CASE STUDY

Resolution of Long Standing Intractable Bilateral Meniere's Disease & Multiple Health Challenges Following Upper Cervical Specific Chiropractic Care: A Case Report

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ABSTRACT

Objective: To report on the positive health outcomes following chiropractic in a patient suffering from Meniere's Disease.

Clinical Features: Forty-eight-year-old female, a retired registered nurse, was diagnosed with right unilateral Meniere's disease (MD) in 1995 that started going bilateral in 1998. Symptoms included multiple vertigo episodes with nausea and vomiting (including drop attacks), low frequency hearing loss, tinnitus, and aural fullness with pain. Other common concomitant MD symptoms including dizziness, imbalance, hearing distortion, hyperacusis, nystagmus, BPPV, brain fog, severe sweating, severe depression, anxiety with panic attacks, IBS, TMJ dysfunction, migraines, headaches, chronic fatigue, and Eustachian tube dysfunction. Cervicalgia and radiating low back pain.

Intervention & Outcome: Upper Cervical Specific Chiropractic Care consisting of twelve visits over six days. She returned for a 2-day reevaluation four years later. She was under the care of upper cervical doctors closer to her home periodically. Chiropractic care had resolved all her complaints except hearing loss though it did improve.

Conclusion: Following upper cervical specific chiropractic care to reduce vertebral subluxation the women reported on in this study experienced resolution of her symptoms related to Meniere's Disease.

Key Words: Meniere's disease, cervical specific chiropractic, vertebral subluxation, adjustment, spinal manipulation

Introduction

Meniere's disease is an inner ear disorder that causes vertigo, fluctuating sensorineural hearing loss, and tinnitus. There is no reliable diagnostic test. Medically, vertigo and nausea are treated symptomatically with anticholinergics or

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benzodiazepines during acute attacks. Diuretics and a low-salt diet, the first line of treatment, often decrease the frequency and severity of episodes. For severe or refractory cases, the vestibular system can be ablated with topical gentamicin or surgery.¹

Since 1938, most otolaryngologists have recognized the causation of Meniere's disease as endolymphatic hydrops, but this theory has now come into question, leaving the underlying cause(s) still unknown. Recent research indicates that Meniere's disease probably has multiple etiologies, including

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autoimmune disorders, allergies, viruses, hereditary predisposition, and head injuries. The controversy is because, upon autopsy or sophisticated MRI techniques, hydrops was not always found in persons with Meniere's disease yet was commonly found in people who did not have Meniere's type symptoms.²

Although much is known of the histopathology and ultrastructural changes in the inner ear in Meniere's disease, there are reasonable theories as to pathogenesis, despite sophisticated methods of audiological and vestibular analysis, it is as true today as it was in Meniere's time. A detailed history remains the first diagnostic tool, and it is still the only way to assess the severity and give an indication of the best therapeutic option.³

Case Report

This patient had several traumas which started at an early age. Childhood injuries included falling off her bike at age five requiring head and knee stitches, falling off a horse and being kicked in the jaw, and falling out of a tree at age twelve onto her back, leaving her unable to walk for two days. She passed out in her kitchen as an adult, hitting forehead on a highchair, then the back of her head on the floor, knocking her unconscious in 1997. Both of her children were difficult births, as was her own. She had several falls skiing and another bike accident in her thirties.

History of digestive and autoimmune problems at age eight. Her mother had medical problems at the time, so they both just tried to make the best of it, as many rural-living people did. She had a bad case of viral bronchitis at age 17.

Vehicular accidents included car slid on ice into ditch in 1995 six months before onset of Meniere's symptoms. T-boned in 2000 getting severe whiplash injury, precipitating anxiety with panic attacks and depression with thoughts of suicide. She got general chiropractic care for it at the time, but it did not help much. She had not yet heard of specific chiropractic.

Her first medical intervention for Meniere's disease was an endolymphatic shunt in right ear 1998. Next, she had three steroid injections in left ear, followed by a Gentamycin injection in right ear in 2004. Later several aural rounds of steroids and bilateral steroid injections. During this time, she saw several medical specialists in private practice and at teaching hospitals.

