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ASRF CASE REPORT PROJECT

# Resolution of Trigeminal Neuralgia and insomnia in a 45-year-old female: A case report

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Background: A 45-year-old female with a moderate activity level and no prior exposure to Chiropractic care, presented to a Chiropractic clinic with a primary complaint of persistent facial pain.

Intervention: The patient commenced a course of care during which she was managed using Knee Chest Upper Cervical Technique.

Outcomes: The patient demonstrated improved posture, arm strength, and cervical mobility, with leg length inequality significantly reduced and smooth pursuit eye movements showing better control, as well as a resolution of her facial pain, and an ability to recommence normal activities of daily living.

Conclusion: Larger studies involving multiple patients and different treatment approaches would be valuable for developing a more comprehensive understanding of how Chiropractic care can support individuals with complex craniofacial pain disorders.

Indexing Terms: Chiropractic; Subluxation; trigeminal neuralgia; facial pain; knee-chest; Quality of Life.

## Introduction

The trigeminal nerve is the fifth and largest cranial nerve, supplying nerve signalling to areas of the face and head. It has three branches, ophthalmic, maxillary, and mandibular, providing sensation to the scalp and forehead, cheek and upper jaw, and lower jaw and mouth respectively.

Trigeminal neuralgia (TN) is a chronic pain condition that affects the trigeminal nerve and manifests as attacks of severe facial pain. The pain has been described as electric shock-like, and while the individual attacks can last for less than a second and up to 2 minutes, they can occur in quick succession. There can be constant aching or pain in between attacks and this is more commonly seen in cases where TN progressively worsens. (1,2)

All branches of the trigeminal nerve can be affected by TN, although maxillary and mandibular branch involvement is most common. (2)

*'... With Chiropractic care this patient experienced a profound reduction in symptoms, which allowed her to resume normal activities, enjoy meals without fear of triggering pain, and engage more fully in her personal and professional life ...'*

In the classic form of TN, a blood vessel makes an impression on part of the trigeminal nerve root, causing dysfunctional signalling and pain. Secondary TN is the byproduct of another disorder, such as a tumour or multiple sclerosis. There are cases of idiopathic TN, when there is no attributable cause, although this is the least common presentation. (2)

TN can be debilitating, most obviously because of the severe pain, but also due to simple daily tasks such as talking, eating, touching the face, brushing teeth, triggering the attacks. Managing TN by trying to prevent the onset of attacks can significantly impair patient's ability to engage with their every day tasks and overall Quality of Life.

There are surgical and pharmacological options available for those with TN, although their recommendation and efficacy varies from person to person, usually pursuing medical therapies initially and reserving surgery for patients who do not respond adequately to medication, if surgery is feasible. Common pain relief medications, such as NSAIDs and hydrocodone, are usually ineffective at managing the pain. Anticonvulsant medications can be effective, but the positive effects are not always sustained long-term. (1)

With limited and under-researched treatment options available for those with TN, despite the severe debilitation it can cause, alternative and adjunctive therapies are often sought by patients. Chiropractic care is one such approach with case report data suggesting it may be helpful in managing the symptoms of TN. (3 - 6)

This case report adds to this much needed area of research, detailing the improvement of TN symptoms in an individual who was unable to find long-lasting relief from medications or other alternative therapies.

## Case details

A 45-year-old female senior category buyer, with a moderate activity level and no prior exposure to Chiropractic care, presented to a Chiropractic clinic with a primary complaint of persistent facial pain. Her medical history included gallbladder removal and hypertension managed with regular medication. She reported a family history of diabetes and denied any significant accidents, injuries, or traumas.

The patient described her facial pain as having started before the COVID-19 pandemic, though she was unsure of the exact date. Onset began with occasional mild pain to the face, moving to her head. The pain typically started on the right side of her face.

She presented at a hospital for medical attention and was referred to a neurologist, who ordered an MRI. Imaging revealed no red flags or underlying pathology, and she was diagnosed with trigeminal neuralgia. Pharmacological management with pain and anti-inflammatory medication initially provided relief; however, the pain returned approximately one year later. On this occasion, medication was again prescribed but resulted in undesirable side effects.

Over time, the patient consulted multiple practitioners. Dental evaluations led to the surgical removal of two teeth, each of which temporarily alleviated her pain before symptoms returned. She subsequently pursued Traditional Chinese Medicine and acupuncture, which coincided with the pain shifting to the left side of her face. At this stage, symptoms radiated to the left eye and shoulder, which she self-managed with topical ointment.

