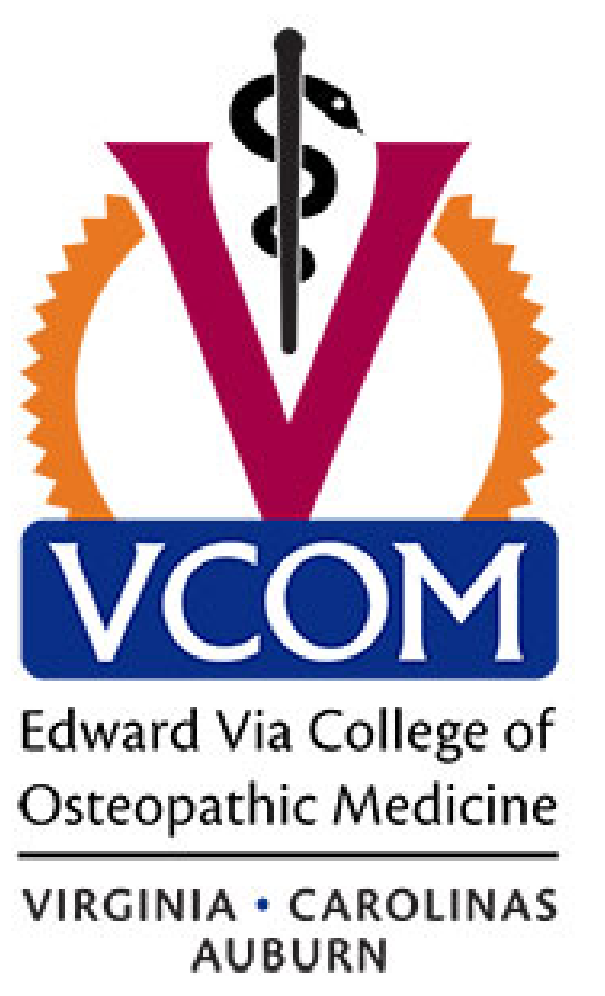


Use of Osteopathic Manipulation Treatment for Trigeminal Neuralgia: A Case Study

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INTRODUCTION

Trigeminal neuralgia (TN) is a common facial pain disorder that involves the fifth cranial nerve. This condition causes abrupt debilitating facial pain that shoots down one or more of the branches of the trigeminal nerve. The pain can be triggered through common everyday stimuli such as a wind breeze, talking, or chewing. The pain is sudden, intense, short lived and stabbing or electrical in nature. The condition has spontaneous remissions and can be asymptomatic for months to years between episodes.

CASE PRESENTATION

A 59-year-old male music teacher with a history trigeminal neuralgia initially presented to the office complaining of a sinus infection. His sinus infection was addressed and his trigeminal neuralgia was also evaluated. Initially gabapentin had controlled his symptoms, but required serial dose increases to maintain adequate pain control. Unfortunately, at higher dosages he was experiencing debilitating side effects. He had then tried a low inflammatory diet which initially helped, but his pain had been progressively worsening over the past few weeks. He was currently exploring surgical options. Upon discussion, the patient was open to trying osteopathic manipulative treatment.

On his initial evaluation, his OA was rotated left and sidebent right, and his C2 was rotated left, sidebent left. He also had bilateral thoracic inlet restrictions. He was treated using facilitated positional release (FPR), myofascial release (MFR), and occipital/cephalographic reflex muscle energy (ME). The patient tolerated treatment well and had improved tissue texture changes, asymmetry, restricted motion, and tenderness (TART) changes. The patient also noted immediate symptom improvement.

The patient returned to the office five days later for evaluation and treatment of his hip and neck pain. He denied TN symptoms at that time.

Two weeks later he presented to the office reporting that his TN pain returned four days prior. He was evaluated and treated with OMT, once more reporting significant pain resolution. When he returned to the office again five days later his symptoms had not returned since the last encounter. He was again evaluated and treated using OMT. During these two encounters his left temporal bone was internally rotated, and his OA was rotated left and sidebent right. These were treated using cranial and ME. He was also found to have RIS and bilateral splenius capitis hypertonicity. These were treated with MFR and FPR. Once again, the patient tolerated treatment well and had improved TART changes as well as resolution of his symptoms following the OMT.

On his fifth visit, along with the RIS and bilateral splenius capitis hypertonicity diagnoses, he had a left pterion cranial restriction. He was again treated using cranial, MFR and FPR techniques. After this visit the patient noted his symptoms were fully resolved and he was able to comfortably play his trumpet in a performance thanks to the treatment he had been receiving.

