

Evaluation of a course of cervical adjustments in treating cervicogenic dizziness

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Introduction

Dizziness is a common problem that can lead to disability and impact on quality of life. In some cases of dizziness the cause may be attributed to pathology or dysfunction of upper cervical spine.

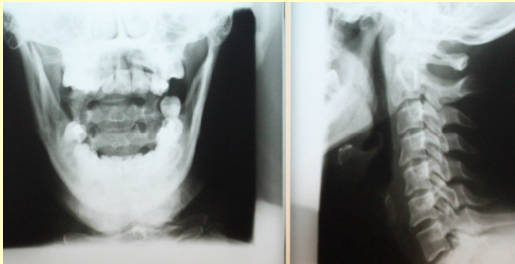


Figure 1. X-Ray of a patient with cervicogenic dizziness with a rotated Cx1 and loss of lower cervical lordosis

This form of cervicogenic dizziness is characterized by symptoms of imbalance or spinning associated with neck pain, stiffness or headache.

Aim

To investigate the effect of a course of cervical spine manipulation (toggle recoil) on clinical outcome in patients with cervicogenic dizziness.

Methodology

20 participants with cervicogenic dizziness

Age: 44.4 ± 8.7

Onset (months) : 62.9 ± 60.4

Inclusion criteria:

- Dizziness described as imbalance or unsteadiness
- Stiffness and/or painful neck
- Dizziness related to either movements or positions of the cervical spine
- Symptoms persisting for at least 4 weeks.

Intervention

Toggle recoil (with Thompson Table)

- **C1: Transverse**
- **Lower cervical: Postero-anterior**



- 6 sessions over 3 weeks

Results

There were no significant differences in the control group following 3 weeks of no intervention ($P > 0.05$, $n=13$). There were significant improvements in all clinical outcome measures following treatment (Table 1)

N = 20	Before	After	P
Severity of neck pain (Max: 10)	6.6 ± 1.6	3.4 ± 2.7*	<0.001
Severity of dizziness (Max: 10)	5.9 ± 1.9	3.3 ± 2.6*	<0.001
Frequency of dizziness (Max: 5)	4.1 ± 1.1	2.3 ± 1.7*	<0.001
Dynamic Gait Index (Max: 24)	21.3 ± 2.0	23.3 ± 0.8*	<0.001
Dizziness Handicap Inventory (Max: 100)	48.2 ± 18.6 (moderate:36-52)	31.9 ± 21.3* (mild:16-35)	<0.001

Table 1. Clinical outcomes before and after intervention (N=20, Paired t test * $p < 0.05$)

Global Perceived Effect scale (-5 to +5): + 3.06 ± 1.42

Significant Improvements ($p < 0.05$) were also found in all Cervical Range of motion

Discussion

- A course of toggle recoil chiropractic adjustments is effective in improving clinical outcome in patients with cervicogenic dizziness.
- The toggle recoil technique is a low amplitude, high velocity thrust. This technique does not involve rotation of the cervical spine and has no recordable preload force, which minimizes the risks associated with cervical spine manipulation.
- The results of this study supported the use of toggle recoil chiropractic adjustment on both the upper and lower cervical spine in management of cervicogenic dizziness.
- Further analysis will investigate the physiological effect of toggle recoil on the vertebral artery blood flow characteristics in people with cervicogenic dizziness.

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