Asia-Pacific Chiropractic Journal

ASRF CASE REPORT PROJECT

Resolution of severe hypoacusia and first degree tinnitus concomitant with chiropractic care: A case report

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Abstract: A 62-year-old female presented for chiropractic care after a medical diagnosis of severe hypoacusia and first degree tinnitus following weight overload.

Intervention/Outcomes: A four-visit course of care was undertaken, using Diversified Technique for the diagnosis and adjustment of subluxations. After four weeks of care, a 90% increase in hearing was noted on the left side. Her subluxation listings remained consistent.

Conclusion: Chiropractic care may be of assistance in the management of hypoacusia. Further research is required.

Indexing Terms: Chiropractic; Subluxation; Immunity; Hypoacusia.

Background

The connection between chiropractic care and hearing loss goes back to the first adjustment delivered in 1895. (1) Since then, there have been a number of case reports in the paediatric and adult population that have indicated that chiropractic care may be of benefit to some cases of hearing loss.

> *... This 67yo male experienced a 50-60% reduction in post-nasal drip as well as 50% decrease in pharmaceutical interventions) in sinusitis where GP and ENT consults had ineffective ...*

In paediatric cases, there have been links to otitis media (ear infections) such as the case of a ten year old female whose ear infections and hearing loss improved under chiropractic care. (2) However, whilst hearing loss associated with otitis media in the paediatric population has a presence in chiropractic literature, so too does more generalised hearing loss in the adult population. A case series with 15 cases and a mean age of 54.3 with 9 males and 6 females also gave strong indications that chiropractic care may assist with hearing loss. (1).

Further research is required to establish causation, and to further understand the mechanisms behind the improvements seen in case report data.

However, the following case report adds to the available evidence that chiropractic care may be able to improve some types of hearing loss.

History and Examination

A 62-year-old female presented for chiropractic care with a primary concern of severe hypoacusia and first-degree tinnitus following experiencing a weight overload. She also had a medical history of bruxism, a sleep disorder affecting the start of sleep on a nightly basis, nightly awakenings, and poor sleep quality as well as arterial hypertension. She had previously had her gallbladder surgicallyremoved.

Prior to commencement of chiropractic care, her audiometry readings were significantly different between ears. The specific measurements were as follows:

	L) ear audiometry	L) ear discrimination
Previa	95,0 DZ	105 DZ NO DISCRIMINATION
	R) ear audiometry	R) ear discrimination
Previs	13,75 DZ	40 DZ

Treatment

Following her examination, a short, four visit course of care commenced in which Diversified Technique was used for the diagnosis and adjustment of subluxations. In addition to said subluxations, audiometry was recorded at baseline, at the visit mark, and at the four visit point for both left and right ear. Additionally, algometry was measured using a *Wagner*-brand certified algometer for suboccipital left and right and EIPS on the left and right side at baseline, two weeks, and again and four weeks.

The initial diagnosis revealed subluxations at C3-C4 on the left, and at T3-T4 as well as the left sacral base. Her leg check was positive for cervical syndrome. Algometry picked up on suboccipital points, and EIPS MPI. With the exception of the second assessment, where subluxations also included C0-C1 on the right, these findings and subluxation listings remained consistent and were adjusted using Diversified Technique.

Outcomes

After 4 visits, her re-examination revealed a 90% increase in her hearing on the left side. The patient also reported a significant improvement in tinnitus, the start of sleep and sleep quality, as well as a decrease in the frequency of her night awakenings.

Her audiometry readings at baseline (Previa), 2 and 4 weeks are given below.

Discussion

In this case, the improvement in hearing, significant patient-reported lessening of tinnitus and improvements in sleep are consistent with other case report data. It should be noted that the etiology of these presentations, and especially hearing loss, is varied and case report data does not offer the ability to generalise findings to the whole population.

That said, it is noteworthy that while C3-C4 and Thoracic subluxation findings remained steady across the course of care, the initial subluxation finding at C0-C1 did resolve following adjustment via the Diversified Technique. We cannot predict via case report alone why this may

be, and thus further research is required to establish causation. However, given the profound level of innervation at the C0-C1 level, it is reasonable to consider that the regulation of the Nervous System under chiropractic care may have led to an improvement in functionality (immune or otherwise), and general physical resilience. While the patient had a history of bruxism and sleep disorders, this too improved under chiropractic care, which may lead to consideration of Autonomic Nervous System function as a potential mechanism for improvement.

Further research into hearing loss, sleep, tinnitus and chiropractic care is welcomed to establish the mechanisms and effects of such an intervention.

	L) ear audiometry	L) ear discrimination
Previa	95,0 DZ	105 DZ NO DISCRIMINATION
Post 2 visits	71,2 DZ	95 DZ
Post 4 visits	27,5 DZ	50 DZ
	R) ear audiometry	R) ear discrimination
Previs	13,75 DZ	40 DZ
Post 2 visits	13,75 DZ	45 DZ
Post 4 visits	12,5 DZ	45 DZ

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Cite: Alarcon EM, Postlethwaite R, McIvor C. Resolution of severe hypoacusia and first degree tinnitus concomitant with chiropractic care. A case report. Asia-Pac Chiropr J. 2022;2.5. URL apcj.net/papers-issue-2-5/#Emiliohypoacusia

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About the Case Report project

This Case Report is a part of the ASRF Case Report Project 2021, 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. This project was made possible by the generous fundraising and contributions of ASRF supporters.