainty, 22 (56.4%) low and 13 (33.3%) very low, chiefly because of risk of bias, inconsistency, imprecision and publication bias [8]. Not every adjunct helps, either. A meta-analysis of 15 trials (about 1,568 participants) found that adding TDP, an infrared lamp therapy, to electroacupuncture gave no significant incremental benefit over other active treatments [9]. If a physically plausible adjunct can add nothing, an anatomically plausible point combination should not be assumed to beat existing protocols without a head-to-head test.

Timing of intervention and facial nerve oedema

One theoretical objection to early acupuncture is that stimulation during the acute inflammatory phase might aggravate oedema within the fallopian canal. The retrieved evidence points the other way. A systematic review and meta-analysis comparing acute- with non-acute-phase initiation, and a propensity-score-matched retrospective cohort from a single Chinese tertiary centre, both associate earlier treatment with better facial nerve function, not worse [1,10]. Neither settles the

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question. A registered randomized trial protocol will quantify acupuncture's effect on nerve oedema in the acute phase using imaging-based outcomes [2], and a published protocol for a systematic review asks directly whether acupuncture should be used in acute facial paralysis at all [21]. Until those report, the safety of early needling rests on observational comparison.

Periocular acupuncture and ocular sequelae

Of everything we reviewed, only one study targets ocular surface disease secondary to refractory peripheral facial palsy, and it is a trial protocol, not a completed study. It proposes intradermal acupuncture at bilateral Yangbai (GB14), Cuanzhu (BL2) and Tongziliao (GB1) to treat exposure keratitis and dry eye disease [4]. That is the opposite end of the tear-film spectrum from epiphora. The protocol omits Jingming and Chengqi and does not evaluate hypersecretion or impaired drainage. Its lack of overlap with our question is itself informative. Acupuncture research on the ocular sequelae of facial paralysis has so far concentrated on exposure and dryness, not on the drainage and hyperlacrimation mechanisms the triad is meant to address.

Taichong (LR3) and syndrome-based point selection

No retrieved trial evaluated Taichong as an isolated variable or as part of a point subset compared analytically. It appears only inside multi-point conventional protocols, for instance as one of ten adjunct points beside Hegu (LI4) and Fengchi (GB20) in the control arm of a thread-embedding trial for post-paralysis muscle atrophy [19]. There it is included on the basis of syndrome differentiation, not tested for its own contribution. The pattern is consistent across the wider literature: Taichong is a theoretically justified but empirically unexamined adjunct, and its specific effect on any ocular or motor outcome cannot be separated from the combination around it.

Central and peripheral mechanisms

Two resting-state fMRI studies from one research group provide the most direct mechanistic evidence we found, although neither examined the triad. In 55 patients

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with acute Bell's palsy and 48 healthy controls, a 28-day acupuncture course accompanied a 96.4% clinical effective rate and changes in fractional amplitude of low-frequency fluctuation and regional homogeneity in the precentral and postcentral gyri, middle frontal gyrus and posterior cingulate cortex. These regions serve sensorimotor control and emotional processing, which suggests functional reorganization of cortex beyond peripheral nerve regeneration [11]. The response rate carries little weight on its own. Healthy controls cannot stand in for untreated patients, so recovery attributable to acupuncture cannot be told apart from spontaneous recovery [23]. A companion study located further post-needling changes in striatal subregions and corticostriatal connectivity, implicating a region better known for motor learning and habit formation than for cranial nerve repair [12].

A retrospective cohort of 125 patients with Ramsay Hunt syndrome added a clinical angle. The systemic immune-inflammation index, a composite of neutrophil, platelet and lymphocyte counts, independently predicted poorer response to acupuncture (adjusted OR 0.997 per unit; AUC 0.839) [13]. Future trials of any facial paralysis protocol, including one aimed at epiphora, could use baseline inflammatory markers to stratify participants and account for heterogeneous response.

Case-level signal

Two case reports show that acupuncture including periocular or periauricular points is plausible in prolonged or complicated facial paralysis. They do not show that it works. An 81-year-old with delayed-presentation Bell's palsy improved from House-Brackmann grade IV to grade I–II over seven weeks of twice-weekly electroacupuncture at facial and cranial points [14]. A 66-year-old with Ramsay Hunt syndrome and severe postherpetic neuralgia, treated at Yifeng (SJ17), Xiaguan (ST7) and facial points including Cuanzhu (BL2) and Yangbai (GB14), saw visual analogue pain scores fall from 9–10 to 3 and facial paralysis resolve fully over one year [15]. Both are single observations in a condition with a well-documented capacity for spontaneous recovery, and neither measured epiphora.

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Discussion

Taken together, the literature supports three propositions with some consistency and leaves a fourth, the one that motivated this review, essentially untested. First, acupuncture, and electroacupuncture in particular, is associated with higher overall effective and cure rates in peripheral facial paralysis across several independent meta-analyses [5,6,7]. Second, that benefit should not be read as high-certainty evidence. The overview of reviews found most pooled outcomes rated low or very low by GRADE and most reviews critically low by AMSTAR-2 [8]. The primary trials are small, mostly single-centre, conducted almost entirely in China, inconsistent in how they define an effective rate, and essentially never blinded at the level of the treating acupuncturist [8]. A bibliometric analysis of 229 publications from 2000 to 2023 tells the same story from another angle: China dominates, collaboration is poor, and large multicentre trials remain scarce despite rapid growth [16]. Third, earlier initiation appears not to harm and probably to help, which answers a long-standing theoretical worry, although a purpose-built trial using imaging-confirmed oedema is still awaited [1,2,10].

