Nursing Experience of Using Gua Sha on the Neck Combined with Auricular Acupoint Therapy to Relieve Headache in a Patient with Mild Traumatic Brain Injury: A Case Report

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Abstract

This paper summarizes the effect of cervical scraping therapy combined with auricular point therapy in alleviating headache in a patient with mild traumatic brain injury, and collates the related nursing experience. By implementing nursing based on syndrome differentiation in traditional Chinese medicine, and integrating cervical scraping and auricular point therapy with routine nursing, dietary care, and emotional care, the patient' s headache symptoms were effectively improved, and the patient' s quality of life was enhanced.

Full Text

Preamble

Nursing Experience of Relieving Post-Traumatic Headache in a Patient with Mild Traumatic Brain Injury Using Neck Gua Sha Combined with Auricular Point Therapy

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Abstract

This paper summarizes the clinical efficacy and nursing experience of applying neck Gua Sha (scraping) combined with auricular point therapy to relieve headache in a patient with mild traumatic brain injury. Based on the principles of Traditional Chinese Medicine (TCM) syndrome differentiation, a comprehensive nursing plan was implemented that integrated neck Gua Sha and auricular point therapy with routine care, dietary interventions, and emotional support. The results demonstrated that these combined measures effectively alleviated the patient' s headache symptoms and significantly improved their quality of life.

Keywords: Neck Gua Sha; Auricular Point Therapy; Post-traumatic Headache; TCM Nursing

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Introduction

Mild traumatic brain injury (mTBI) is a common clinical emergency in neurosurgery, with post-traumatic headache (PTH) representing its most frequent complication, occurring in 72.7% to 77.9% of cases. This type of pain not only severely disrupts patients' sleep and daily activities but also frequently triggers negative emotions such as anxiety and depression, thereby delaying the recovery process. Current Western medicine primarily employs analgesic medications for symptomatic treatment, but long-term use carries risks of gastrointestinal damage and drug dependence. TCM advocates the principle that "where the meridian passes, there the therapeutic effect reaches." Neck Gua Sha achieves pain relief through physical stimulation of meridians to promote blood circulation and resolve stasis, while auricular point therapy regulates nervous system function by pressing specific areas of the auricle to produce analgesic and calming effects. The combined application of these two modalities can achieve synergistic enhancement. This study retrospectively summarizes the nursing experience of one case of PTH after mTBI treated with neck Gua Sha combined with auricular point therapy, which achieved satisfactory results through syndrome differentiation-based nursing care.

Case Report

1.1 Patient Information

The patient was a 45-year-old male admitted to our department on December 20, 2025, with a chief complaint of "persistent headache and intermittent dizziness for 15 days following head trauma." Fifteen days prior, the patient' s left temporoparietal region had been struck while riding a bus, immediately causing severe headache, mild dizziness, nausea, and vomiting, without loss of consciousness. Emergency cranial CT showed "no obvious organic intracranial

abnormalities," excluding intracranial hematoma and fracture, with a clinical diagnosis of "mild traumatic brain injury." The emergency department provided analgesic and antiemetic symptomatic treatment and advised home rest. During the home rest period, the patient' s headache persisted as fixed, stabbing pain with intermittent dizziness, severely affecting sleep and daily activities, prompting transfer to our department for TCM rehabilitation treatment. The patient had previously been healthy with good psychological status, denied any food or drug allergies, and had no family history of genetic diseases.

1.2 Physical Examination

Upon admission, physical examination revealed: temperature 36.5°C, pulse 52 beats/min, respiration 18 breaths/min, blood pressure 132/70 mmHg. The patient was conscious but in poor spirits, with normal development and moderate nutrition, in a self-position, and cooperative during examination. Neurological examination showed GCS score of 15; bilateral pupils were equal and round, approximately 3.0 mm in diameter, with sensitive light reflex; fluent speech without facial deviation; muscle strength grade 5 in all limbs with normal muscle tone; physiological reflexes present, pathological reflexes (Babinski sign) absent. Local palpation revealed slight elevation and obvious tenderness at the left temporoparietal impact site. Neck muscles (bilateral trapezius and sternocleidomastoid) were stiff to touch, showing cord-like changes with tenderness (+). TCM four examinations revealed: dull complexion without luster, mild periorbital darkening; tongue was purplish-dark with obvious petechiae and ecchymosis at the tip and edges, sublingual collaterals were distended and bluish-purple; pulse was wiry and choppy. Pain assessment using the Visual Analogue Scale (VAS) scored 7 points at admission, characterized as fixed, persistent stabbing pain.