As a registered nurse, she knew what questions to ask, but because they could not tie her long list of symptoms together, she was labeled a hypochondriac. The four symptoms that came to be known as Meniere's disease are part of a list of about 40 that can result from a long standing upper cervical subluxation complex, often caused by concussion/whiplash injuries.^{4,5} The most common symptoms included cognitive issues, neck pain, headaches, visual abnormalities, poor coordination, difficulty swallowing, nausea, dizziness, anxiety, and depression.⁶

She had an upright MRI scan of the brain without contrast from April 2017. Impressions included Chiari 0 malformation of the cerebellar tonsils. This was likely caused by a combination difficult pregnancy and birth, followed by dozens of falls to the head and two serious vehicular accidents. The CCJ is the most complex joint region in the body. The CCJ is a collective term that refers to the occiput (posterior skull base), atlas, axis, and very importantly, the supporting ligaments. CCJ subluxation can impede blood flow to the inner ear via the vertebral artery, and cerebral spinal fluid flow exiting the posterior aspect at the junction between the brain and the body.⁷⁻⁹

Methods

The first chiropractic adjustment was done in 1895 by magnetic healer D.D. Palmer in Iowa. The patient was his janitor who went profoundly deaf after an accident.¹⁰ After an Axis (C2) correction, Harvey Lillard's hearing was restored. D.D. and later his son, B.J. Palmer, started Palmer Chiropractic College in 1897. B.J. started researching upper cervical specific chiropractic at his teaching hospital affiliated with the school in 1931 until his death in 1961. To continue B.J. Palmer's research, Michael T. Burcon, B.Ph., D.C. founded the Burcon Chiropractic Research Institute in Grand Rapids, MI in 1999, later to become the Meniere's Research Institute in 2007.¹⁰⁻¹²

After a thorough case history, the next step of Burcon Cervical Specific Protocol is the examination, starting with thermography. Dysautonomia refers to a disorder of autonomic nervous system (ANS) function that often involves over stimulation of the sympathetic component of the ANS. The physiological effects of dysautonomia include erroneous management of the capillary beds that allow for the dissipation of heat from the core of the body.

Each of the nerves leaving the spinal column innervates specific areas of the skin, thus dividing the body into a patterned form known as dermatomes. There are eight cervical dermatomes. The nervous system uses vasoconstriction and vasodilatation of the capillary beds to help regulate body temperature. Nerve irritations can cause the skin's natural temperature symmetry to fall out of balance from the left or right side of the spine.

The Tytron Thermography Scanners read the temperature bilaterally simultaneously to gather the data on the paraspinal temperature radiated from these capillary beds. The graphs produced by the scan show the temperature of the scanned anatomy, and with some math, show the balance of the temperatures graphed at that time.

Coupled and layered with other graphs from other days and before- and after-visit scans, if repeating patterns, it could indicate an abnormal non-adaptive control system and possible dysautonomia.¹³

These repetitive patterns often indicate spinal articulation fixations, resulting in dysafferentation due to irritation of cervical spine mechano-receptors.¹⁴ The graphs should frequently change to demonstrate variability as we adapt to our environment. When the pattern changes, it often is an indication to discontinue adjustments until it returns. Seventy percent of Meniere's patients are unilateral. If the involved ear is 0.5° C too hot, medically it indicates a lesion, often caused

by vertebral subluxation. If it is too cold at the suboccipital level, it could suggest insufficient blood supply through the vertebral artery.¹⁵

Most upper cervical chiropractors use the top section of the Delta-T graph to decide if a patient is in pattern and probably needing an adjustment. A straight line would suggest normal, but if it consistently breaks right or left before treatment begins, that is considered their upper cervical subluxation pattern. B.J. Palmer, D.C. also studied breaks lower in the spine, considering them possible levels of misalignment.¹⁶ Early in his career he would improve them with manipulations. Later he came to believe that given time, they could be controlled by precise upper cervical adjustnents.¹⁷ The patient's initial graphs in this study suggested excess heat on the right in the upper cervical region, with a variety of breaks in the lower cervical region. When she returned four years later all her graphs were straight and within normal limits.

The second half of the examination was extensive relative leg length tests. Step one of the protocol is to notate if the patient has one leg that appears shorter while prone.¹⁸ Her right leg was ¹/₄" relatively short compared to left. This suggested a subluxation somewhere in her spine. The test can also be done with patient supine. The protocol then tests the eight sets of cervical nerves above and below the seven cervical vertebrae by using specific positioning and movements done by the patient. If the leg goes shorter, it is a positive test for a problem in that area. Patient had positive tests at Atlas, Axis, C4, C5 and C6.

Her leg went shortest on C6 test, which was developed by the author. Complete details of testing are on Information page of website under Doctors of Chiropractic in Word format with illustrations at <u>www.BurconChiropractic.com</u> under Protocol and in video using YouTube link to Health Talk V, Part 1.