The fourth proposition, that Jingming, Chengqi and Taichong, or periocular acupuncture generally, relieves epiphora, cannot be assessed because the evidence base does not exist. This is a gap, not a negative result. The one trial protocol on ocular sequelae targets exposure-related dry eye with a different point set [4], and Taichong appears only in multi-point protocols that neither isolate nor measure its contribution [19]. The rationale set out in the Introduction, periocular points acting on orbicularis oculi tone and lacrimal drainage, with Taichong addressing the Liver-wind pattern, therefore remains a rationale. Nobody has demonstrated it as a mechanism specific to this combination.

The mechanistic literature offers partial, indirect support. Electroacupuncture has been proposed to promote facial nerve recovery by modulating endothelin-mediated microcirculation and by upregulating nerve growth factor and brain-derived neurotrophic factor in the facial nerve nucleus [17]. If those mechanisms generalize

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to periocular needling, they would plausibly improve orbicularis oculi tone and, through it, lacrimal pump function. The source here is a review protocol, not a primary mechanistic study, so we treat the claim as a hypothesis. Waveform matters too. In a 100-patient randomized trial of acute facial paralysis, sparse-dense stimulation reduced facial spasm recurrence and serum immunoglobulin levels more than continuous-wave stimulation [18]. Any protocol-specific trial would have to specify waveform, not treat it as incidental. The two fMRI studies extend the picture centrally, implicating sensorimotor cortex, limbic-adjacent regions and corticostriatal connectivity [11,12]. Both used conventional facial-region protocols. They show that acupuncture can engage central pathways relevant to facial function. They say nothing about whether this particular combination does.

Outcome selection is the most serious obstacle for the question we set out to answer. None of the trials, protocols or reviews we retrieved used a validated, epiphora-specific instrument, whether tear meniscus height, Schirmer's test, fluorescein clearance, ocular surface staining or a lacrimation-specific patient questionnaire. The House-Brackmann grade [22], the Sunnybrook score, the Facial Disability Index and the Portmann score dominate this literature. They capture global motor function and quality of life. They were not built to quantify lacrimal drainage or reflex tearing, and they cannot distinguish pump failure from corneal exposure or synkinetic gustatory tearing. A trial that improved epiphora as a side effect of better orbicularis oculi tone would therefore have been structurally unable to report it. This is a blind spot of the field, not just an absence of trials on one point combination.

Designing a better trial also means confronting the heterogeneity of epiphora. A protocol meant to restore lacrimal pump function through orbicularis oculi tone differs mechanistically from one meant to reduce reflex tearing from corneal exposure, and both differ from an intervention aimed at crocodile tears, which emerge months after onset and would not be expected to share a treatment window with acute-phase epiphora. A trial that pooled these patients would risk diluting a true effect in one subgroup. Worse, it might credit acupuncture with improvement that

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simply reflected exposure-related tearing resolving as lagophthalmos recovered. Blinding the treating acupuncturist is not feasible, as several of the reviewed protocols acknowledge [2,4,20]. The minimum design requirements are therefore clear: a mechanistically homogeneous population, objective lacrimal outcomes alongside standard facial grading, rigorous assessor blinding, and a comparator arm that separates the three-point protocol from the larger point sets in current use.

This review has its own limits. It is narrative, and its search was neither exhaustive nor reproducible, so relevant studies may have been missed and our selection may lean toward the open-access journals we searched. We relied on the quality ratings of the original authors and did not re-appraise primary trials. Several cited sources are protocols and case reports, which show what is being attempted and what is plausible, not what is effective. Finally, the evidence base is geographically narrow, and our conclusions inherit that narrowness.

Conclusion

The existing literature shows, with moderate consistency across several meta-analyses, that acupuncture, and electroacupuncture in particular, brings a modest benefit in peripheral facial paralysis as measured by effective and cure rates, and that starting early does not carry the oedema-related harm once feared. The certainty of that evidence is mostly low. Jingming, Chengqi and Taichong are anatomically and theoretically well placed to address facial-neuritis-related epiphora, but no published study has tested this combination, and no study in this literature has used a validated epiphora-specific outcome. The triad is plausible and unproven. A prospective, adequately powered, assessor-blinded trial that enrols a mechanistically defined epiphora population, isolates the three-point protocol from larger conventional point sets, and measures lacrimal function with validated instruments beside standard facial grading is the next step. Only then can the combination be recommended or set aside.

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Author information

Isroiljonov Behruz — Master’s student, Xinjiang Medical University. E-mail: isroiljonovbehruz05@gmail.com

Li Yong Kai — Chief physician (supervisor), Xinjiang Medical University. E-mail: kaikai59@126.com

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