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ASRF
CASE REPORT PROJECT

Reduction in Trigeminal Neuralgia, and increase in muscle function and Quality of Life in 72-year-old female: A case report

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Background: A 72-year-old female presented for Chiropractic care with a chief complaint of severe trigeminal neuralgia, resulting in excruciating headaches and significant disability to do basic activities of daily life including brushing her teeth or lightly touching her face.

Intervention: The patient was managed using a five-stage chiropractic protocol using the Knee-Chest Upper Cervical technique specifically honed for patients with vestibular or trigeminal symptoms.

Outcomes: Concomitant with improvements in subluxation listings and thermography scans, the patient reported significant reduction in trigeminal neuralgia episodes, was now able to sleep, socialise and engage in activities of daily life. She described her recovery as remarkable.

Conclusion: Given the pain and disability levels associated with Trigeminal Neuralgia and the frustrations often faced when patients do not reap significant benefits from pharmacological or surgical interventions, Chiropractic should be considered as a conservative, early intervention.

Indexing Terms: Chiropractic; Subluxation; Advanced Biostructural Correction Technique; ABC; Trigeminal Neuralgia; Quality of Life.

Introduction

Trigeminal Neuralgia is a chronic pain condition affecting the trigeminal nerve (CN V) that innervates the face. Current estimates as to its prevalence are just 0.16 to 0.3%, with a higher prevalence in women than in men, at a ratio of 3:1. (1)

The condition is characterised by intense, sudden pain likened to electric shocks often triggered even by light touch or routine activities such as applying make-up, talking, touching the face or even experiencing a light breeze. While it usually affects one side of the face more than the other, bilateral cases have been recorded, and the duration can vary in time from seconds to minutes.

Currently, its ethology is unclear, but among the hypotheses regarding its origins is the possibility that compression of blood vessels exiting the brain

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stem may contribute. At present, research indicates that the Maxillary and Mandibular branches of the Trigeminal nerve are most often affected, and that risk factors include injury or trauma, hypertension, stroke, multiple sclerosis, genetic factors, and being aged over 37 (with risk factors increasing over 50). (2, 3)

Treatment for trigeminal neuralgia is usually pharmaceutical, with anticonvulsant medications playing a key role, or surgical. Given the significant intense pain evoked by the condition, it can be debilitating, and severely impacts a patient's quality of life.

At present, these invasive or pharmaceutical interventions are best practice for a condition that is severely life interrupting. Case report evidence does exist wherein upper cervical Chiropractic care has elicited positive results for patients with trigeminal neuralgia. Yet larger studies have not been completed, meaning that Chiropractic care has not yet been adequately highlighted as a conservative alternative to more aggressive interventions.

This report examines the case of a 72-year-old-woman suffering from Trigeminal Neuralgia.

Case details

A 72-year-old female presented for Chiropractic care reporting a four-year history of right-sided facial pain. She was retired, novice to Chiropractic, and reported a moderate level of physical activity. Her facial pain had started as a toothache (described as '*less of a sharp pain*') some four years ago. She presented to a polyclinic general practitioner, who then referred her to a surgeon. Upon seeing the surgeon, she was sent for an MRI scan, and received a diagnosis of Trigeminal Neuralgia.

She was prescribed pain medication to manage her condition, and continued to experience episodes of what she described as '*excruciating pain*' approximately every six months.

At the time of her presentation to our clinic she also reported pain and stiffness in her left shoulder that had been present for some 20 years. Approximately two years prior to her Chiropractic presentation she had suffered from a frozen shoulder. She also reported neck pain in the left cervical spine, headaches following poor sleep, and sleeping just five hours per night.

Her main complaints at the time of presentation were facial pain, Trigeminal Neuralgia, pain and difficulty when touching her face, which created difficulty in brushing her teeth or eating. She was taking a high number of painkillers and medications to manage her pain, which caused her concern.

Her secondary complaints included her frozen shoulder which restricted her movement, and made sleeping difficult.

Clinical findings

Upon first presentation, our standard Chiropractic examination was undertaken with both objective and patient self-reported measures considered. In order to obtain objective measures, cervical x-rays were taken, as well as blood pressure and pulse readings, balance scale readings and leg-length inequality tests. Cervical range of motion was tested and a Bournemouth Questionnaire was undertaken.

Findings included antalgic posture with a right head tilt and lower right shoulder, a reduced cervical range of motion, a short right leg and cervical syndrome. Muscle testing was weak across the board, and balance scales revealed a difference of 3.2kg (7lbs). Her face was clearly painful to touch, and her blood pressure was elevated at 185/93 with pulses of 73.

Tytron thermography scans showed consistent signs of neuropathophysiology across six scans taken at consults. The Bournemouth Questionnaire score was 43 (out of a maximum of 70 for neck and back pain disability), thus indicating significant impairment.

Subluxations were assessed using the initial x-rays, as well as thermography findings and by correlating these with physical examination indicated the levels for adjustment at each session.

The orthopaedic tests of cervical compression and distraction were negative. The cervical range of motion was limited in left lateral flexion and both left and right rotation. She had a short right leg which lengthened to normal on left cervical rotation while prone, indicating involvement of the neck on the pelvis.