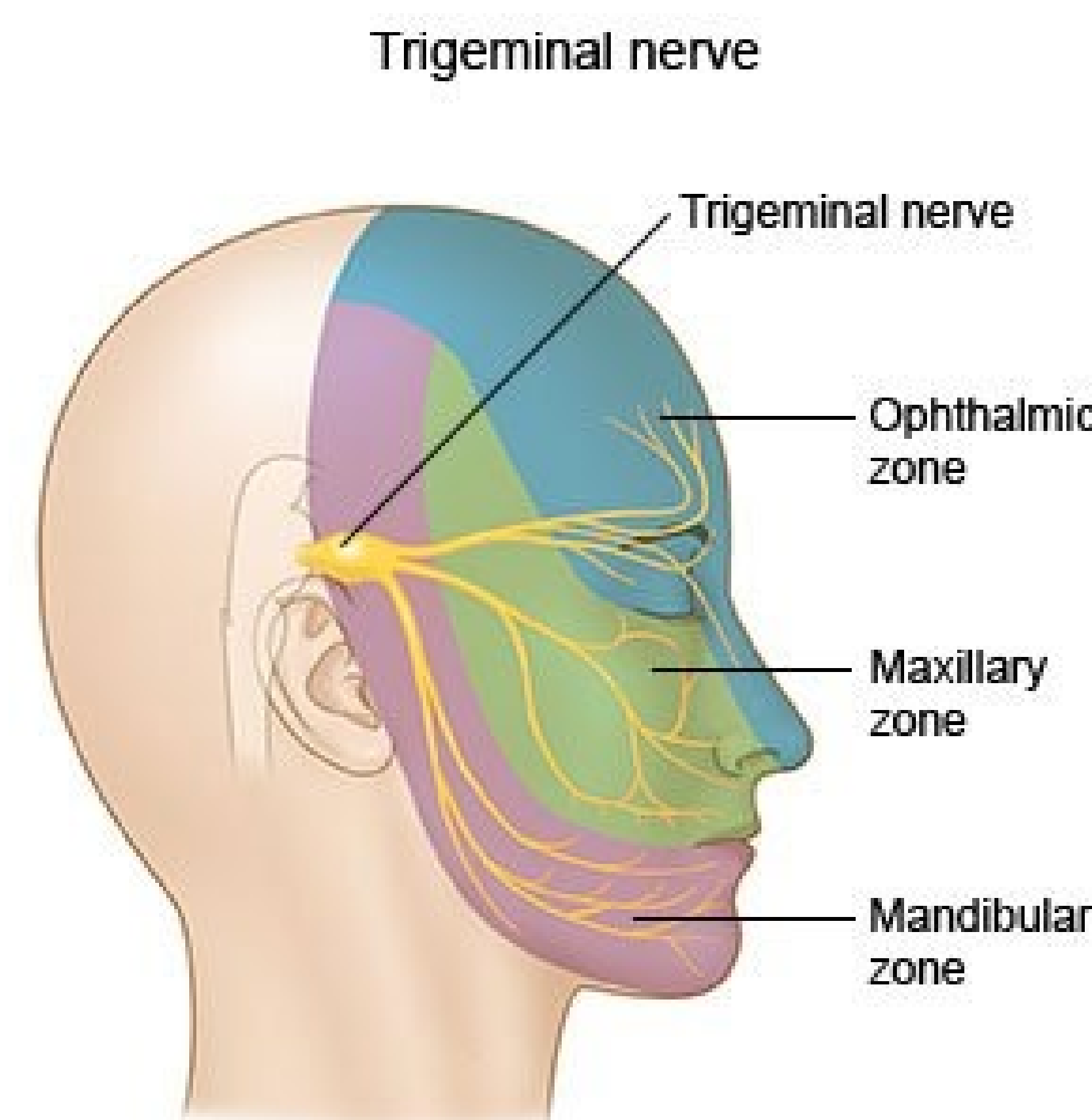


Fig 1: Trigeminal nerve distribution. Photo obtained from <https://www.drugs.com/cg/trigeminal-neuralgia.html>

Visit	Findings and Treatments
Visit One	<ul style="list-style-type: none">Initial VisitReceived trial of OMT for trigeminal neuralgia
Visit Two	<ul style="list-style-type: none">No TN symptoms since first treatmentReturned for neck and hip pain treatment. No OMT for trigeminal neuralgia given.
Visit Three	<ul style="list-style-type: none">Experienced TN pain 4 days prior.Treated with ME, MFR, FPR, and cranial techniques
Visit Four	<ul style="list-style-type: none">Improvement since last OMT session; Face and head pain improvingTreated with ME, MFR, FPR, and cranial techniques
Visit Five	<ul style="list-style-type: none">Significant improvement reported; able to play trumpet againTreated with MFR, FPR and cranial techniques

Table 1: Timeline of patient visits with findings and treatments provided

DISCUSSION

Antiepileptic medications are used to treat trigeminal neuralgia with carbamazepine being the gold standard for first line treatment based on international guidelines. A starting dose of 200mg is given about 2-3 times per day. Based on the severity of the condition, the dosage needed to control the pain can increase up to 1200mg per day. However, clinical improvement is often offset by side effects with dizziness, diplopia, ataxia, and elevated aminotransferase levels being some examples.

When medical therapy fails, surgical therapy is indicated as the next line of therapy. Depending on the procedure used, pain relief can or cannot be immediate. Facial numbness can be reported as a side effect, and some report no pain relief. These patients will require repeat procedures.

Osteopathic manipulative medicine (OMM) seeks to correct structural imbalances in the body to help the body function better. To treat the patient, the physician must position his/her hands to release articular strain mainly between the temporal and sphenoid bones. An articular strain between the petrous portion of the temporal bone and sphenoid can be diagnosed by palpation and released by usage of osteopathic manipulative procedures. OMT can sometimes cause side effects like vertigo, nausea, headaches, aches, and pains. However, further treatment typically remedies this as the body releases the patterns related to the dysfunctions causing the symptoms.

CONCLUSIONS

Treatment decisions are centered based on the patient's preferences and with the treating team's knowledge of available modalities. Often medication is used initially but can come with adverse effects that outweigh the benefits of treatment. Surgery may also help but is invasive and carries the risk of long-term side effects. OMT may be a treatment option with low risk of adverse effects and should be considered in trigeminal neuralgia patients.

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