Resolution of Hemifacial Spasm Following Specific Upper Cervical Chiropractic Care

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ABSTRACT

Objective: To describe resolution of symptoms in a patient with chronic hemifacial spasm, neck pain, and low back pain following specific chiropractic adjustments to correct vertebral subluxations.

Clinical Features: A 48-year-old male patient with hemifacial spasm, accompanied by neck pain and low back pain was evaluated using palpation, posture analysis and chiropractic radiographic analysis. He was diagnosed with subluxation of the atlas, L4, L5, sacrum, and sacroiliac joints.

Intervention and Outcome: Treatment consisted of specific upper cervical adjustments using Palmer Toggle Recoil technique and Thompson drop technique on the lumbar, sacral, and pelvic areas. The patient’s symptoms resolved following three chiropractic adjustments and he was still free of symptoms at a 3 month follow up.

Conclusion: Further investigation is warranted on the relationship between subluxation at the upper cervical spine and cranial nerve dysfunction. Upper cervical chiropractic care may benefit patients with hemifacial spasm.

Keywords: Chiropractic, chiropractor, spinal manipulation, hemifacial spasm, facial spasm, vertebral subluxation, adjustment

Introduction

Hemifacial spasm is a rare condition characterized by irregular clonic twitching of the muscles supplied by the 7th cranial nerve (facial nerve) on one side of the face. The condition is more prevalent in middle-aged or older females. Symptoms begin with fasciculation of orbicularis oculi and are progressive, spreading to other muscles, typically resulting in the closing of one eye and the drawing up of the corner of the mouth.

Causes

The known causes of hemifacial spasm include vascular compression, injury to the facial nerve, and, rarely, nerve compression due to tumor. The cause may also be unknown.\(^1\) Nerve compression due to a pulsating blood vessel is thought to be the most common cause.\(^2\) Abnormal blood vessels at the cerebellopontine angle may result in vascular compression.\(^3\) Guan et al found a correlation between the lateral deviation of the vertebral artery as identified on MRI and the side of hemifacial spasm.\(^4\) Etiology may also be due to brain stem lesions, multiple sclerosis, meningitis, Bell’s palsy,\(^5\) or secondary to otitis media with effusion.\(^6\) The condition may be worsened by stress.\(^7\)
Treatment

Standard medical treatment of hemifacial spasm includes injection using botulism toxin (botox) or microvascular decompression surgery. In the absence of treatment, the condition progresses to contraction of the muscles of the entire hemiface and is socially disabling.8 Prognosis is dependent on the intervention. Ilingworth found that 72 out of 78 patients available for a follow up remained asymptomatic for 8 years following microvascular decompression.7 Risks of surgery include hearing loss or facial weakness, with complications occurring in 35% of patients.9 When the usual medical intervention is ineffective, patients frequently turn to complementary and alternative medicine, including chiropractic.

Literature

A literature search was conducted using the Index to Chiropractic Literature, the Journal of Vertebral Subluxation Research, and PubMed using the keywords “hemifacial spasm” and “facial spasm” for chiropractic specific journals and “chiropractic hemifacial spasm” and “chiropractic facial spasm” for PubMed.

The literature search revealed only one paper on chiropractic care for hemifacial spasm. A case report by Salminem et al. describe a resolution of symptoms in a 3-year-old boy with Joubert Syndrome and hemifacial spasm following upper cervical chiropractic care using NUCCA technique. The study concluded that there might be a possible connection between atlas subluxation and cranial nerve dysfunction, particularly hemifacial spasm.10 Searching PubMed for “chiropractic facial spasm” returned one additional paper by Toto, a case report describing the resolution of congenital muscular torticollis using chiropractic manipulation, stretches, and trigger point therapy to the cervical spine.11

Case Report

History

An obese 48-year-old male presented with left hemifacial spasms of one-year duration, accompanied by neck pain and tension. He reported a tic causing the left eye to blink that sometimes forced the eye to almost close. He reported an insidious onset and denied history of trauma. He described constant neck pain, centrally located, with tension and crepitus on movement. He described the pain as a mild, irritating discomfort. He reported that his symptoms were aggravated by stress while nothing brought significant relief.

He had prior evaluation with his primary care physician and a neurologist and was treated with Botox injections. Prior evaluation included MRI. Botox injections helped temporarily but symptoms were recurrent. The patient sought chiropractic treatment after his physician suggested that releasing neck tension would help the hemifacial spasms.

He also reported chronic right-sided low back pain, of moderate intensity that comes and goes.

Past medical history included splenectomy for idiopathic thrombocytopenic purpura (ITP). The patient’s condition was complicated by diabetes, high blood pressure, and high cholesterol. Relevant family history included Tourette’s syndrome in the patient’s son.

Examination

The patient’s active cervical range of motion was reduced in all movements. There was palpable spasm and tenderness at C1, C2, L4, L5, sacrum, and both sacroiliac joints. Cervical foraminal compression (Jackson’s compression test) increased local pain in the left lateral flexion position. Cervical distraction relieved local pain. Kemp’s test increased low back pain with no radiating pain. There was palpable hypertonicity at the suboccipital muscles and right quadratus lumborum and gluteal muscles. Asymmetry and restricted joint motion were palpable at C1, L4, L5, sacrum, left ilium, and right ilium.

AP and lateral radiographs were taken of the cervical and lumbar spine. There was a reversal of the cervical lordosis. The patient had significant right head tilt and left head rotation. There was a right listing at the lumbar spine. The lumbar lordosis was normal, with posterior disc wedging at L5. Chiropractic radiographic line analysis using the Palmer upper cervical analysis and Gonstead lumbopelvic analysis taught at Sherman College of Chiropractic revealed the following subluxations using the Palmer/Gonstead listings: C1 ASL (left laterality), L4 PR (left rotation), L5 PR (left rotation), sacrum AP (apex posterior), LIL PIN (posterior and internal rotation), RIL PIEX (posterior and external rotation).

The patient was diagnosed with subluxations of the cervical spine (C1) producing cervicalgia and lumbalgia secondary to subluxations of the lumbar, sacral, and pelvic areas.

Intervention & Outcome

There were no contraindications to chiropractic adjustment. The management plan consisted of specific upper cervical chiropractic adjustments using the Palmer Toggle Recoil technique to correct the C1 subluxation and Thompson drop technique to correct the subluxations at the lumbar, sacral, and pelvic regions at a frequency of twice per week for four weeks.

Following each adjustment, motion palpation indicated immediate improvement in joint motion. He received a total of three chiropractic adjustments over a 13-day period of time, after which time the patient discontinued care due to a resolution of his symptoms. At a 3 month follow up the patient was still asymptomatic.

Discussion

In this case, the patient had tried the usual medical care for his hemifacial spasm. His symptoms were alleviated by Botox injections but the relief was temporary. This patient also presented with neck pain and low back pain. The benefits of spinal manipulation for neck pain and back pain have been well documented.

There is literature related to the chiropractic management of other conditions affecting the cranial nerves, such as Bell’s
palsy and trigeminal neuralgia. However, the literature on chiropractic adjustments for hemifacial spasm is very limited, with only one published study to date.

**Conclusion**

In this case, upper cervical chiropractic care benefitted this patient with hemifacial spasm. Further investigation is warranted on the relationship between subluxation at the upper cervical spine and cranial nerve dysfunction.

**Acknowledgements**

Thanks to John Hart, DC, MHSc, Assistant Director of Research at Sherman College of Chiropractic for his suggestions and help in the preparation of this manuscript.

**References**


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