1.3 Diagnosis

TCM Diagnosis: Headache, syndrome differentiation: Blood Stasis Obstructing the Collaterals.
Western Medicine Diagnosis: Mild traumatic brain injury.
Auxiliary Examinations: Imaging studies including cranial CT and MRI showed no obvious abnormalities.

1.4 Treatment

Western Medicine Treatment: Provided neurotrophic support and symptomatic treatment: oral Mecobalamin tablets 0.5 mg/time, 3 times daily to promote nerve function recovery; non-steroidal anti-inflammatory drugs for temporary analgesia when headache was severe. **TCM Treatment:** Based on the principle of "activating blood circulation to resolve stasis and dredging collaterals to relieve pain," internal and external combined treatment was implemented. Oral administration of modified Xuefu Zhuyu Decoction, one dose daily, taken warm in the morning and evening. External treatment consisted of neck Gua

Sha combined with auricular point therapy to improve cerebral blood supply and nervous system function.

Treatment Outcomes: Before treatment, the patient' s VAS pain score was 7 points, Self-Rating Anxiety Scale (SAS) score was 52 points, and Pittsburgh Sleep Quality Index (PSQI) score was recorded. By December 23, the VAS score decreased to 5 points, SAS score to 46 points, and PSQI score to 8 points, with faster sleep onset and increased sleep depth; analgesic use frequency was 1 time per 3 days; no dizziness reported. By January 3, 2026, the VAS score further decreased to 1 point, SAS score to 38 points, and PSQI score to 3 points with stable sleep; analgesics were completely discontinued; no dizziness reported. The patient' s condition was stable, and discharge was approved.

Nursing Care

2.1 Nursing Assessment

This case assessment utilized the Visual Analogue Scale for pain, the Self-Rating Anxiety Scale, and the Pittsburgh Sleep Quality Index. (1) **Visual Analogue Scale (VAS):** Assesses pain intensity, with 0 indicating no pain and 10 indicating severe pain. The patient scored 7 points at admission, with fixed stabbing pain. (2) **Self-Rating Anxiety Scale (SAS):** Assesses psychological status, with a standard score $ $50 indicating anxiety. The patient scored 52 points, manifesting anxiety due to prolonged disease course and concerns about prognosis. (3) **Pittsburgh Sleep Quality Index (PSQI):** Assesses sleep quality, with a total score >7 indicating poor sleep quality. The patient scored above this threshold at admission.

2.2 Nursing Diagnosis

Based on comprehensive assessment, four primary nursing diagnoses were identified: (1) Chronic pain related to post-traumatic blood stasis obstructing brain collaterals and impaired qi-blood circulation; (2) Sleep pattern disturbance related to persistent headache and nocturnal pain exacerbation; (3) Anxiety related to prolonged headache course, concerns about rehabilitation efficacy, and future work performance; (4) Risk for injury related to occasional vertigo and decreased reaction time during headache episodes.

2.3 Nursing Plan

According to the patient' s actual condition, the following nursing plan was formulated: (1) Implement TCM characteristic techniques based on pain severity, applying blood-activating, stasis-resolving, and collateral-dredging protocols to relieve headache; (2) Conduct comprehensive interventions to improve sleep quality and enhance nocturnal rest efficiency; (3) Strengthen psychological counseling to alleviate anxiety and improve treatment compliance; (4) Implement safety education to prevent falls during headache and vertigo episodes.

