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CLINICAL VIGNETTE

Integrative Approach Incorporating Acupuncture and Trigger Point Injection to Treat Occipital Neuralgia

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Case Presentation

A 38-year-old man presented with chronic neck pain and occipital headache for 6 months. His past medical history was significant for prediabetes, hyperlipidemia, depression, hypertension and insomnia. The headache was located in the left posterior auricular area, and neck pain was at the base of the left skull and radiated into the left shoulder and posterior occiput. He described it as throbbing in nature and severe. The pain was affecting his quality of sleep. He denied taking any oral pain medications.

Associated symptoms included chronic insomnia for over a year and daytime fatigue. His wife reported possible apneic episodes during sleep. He was able to fall asleep but had difficulty staying asleep. Due to his fatigue, he took naps during the day. He also reported poor memory and mood as well as increasing anxiety, which he attributed to headaches, poor sleep, and neck pain. He denied vision changes, nausea, or vomiting. His primary care physician referred him to neurology for memory loss, recommended obtaining a sleep study, and referred him to east west medicine for further management of occipital neuralgia.

On further history, the patient had a 3-year-old daughter that slept in the same bed as he and his wife. He reported significant family stress due to sleep difficulties with his children. When he woke up from sleep, he would get out of bed and watch television. He was taking caffeine supplements for energy during the day. In addition, he lifted heavy weights 4-6 times per week for exercise. Review of symptoms was significant for jaw tension as well as low back and leg cramping.

Vital signs were blood pressure 153/100, pulse 74, temperature 36.7°C, respiratory rate 16. Physical exam was significant for a large build man with prominent neck and shoulder muscles. Active myofascial trigger points were identified on bilateral neck muscles, over the left upper trapezius and at the base of the left skull with radiation of severe pain to the occipital dermatome.

Treatment included one session of trigger point injections, acupuncture, and counseling regarding self-care. We administered trigger point injections in the bilateral trapezius, splenius cervicis, scalene, and left splenius capitis muscles. Acupuncture points included bilateral LI-4, Liv-3, ST-36, SP-6, SJ-3, LI-10, GB43, yintang, and left ear shenmen. We counseled the patient

on sleep hygiene for the entire family and self-care, which included self-acupressure points, nightly foot massage, short term avoiding upper body resistance exercises, passion flower supplementation for sleep, and stopping caffeine supplements. At the one week follow up visit, his neck and head pain had resolved. He also reported subjective improvement in sleep, having slept a full 8 hours one night.

Discussion

Neck pain and headaches are a common presentation in many primary care offices prompting neurologic work up and may result in a diagnosis of occipital neuralgia (ON). Occipital neuralgia presents with unilateral headache that extends from the upper neck and radiates toward the posterior head, and may involve the temporal region, ear, and eye along the distribution of the greater and lesser occipital nerves. ON is thought to be caused by irritation or injury to the nerves and can be the result of trauma to the head, muscle tension, osteoarthritis compressing the nerves, localized or systemic inflammation due to infection, diabetes, or vasculitis. Often no etiology is identified.¹

Current treatments include conservative management with rest, warm or cold compresses, massage, and physical therapy to improve posture. Medical therapy includes non-steroidal anti-inflammatory medications, muscle relaxants, and neuroleptic medications, including antidepressants and anticonvulsants. Refractory cases may be treated with more invasive interventions such as local anesthetic injections, nerve blocks, and neurosurgical procedures such as implantable nerve stimulators, neural decompression, neurectomy, rhizotomy, ganglionectomy, or radiofrequency ablation.² Safe, effective, and low risk treatment options with less potential adverse effects may include an integrative approach utilizing acupuncture and trigger point injections.

A component of ON pain may be myofascial in nature.³ To determine if myofascial pain is present, one must physically exam the posterior neck and upper shoulders for myofascial trigger points. Myofascial trigger points are small regions of intense tenderness and hyperirritability in the muscles or their fascia.⁴ If present, the active trigger points may be causing irritation to the local nerves. Multiple myofascial trigger points in the upper back and posterior neck muscles have pain referral

patterns that mirror the presentation of occipital neuralgia. Although evidence is not robust, trigger point injections have been shown to relieve symptoms in a variety of musculoskeletal pain syndromes, including chronic headache.^{5,6} They are often used by practitioners for headaches and ON.⁷ The goal of trigger point injections is to deactivate the trigger point by releasing the muscle to alleviate its irritation of the greater and lesser occipital nerves, thus decreasing pain.

In addition to trigger point injections, acupuncture is another needle-based treatment that can be used to relieve myofascial pain.^{8,9} Multiple studies have demonstrated the benefits of acupuncture in patients with chronic neck pain and headaches.¹⁰⁻¹² Interestingly, a study conducted by Melzack and colleagues in the 1970s, elucidated the significant overlap between acupuncture and myofascial trigger points.¹³ Therefore, combining acupuncture and trigger point injections to treat the myofascial pain component of ON may be a more effective than either intervention alone.

This patient responded favorably with a combination of acupuncture, trigger point injections, and behavioral counseling to improve sleep and minimize tension from accumulating in the affected areas. He avoided resistance exercises and caffeine, which likely resulted in less muscle tension, and therefore improved myofascial pain. He also used passion flower supplementation, which has been demonstrated to help with anxiety.^{14,15} This, too, may have improved his sleep and therefore helped with overall tension and myofascial pain.

An integrative approach utilizing acupuncture, trigger point injections, and lifestyle modification may help patients suffering from ON. These are safe and low cost interventions that may prevent overutilization of imaging studies, pharmacotherapy, or invasive procedures. Further studies investigating the combined use of acupuncture and trigger point injections in the treatment of patients with ON are warranted.

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The authors declare no conflicts of interest.

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