The author considers step two to be the single most important test to detect the presence of an upper cervical subluxation complex, the cervical syndrome test. It was developed in the 1940s by Ruth Jackson, M.D., the first female orthopedic surgeon in the USA. She had 20,000 whiplash patients on which she published a book in the 1950s.¹⁹ It was later to become a standard test for most chiropractors.²⁰ It varies slightly using different chiropractic techniques. The patients gently turn their heads toward the right and relax.

Any change in relative leg length is notated. Then the patients are instructed to gently turn their head toward the left and relax, again notating any change in relative leg length. If it changes only toward the right or left, it is recorded as a right or left cervical syndrome, with the amount of change being recorded.

If it changes from the original presentation in both directions, it is called a bilateral cervical syndrome (BLCS). The total amount of change is recorded. For example, if it started $\frac{1}{4}$ " short on the right then increased to $\frac{3}{4}$ " on the right, that would represent $\frac{1}{2}$ ". If it balanced turning left it would be $\frac{1}{4}$ " change from starting point. Added together it would be a $\frac{3}{4}$ " BLCS.

A positive cervical syndrome test is indicative of an upper

cervical subluxation of C1 (Atlas) and/or C2 (Axis). With practice the doctor can tell which segment is the major problem by the way the leg length changes. Atlas moves straight up and/or down, whereas Axis rotates out a small amount like the movement of a piston $rod.^{21}$ This patient presented with a $\frac{1}{2}$ " right cervical syndrome.

At this point thermography graphs and relative leg length testing results are compared. Both showed problems at Atlas and Axis, C5 and C6, with C2 and C6 being the major pair, C1 and C5 the minor. This was the third most common set of these findings of the first 1,000 MD patients cared for at the Institute.

Cervical subluxations do not always travel in pairs, but it was a common finding— some had only Atlas, some both Atlas and Axis. Atlas and C5 was the most common combination. Axis and C6 came in second. Without exception, adjustments begin at the lowest subluxated segment, and always end with an upper adjustment. No lower adjustments are performed without any positive tests in the upper cervical region.

B.J. Palmer was the first chiropractor to use x-rays in 1910. Xray series for protocol include eight views: neutral, flexion and extension lateral cervical region for Pierce Results in the lower cervical region and base posterior or vertex view and a pair of protractos (oblique nasium views) for Blair upper cervical technique listings. AP Open Mouth and AP Nasium views are taken for Orthospinology, recently adding the KH-2 Laney adjusting Instrument.

Burcon also uses the Activator and Integrator chiropractic instruments but does most of his adjusting by hand.⁷ He believes the Cone Beam CT scanners to be the future of upper cervical chiropractic because they capture true 3D images prisms instead of pixels— at a lower dose of radiation. All upper cervical technique subluxation listings could then be determined from the same scan at any upper cervical practice. Chiropractic imaging needs to be done weight bearing, seated, or standing, showing the effects of gravity.

Her Blair Atlas listing was a double: PIR and ASR. Based on experience, the posterior listing was used. Ninety percent of the 1,000 patients tracked had posterior listings. Posterior adjustments often help drain excess CSF from the base of the skull. Comparing the base of Axis to C3, her Blair listing was PRI, but her dens was posterior.

Unfortunately, her upright MRI did not include the additional images of her CCJ needed to analyze the alar ligament accurately, which was believed to be sprained. It was adjusted ASL in the side posture position to move it away from the medulla oblongata. Her C5 listing was PRI and C6 was PLI.

When thermography and leg length tests results do not match, cervical motion palpation was done, then she was instructed to do four gentle neck exercises, twice each, while reporting any pain or discomfort and limited range of motion, which is also observed and notated. Then the tests are repeated to check for changes. If there are none, a review of case history comparing traumas with imaging, imagining vectors and velocity of traumas, trying to visualize how and when these misalignments occurred. Then a comparison is done may give insight to similar cases in the data bank of 1,000 previous MD cases.

Results

At the end of 12-visit intensive care plans, patients are asked, "At this point, do you feel that your investment of time and money was worth it? Are you a satisfied client?" A yes or no answer is required to track it. "I do feel better, so I am glad I came, but I had hoped for more." Local patients come in every other day for a month.

Michigan patients with a longer drive usually come in twice a week for six weeks. They are required to spend the night of their first adjustment locally, with a recheck the next morning. These plans work well. It takes most tissue that long to start healing and the spines' new posture to start holding. Patients from out of the state are instructed not to jump to conclusions for at least a month; because they just received rather aggressive chiropractic treatment that is still changing things. There have been several deaf patients get their hearing restored after a month, a couple after two months and one after 10 weeks.