2.4 Nursing Interventions

2.4.1 TCM Characteristic Nursing **Neck Gua Sha:** The specific procedure involved assisting the patient to a sitting position with full neck exposure. After routine disinfection of local skin with 75% alcohol and drying, an appropriate amount of Gua Sha oil was evenly applied for lubrication. The practitioner held the Gua Sha board at a 45° angle to the skin, applying moderate pressure using body weight to sequentially scrape along the Governor Vessel (from Fengfu to Dazhui), Bladder Meridian of Foot-Taiyang (bilateral Tianzhu to Fengmen), and Gallbladder Meridian of Foot-Shaoyang (bilateral Fengchi to Jianjing). The technique emphasized continuous, smooth movements without lifting the board from the skin, with force that was gentle yet reached deep tissues. Key areas along these meridians were repeatedly scraped with intensity adjusted to patient tolerance until purplish-red ecchymosis (sha) appeared. After the procedure, residual medium was wiped clean, and patients were advised to keep the area warm. Treatment was performed once every 3 days (twice weekly) for a two-week course. During the procedure, skin reactions were closely observed to avoid forced sha appearance; if "fainting during Gua Sha" symptoms such as dizziness or cold sweat occurred, the procedure was immediately stopped and the patient placed in a supine position.

Auricular Point Therapy: The procedure began with thorough massage of both ears until slightly flushed. After disinfecting the auricles, Vaccaria seeds were applied to selected points including Shenmen, Subcortex, Forehead, Temple, Liver, and Ear Apex. Patients were instructed to press each point 3-5 times daily for 1-2 minutes per point, seeking a sensation of soreness, numbness, distension, or pain. Both ears were used alternately, with seed replacement every 3 days for a two-week course.

Safety and Compliance: Throughout the TCM characteristic nursing intervention, no skin damage or allergic reactions occurred at Gua Sha sites, and no local infection or pressure injuries developed at auricular point sites. The patient demonstrated good treatment compliance and expressed satisfaction with the pain-relieving effects of TCM nursing techniques.

2.4.2 General Nursing The ward environment was maintained quiet with soft lighting. During headache episodes, patients were instructed to lie supine with minimal head movement, avoiding strong light and noise stimulation. Daily necessities were placed within easy reach to reduce repeated head lowering or large movements.

2.4.3 Dietary Nursing Following the principle of "activating blood circulation to resolve stasis," patients were advised to consume foods with blood-activating and stasis-dispelling properties, such as hawthorn, black fungus, and brown sugar. Spicy foods, alcohol, and caffeine were avoided to prevent vasoconstriction that could exacerbate headache. Dinner was advised not to be too heavy, and fluid intake was reduced before bedtime.

2.4.4 Psychological Nursing Active listening to patient concerns was combined with education about the recovery timeline for "blood stasis" to reduce psychological burden. For restlessness caused by "blood stasis obstructing collaterals," patients were guided to listen to Jue-mode music such as "Three Variations of Plum Blossoms" daily from 9:00-11:00 (Spleen Meridian time) to assist dampness transformation and blood generation, or from 19:00-21:00 to help liver qi dispersal and blood regulation. The volume was maintained at 40-50 dB for 20-30 minutes to promote emotional smoothness.

2.4.5 Sleep Nursing A "pre-sleep ritual" was created, guiding patients to achieve relaxation through auricular point pressing of Shenmen and Subcortex before bedtime. The concept of "first calm the heart, then close the eyes" was emphasized, focusing on mental regulation with a relaxed and natural attitude toward sleep.

2.5 Nursing Effect Evaluation

After 14 days of treatment and nursing care, the patient' s clinical symptoms improved significantly. Headache attack frequency decreased markedly, with pain quality changing from persistent stabbing pain at admission to occasional mild distending pain, and VAS score reduced to 1 point. Sleep quality improved notably, with nightly sleep duration maintained above 7.5 hours and smooth sleep onset. Appetite was good, with normal bowel and bladder function. Anxiety disappeared, and mental status was good. Detailed changes in observation indicators are shown in Table 1 .

Table 1 Comparison of Patient' s Observation Indicators Before and After Intervention

Indicator	Admission	Day 3	Day 9	Day 14
VAS Pain Score (points)	7	5	3	1
SAS Anxiety Score (points)	52	46	42	38
PSQI Sleep Score (points)	>7	8	5	3
Analgesic Use Frequency (times/day)	1	0.33*	0	0

Note: 0.33 times/day indicates analgesic use once every 3 days on average.