Management

The patient commenced a course of Chiropractic care in which the Knee Chest Upper Cervical Specific technique was the only technique used. Each appointment followed the same protocol, which took place as follows:

1) Pre-rest: Patient in the waiting area for eight-to-ten minutes, allowing their body to acclimatise to the temperature for a more accurate thermography scan. This is particularly important in Singapore due to the tropical 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 indicated: If indicated on the thermography scan, an 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 from lying supine.
5) Re-scan: the patient is scanned again after the recovery room to document any improvement in their thermography scan.
6) If, after the second thermography scan, a patient does not need to be adjusted again, they are rested for a further 7-10 minutes and rescanned to confirm adjustment isn't needed.

Additional care recommendations included postural advice, sleeping postures, exercise and general nutrition advice.

The patient was seen for a total of 36 visits over four-to-six months, starting at two visits per week then reducing frequency. Frequency and duration of care were dependent on progress and changes on thermography scans. Re-examinations were booked every twelve appointments (at sessions twelve, twenty-four and thirty-six) with subjective and objective findings documented.

The aims of care during this time included an increase in the patient's sleep, Quality of Life, and ability to undertake the activities of daily life, as well as a decrease in pain in the face, shoulder and neck. Secondary aims of care were improved thermography scans, with fewer adjustments required and holding for longer. This would be alongside improved objective findings at re-examinations, particularly posture, range of motion, leg length, eye movements, arm strength and improved scores on the Bournemouth Questionnaire.

Formal re-examination occurred every twelve appointments, at which point the chiropractor and patient went through re-testing of objective clinical findings as well as reports of subjective changes. This occurred at appointments twelve, twenty-four, and thirty-six.

Thermography scans with SOAP (Subjective, Objective, Assessment and Plan) notes were taken at every appointment.

Outcomes

At the first review (the 12th appointment), the patient reported reduced facial pain, neck stiffness, and shoulder aches, and remarked that her neck felt straighter. Our retesting revealed improved posture, improvements in weight distribution on the balance scales, improved arm strength, improved cervical range of motion, and normal blood pressure. Given the blood pressure readings at the beginning of the course of care, this alone was significant.

At the second review, (the 24th appointment), her facial pain further reduced, and she reported that she was now able to return to daily chores. This represented not only a significant reduction in pain, but a marked and meaningful improvement in QoL. The Chiropractor noted further improvements in posture, arm strength and cervical range of motion, as well as a reduction in leg length inequality.

At the final review (the 36th appointment), the patient's posture had improved remarkably. She now had improved arm strength, reduced leg length inequality, and improved cervical range of motion. Her Bournemouth questionnaire had reduced from 43 to 2, indicating significant improvements in QoL.

At this point in her care, thermography scans were showing significant and sustained improvement, and at some appointments she did not require extensive adjusting. She remarked that she was very happy with the changes and was regaining normality in life.

Given that this patient had commenced her course of care in a state of excruciating pain, causing an inability to do simple tasks like combing her hair or brushing her teeth, let alone sleep, socialise or work, the turn-around has been remarkable. She is now able to sleep normally, engage with her career and spend time with family.

Discussion

Prior to engaging with Chiropractic care the patient had been under the care of ordinary medical practitioners and neurologists and had tried pharmacological interventions to no avail. Chiropractic care has been the first intervention to show marked, long term change for her symptoms, allowing her to return to her normal life.

Limitations of this case include the potential for clinical error in some tests, such as muscle testing and observation of eye movements. Additionally, this patient missed some appointments affecting the consistency of care. More neurological testing could have been included to track these changes, however these were limited due to the symptoms experienced by the patient (i.e. palpation or sharp/soft testing of the face would inflict pain).

Conclusion

While this report covers a single case, other case reports do exist, and the clinic this case report originates from routinely cares for many patients with similar presenting symptoms, and treats them according to similar testing and adjusting approaches. This has allowed for the development of a streamlined examination routine to suit these presenting symptoms.

There is a high level of correlation between other presenting symptoms, which represents potential aetiological links between similar clusters of symptoms such as dizziness, neck pain, headaches, arm symptoms, fatigue.

This presents a rationale for future research, given that not all Trigeminal Neuralgia patients are able to achieve remission or recovery even with more aggressive treatments.

If Chiropractic is able to offer future patients the confidence that symptomatic improvement or remission is possible without long-term medication or surgery, this is surely worth further investigation.

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About the Chiropractor

Dr Shaan Rai graduated with a Master of Chiropractic (AECC, UK) in 2014. He then worked in a practice outside of London before moving to South-East Asia to begin practicing as a Chiropractor in 2016. Vitality Chiropractic Centres was founded to provide Singapore with its first Upper Cervical focused practice, a dedicated migraine and vertigo specialist centre.

Shaan has experience working with patients from 2 weeks old to over 90 years old, with patients in wheelchairs to professional athletes. In addition to clinical practice, Dr Shaan has met with the *World Health Organisation*, lobbying on the topic of furthering Chiropractic research. He 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 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, 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.

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