Of the first 1,000 patients, 97% were satisfied at the end of the second year. By the end of the 5th year, on a scale of 0 to 10 (0, I don't have any vertigo; 10 being laying on the bathroom floor vomiting during attacks; 5, I can walk but I feel too sick to leave the house) the mean score went from 8.5 to 0.8, an improvement of over 90%.⁸ Three hundred patients that had profound or severe hearing loss in one ear improved to minor or no hearing loss. These patients were originally marked as dissatisfied— maybes are nos.

Patient, "I have been called lots of things. Hypochondriac was one, liar, drug seeker, psychotic, and a hermit. Hard to explain how the medical world left me to die. I thought I was dying every day. I was told to learn to live with it. I can't describe it, but it is awful. Meniere's patients don't realize that this is a massive autonomic dysfunction problem. They think that either somehow Meniere's is causing all of this without realizing these are just more symptoms of the bigger problem or they have zero clue that all of this is connected because the medical community tells them there is nothing wrong."

Understand that bilateral Meniere's patients are much more than twice as hard to get under control than are unilateral patients. There is no way to put a percentage on it. It is estimated that 30% of MD patients go bilateral.²²

The chiropractor had already spent over two hours reading her numerous doctor reports, chiropractic intake forms, her journaling, and emails, plus quickly viewing the eight CDs of imaging she had sent.

Then, at the end of spending over an hour reviewing the case history in a discussion with the couple, I asked if they had any questions. Her husband looked me in the eye and asked, "Do you think you can help her?" Thinking of their five-hundredmile trip while she was ill and all the "wild goose chases" they must have gone through, I replied, "I'm cautiously optimistic." He retorted, "Yeah, I'm cautiously optimistic too." Her monthly emails continued. In 2021 she reported, "Some of my last symptoms to get under control were vascular problems. The leg discoloration that I had my whole adult/teen life is all normal now (erythromelalgia).⁹ Also arm pain and weakness, gastric belching, heart palpitations, dry eye and burning in my thoracic spine. Healed or managing all of it but the tinnitus and hearing loss. I can drive again; I just don't have a car I can navigate 500 miles to see you. We have a very big truck and a very old truck. I can't use the phone well enough to deal with auto problems.

"The cochlear implant is a different kind of hearing. I crave more sound, but it produces a mechanical nasal sound that I don't like. My hearing aid is more natural. The Bluetooth streaming Netflix TV is the best. It masks the tinnitus. I can hear my husband just fine in a small room when he sits on my left."

It is also noteworthy that working as a team, two other Blair chiropractors helped her recovery. Upper cervical techniques must strive harder to work together. There are States with no Blair doctors. Although only 0.20 percent of Americans have been diagnosed with Meniere's, making it a not quite rare disease, it still equates to over 3,000 MD patients per Blair chiropractor.

Conclusion

The Meniere's Research Institute uses the Burcon Cervical Specific Protocol in the same way the practice does with any medical diagnosis or for a standard chiropractic maintenance examination.²³⁻²⁵ MD patients are just plain frustrated with the lack of progress since the diagnosis was named over one hundred and fifty years ago. The main reason medical doctors have not discovered the main cause of MD is they are not going back far enough in the case history. It takes an average of fifteen years from the time of the offending trauma(s) until the onset of the first MD symptom. It is also important to understand that ligamentous injuries are cumulative; you never totaling heal so the next trauma causes more damage because the structure cannot defend itself as well.¹⁰

MD patients usually show up when first diagnosed and disappointed in the lack of options offered or when going bilateral and scared at the process of going through the whole miserable downhill process again with the outcome of being totally deaf.

If patients that have recent whiplash and/or concussion injuries were examined by a certified upper cervical chiropractor at the hospital, or at least given a list of local practitioners and encouraged to make an appointment for an examination, most cases might be prevented. The efficacy of upper cervical specific chiropractic in dramatically improving the lives of Meniere's disease patients has been well documented in recent years.²⁶⁻³²

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Appendix

1. Types of Whiplash



Right head translation, forward head carriage, right head tilt

2. Lateral Upright MRI of Head



Chiari 0 malformation of the cerebellar tonsils



Chiari 0 malformation

4. Paraspinal Thermography (A) Line Graphs



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Less "activity" in post graph suggests improvement

5. Burcon Cervical Specific Relative Leg Length Tests



Upper Cervical Syndrome Test





6. AP Open Mouth X-Rays



Reduced Head Tilt

7. Hand Adjustments



Side posture position is favored when translation is major component of subluxation and prone position for posteriority.



Improved over 90% in five years

9. Erythromelalgia



Resolved after Cervical Specific Chiropractic Care



Notice grouping around 14, 15 and 16 years.