Results and Follow-up

One week after discharge, telephone follow-up was conducted to inquire about headache episodes and sleep improvement. The patient reported that headache had essentially disappeared and sleep remained good. The patient continued auricular point pressing as prescribed after discharge. Guidance was provided to maintain a light diet, avoid emotional fluctuations, maintain good sleep habits, and seek medical attention if discomfort occurred.

Discussion

Pathogenesis of Post-Traumatic Headache and TCM Syndrome Differentiation

Modern medical research suggests that PTH occurrence is closely related to intracranial vasomotor dysfunction, neurogenic inflammatory responses, and protective muscle spasms in the neck caused by trauma. Local microcirculation 障碍 and metabolic product accumulation from trauma can continuously stimulate nociceptors, inducing chronic pain. TCM classifies this type of headache under the category of "traumatic headache," with the core pathogenesis being "stasis." As stated in *Yi Lin Gai Cuo* (Corrections of Medical Errors): "Examination of headache patients···mostly results from blood stasis obstructing brain collaterals." Trauma causes blood to overflow outside vessels and accumulate as stasis, which obstructs qi movement and creates "pain due to obstruction." This patient' s fixed stabbing pain in the left head and tongue/pulse changes all highly corresponded to the pathological features of blood stasis obstructing collaterals syndrome.

Mechanism Analysis of "Meridian-Following" Neck Gua Sha

Meridian-following Gua Sha targets the injury location in the left temporoparietal region, where the temporal area is governed by the Gallbladder Meridian of Foot-Shaoyang and the parietal area is the intersection of the Bladder Meridian of Foot-Taiyang and Governor Vessel. This study focused on selecting Fengchi point (a key point of the Gallbladder Meridian) to dredge local stagnant qi, embodying the principle of "where the meridian passes, there the therapeutic effect reaches." Scraping Tianzhu point (Bladder Meridian) relaxed tension in posterior neck muscles, aiming to establish a channel for blood reflux and stasis-heat descent from the head and neck region. Coordinated scraping of Dazhui point (Governor Vessel) was used to invigorate yang qi throughout the body, achieving the goal of "yang transforming qi and blood resolving stasis." During the scraping process, it was observed that sha appeared rapidly on the left posterior neck (same side as injury) with deep purple coloration and cord-like nodules. This "sha phenomenon" highly consistent with the injury site not only objectively verified the severity of blood stasis obstructing collaterals but also confirmed the effectiveness of neck Gua Sha in improving cerebral perfusion and interrupting the "pain-spasm-pain" vicious cycle through physical stimulation.

Regulatory Effects and Synergistic Effects of Auricular Point Therapy

Auricular point therapy exerts holistic regulatory effects by stimulating specific functional areas of the auricle. TCM holds that "the ear is the gathering place of all vessels," and auricular point pressing can regulate viscera and blood. This protocol selected "Shenmen" and "Subcortex" to elevate pain threshold and calm the mind, aiming to relieve patients' stress states by regulating the autonomic nervous system. Simultaneously, points corresponding to the injured

area such as "Forehead," "Temple," and "Occiput" were selected for precise local intervention. Modern research has also confirmed that auricular point stimulation can effectively intervene in pain transmission pathways and has clear advantages in relieving pain-associated anxiety and sleep disorders.

Neck Gua Sha combined with auricular point therapy achieved synergistic effects through internal-external combined treatment and meridian-point triggering. This study effectively alleviated blood stasis obstructing collaterals-type headache and improved the patient' s quality of life through precise intervention on meridians related to the injury site. This approach is simple to operate and highly safe, demonstrating the unique advantages of TCM nursing' s "syndrome differentiation-based nursing and holistic nursing." The limitation of this case report is that it is a single case with a relatively short intervention period. Future studies should expand sample sizes and extend follow-up duration to further confirm the long-term clinical value of this protocol.

Ethical Statements

Patient Informed Consent: Publication of this case report was approved with informed consent from the patient and family members.

Conflict of Interest Declaration: The authors declare no conflict of interest in this article.

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Note: Figure translations are in progress. See original paper for figures.