The pain now is usually across the left side of the face but had now progressed to the middle due to referred pain. When the pain was on the right it was in the middle and lower parts of the face. She occasionally experienced headaches on the left side of the head. At the time of the consultation her sleep was poor due to pain, whereas before the onset of her trigeminal neuralgia she did not experience sleep issues. The patient also presented with left-sided plantar fasciitis.

Secondary complaints included difficulty sleeping, challenges in fulfilling her work duties, and interference with daily activities. Pain was aggravated by everyday stimuli such as washing her face, exposure to cold wind, brushing her hair, and stress. She described the sensation as so severe at times that she '*wanted to pull all of her teeth out*'.

## Clinical findings

The patient presented to her initial examination in an antalgic posture, demonstrating a leftward head tilt and a lowered right shoulder. Cervical compression and distraction testing both reduced her pain. Cervical range of motion was notably restricted, and manual muscle testing revealed generalised weakness. Vital signs indicated slightly elevated blood pressure at 145/96 mmHg with a pulse rate of 81 bpm. Postural analysis revealed a short left leg, a positive Prill C2 finding, and a positive left Derifield test.

Palpation confirmed facial tenderness, with pain elicited upon light touch. Oculomotor assessment identified dizziness on upward gaze and difficulty with smooth pursuit on right-sided vertical movements, where the eyes skipped or jumped. Instrumental analysis using Tytron thermography demonstrated consistent patterns of neuropathophysiology across six scans conducted at the consultation.

Cervical radiographs were taken to further assess structural integrity, and outcome measures included a Bournemouth Questionnaire score of 51, reflecting a moderate degree of disability and symptom burden.

## Management

Following her examination the patient commenced a course of Chiropractic care during which she was checked and adjusted using the Knee Chest Upper Cervical specific technique.This was subluxation focused, and based chiefly on thermography findings.

Xrays and correlating physical exams were used to determine subluxation listings, thus guiding the adjustments.

For each appointment at the clinic, a specific protocol for checking and adjusting is followed. It is as described below:

1. Pre-rest: patient in the waiting area for 8-10 minutes, allowing their body to acclimatise to the temperature for a more accurate thermography scan. This is particularly important in Singapore, where the clinic is located, due to the climate.
2. Thermography scan: scan the patient from T1 up to occipital shelf, comparing to previous scans and their defined pattern (established during their consultation).
3. Adjust (if needed): if indicated on the thermography scan, adjustment is given in the upper cervical spine using Knee Chest Upper Cervical technique
4. Recovery room: patients are rested for 15 to 30 minutes in a separate room. This room is darkened, with patients lying supine with legs raised in a 'zero gravity' position, using a cervical support pillow. Patients may be rested at an incline or in a chair if they experience dizziness, acid reflux, or any other limitation which prevents them lying supine.
5. Re-scan: patient is scanned again after the recovery room to determine if there is an improvement in their thermography scan

   Note: If after a thermography scan a patient doesn't need to be adjusted, they are rested for a further 7-10 minutes and rescanned to confirm adjustment isn't needed.

In the case of this patient, additional care recommendations were given. These included advice for home, including postures, sleeping postures, exercise and general nutrition advice.

Her care plan comprised thirty-six visits over four-to-six months, starting at a frequency of two visits per week then reducing. Frequency and length of care were dependent on progress and changes on thermography scans. Re-examinations were booked every twelve appointments (at appointments twelve, twenty-four, and thirty-six) with subjective and objective findings.

Stated aims of care were to reduce pain in the face, eye and head, and to improve Quality of Life through improvements in sleep, work and activities of daily life. The Chiropractor sought to see improvements in objective findings at re-examinations, such as posture, range of motion, leg length inequality, eye movements and arm strength, long with improvements on thermography scans, requiring fewer adjustments to hold for longer times. I improved Bournemouth Questionnaire scores were also desired outcomes.

## Outcomes

By her 12th appointment the patient reported a notable reduction in facial pain, neck stiffness, and shoulder aches. Clinically, her posture was visibly improved, cervical range of motion had increased, and manual testing confirmed stronger arm function. These early changes provided encouraging signs that her nervous system and musculoskeletal function were beginning to respond positively to cChiropractic care.

At her 24th appointment the patient reported further reduction in facial pain and described being able to return to her normal daily life, expressing that she was '*very happy*' with her decision to pursue Chiropractic care. Objective findings showed continued improvements in posture, arm strength, leg length balance, and cervical mobility. These changes correlated with her subjective experience of better function and reduced discomfort in daily activities.

By the 36th appointment, progress was even more pronounced. The patient demonstrated improved posture, arm strength, and cervical mobility, with leg length inequality significantly reduced and smooth pursuit eye movements showing better control. Her Bournemouth Questionnaire score had decreased from 51 at baseline to 35, despite this assessment coinciding with a particularly stressful week in her personal life. Over the course of care, thermography scans consistently demonstrated improved patterns, and on multiple visits no adjustments were required, suggesting greater spinal stability. The patient expressed deep satisfaction with her progress and the resolution of her facial pain, writing in her follow-up paperwork:

> 'Very thankful and I can say one of the best decisions … Big improvement as I am no longer in pain … I have a normal life now'

## Discussion

This case shows a significant improvement in the patient's quality of life following Chiropractic care for trigeminal neuralgia. Before commencing care, the patient experienced excruciating pain that made even basic daily activities, such as brushing her teeth, combing her hair, or eating, extremely difficult. The pain also interfered with her sleep, career progression, and family life.

Following Chiropractic care, she experienced a profound reduction in symptoms, which allowed her to resume normal activities, enjoy meals without fear of triggering pain, and engage more fully in her personal and professional life.

The psychological impact of this change was substantial all on its own. Trigeminal neuralgia is often referred to as 'the suicide disease' due to its association with severe depression and distress. This patient had previously explored a range of treatment options, including medication, topical ointments, acupuncture, and even the removal of two teeth, none of which provided lasting relief. Chiropractic care was the first intervention to deliver marked and sustained improvement, enabling her to regain a sense of normalcy and independence.

This case shows the potential for Chiropractors to provide non-invasive, long-term management of trigeminal neuralgia and other forms of facial pain, offering patients an alternative to ongoing medication or surgical intervention. It also highlights the importance of continued research to build patient confidence and expand evidence-based approaches for these challenging conditions. Given the severe and life-interrupting nature of Trigeminal Neuralgia, creating and communicating the chiropractic potential for TN patients is important.

## Conclusion

Some limitations were noted throughout the case. Certain assessment methods, such as muscle testing and eye movement observation, are inherently open to clinical error. In addition, missed appointments affected the continuity and consistency of care.

The patient's Bournemouth Questionnaire scores may have been further influenced by external stressors beyond the control of the practitioner. Neurological testing was also limited, as the severe facial pain made certain assessments, such as palpation or sharp/soft sensory testing, intolerable for the patient.

Future work could include standardised examination protocols for patients with similar presentations, along with exploration of correlations between related symptoms such as dizziness, neck pain, headaches, fatigue, and upper limb symptoms. Larger studies involving multiple patients and different treatment approaches would be valuable for developing a more comprehensive understanding of how chiropractic care can support individuals with complex craniofacial pain disorders.

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### *About the Chiropractor*

Shaan completed his 5 years Chiropractic Masters at AECC in the UK, then working in a practice outside of London. In 2016 he moved to south-east Asia, and started practicing as a Chiropractor in Singapore at reasonable rates.

Vitality Chiropractic Centres was founded to provide Singapore with its FIRST Upper Cervical focused practice. This is the ONLY Chiropractor clinic in Singapore that is a dedicated to Upper Cervical care, with a history of helping patients with dizziness, migraines, facial pain, and neck pain.

Shaan has experience working with patients from 2 weeks old to over 90 years old, with patients in wheelchairs to professional athletes.In 2013 he met with the WHO (World Health Organisation) about furthering Chiropractic research. Shaan is an active member of the Alliance of Chiropractic (Singapore), and serves as the Vice President and Chairman for Charity and Community Outreach for the association.

He continues to further his knowledge, regularly attending seminars both locally and abroad. In addition, he is the first Chiropractor in Singapore to complete certification in TATS Knee chest for Upper Cervical Care, travelling to Australia, America and Philippines for training. He has also completed post-graduate study in: Atlas Orthogonal, Blair Upper Cervical, NUCCA (National Upper Cervical Chiropractic Association), KCUCS (Knee Chest Upper Cervical Specific), BGI (Bio Geometric Integration), TPI (Titleist Performance Institute – Golfers), MLS Adjusting, and Syntropy Adjusting.

In his free time, Shaan enjoys golf, skiing and being in nature (as well as trying new food!). When he's not busy with his patients as a Chiropractor in Singapore, he volunteers to help migrant workers through SDI (Singapore), Centre for Domestic Employees (CDE), Singapore Special Olympics team, HOME, AIDHA and mission trips in Philippines.

## *About the Case Report project*

This Case Report is a part of the ASRF Case Report Project, a project designed to gather client studies from chiropractors and transform them into much-needed case reports, focused on the effects of chiropractic care on clinical presentations highly relevant to chiropractic, such as stress, immunity and adaptability.

This valuable project is made possible by the generous fundraising and contributions of ASRF supporters.