

A Cross-Sectional Study of the Association Between Pain and Disability in Neck Pain Patients with Dizziness of Suspected Cervical Origin

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FROM ABSTRACT:

Introduction.

Neck pain is almost as common as low back pain, with a lifetime prevalence of 70% and yearly prevalence of 30%.

Dizziness and vertigo are common complaints of neck pain patients with 80 to 90% of whiplash sufferers reporting these symptoms.

Emerging evidence suggests that dizziness and vertigo may commonly arise from dysfunctional cervical spine structures such as joint and neck mechanoreceptors, particularly from trauma. **[IMPORTANT]**

Although pain, disability and dizziness are common complaints of neck pain and whiplash patients, their interaction has not previously been reported.

The purpose of this study was to determine if there is an association between reported levels of pain and disability in neck pain patients with dizziness of suspected cervical origin.

Methods.

Consecutive neck pain patients over the age of 18 were recruited from the outpatient clinic at the AECC at the time of their initial consultation. Patients were excluded if they had radiographic evidence of congenital anomalies, fracture/dislocation, inflammatory, infectious or other serious pathologies. Patients were asked to answer questions regarding demographics, history of injury/trauma and duration of neck pain, and presence of neck pain related dizziness/unsteadiness. Pain intensity was measured using two, 11-point numerical rating scales while disability was measured with the Neck Disability Index (NDI).

Results.

One hundred eighty neck pain patients were recruited to the study. The mean age was 49 years (range 18-82). Fifty-six percent were female.

Overall, 71 patients (40.57%) reported neck pain resulting from trauma and 60 patients (33.5%) were suffering from dizziness.

In terms of total patients, no statistical correlation was found between age and reported disability (total NDI score), or between reported pain (over last week) and disability (total NDI score).

Regarding dizziness, females were significantly more likely to report dizziness compared to males while no significant difference was found for dizziness versus age.

Patients experiencing dizziness also reported greater intensity of neck pain compared to those without dizziness.

Increasing duration of neck pain was significantly associated with increasing reports of dizziness.

Subjects who reported dizziness were significantly more likely to have been involved in an injury [**usually whiplash injury**].

For disability, neck pain patients with dizziness reported significantly more disability (total NDI score) compared to neck pain patients without dizziness.

Conclusions.

Neck pain patients with dizziness were significantly more likely to have suffered a trauma injury, experienced greater pain intensity and disability levels, experienced for a longer period of time, compared to neck pain patients without dizziness.

In general, female patients were significantly more affected than males.

THESE AUTHORS ALSO NOTE:

A considerable number of neck pain patients will suffer from pain and disability for longer than 6-months.

"Dizziness and vertigo are also common complaints of neck pain patients and particularly for whiplash sufferers, with 80-90% of patients reporting symptoms."

Dizziness is used to describe lightheadedness, seasickness, instability, rotatory vertigo, etc.

"The term 'cervical vertigo' was introduced to describe dizziness and unsteadiness associated with cervical spine pain syndromes." [Lancet, 1955]

"Vascular, proprioceptive and cervical sympathetic chain vasomotor changes have been proposed as possible mechanisms for cervical vertigo."

“Increasing evidence suggests that dizziness and vertigo may arise from dysfunctional cervical spine structures.” **[Chiropractic Subluxation Complex]**

“Whiplash patients are likely to suffer from dizziness, vertigo and associated neck pain and disability resulting from traumatized cervical spine structures.”

“Cervicogenic dizziness, especially in whiplash patients, may result from disturbed sensory information due to dysfunctional joint and neck mechanoreceptors.”
[IMPORTANT, subluxation complex and nerve interference]

RESULTS

71 patients (40.57%) reported neck pain from whiplash trauma.

60 patients (33.5%) suffered from dizziness/unsteadiness related to their neck pain.

34.6% had neck pain only during the last year.

36.3% had neck pain during the last 1 to 5 years.

29.1% had neck pain for more than 5 years.

“Of those that were involved in whiplash trauma, 26% had occurred within the last year, 34% within the last 1-5 years and 40% occurred longer than 5-years ago.”
[This means that 74% of the whiplash group had pain for more than 1 year]

“Females reported significantly more pain and disability compared to males.”

“Patients with neck pain as a result of injury reported significantly higher levels of disability compared to non-trauma patients.”

“Females were more likely to report problems with dizziness/unsteadiness compared to males.”

“Neck pain patients with dizziness reported significantly higher levels of pain intensity compared to those without dizziness.”

“An increasing duration of neck pain was also significantly associated with an increasing report of dizziness.”

“Neck pain patients with dizziness reported significantly more disability compared to neck pain patients without dizziness.”

DISCUSSION

“Similar to previous studies, women were found to suffer more in terms of reported neck pain and disability compared to males.”

“Women are likely more prone to neck pain complaints compared to men, especially in the case of trauma/whiplash, as a result of differences in cervical muscle mass.”

“The smaller cross sectional area of muscles mass in women results in a decrease in the forces generated to stabilize, support and protect the cervical spine, particularly during trauma or sustained postures of daily living.”

“Ligamentous structures of the neck in females may be prone to greater injury and/or biomechanical stresses due to reduced muscular support, leading to pain and disability.”

“Females reported more problems with dizziness/unsteadiness compared to males.”

“Dysfunction or trauma to connective tissues such as cervical muscles and ligaments rich in proprioceptive receptors (mechanoreceptors) may lead to sensory impairment.” **[IMPORTANT, subluxation and nerve interference]**

A disturbance of sensory in-put from the proprioceptive system in the neck is commonly responsible for the genesis of cervicogenic dizziness/vertigo. **[GOOD]**

“Duration of neck pain was also significantly linked to dizziness. Patients with chronic neck pain were significantly more likely to have dizziness compared to those with neck pain of more recent onset.”

[Dizziness is associated with poor prognosis for trauma recovery]

This “study results reinforce the concept of neck pain and disability leading to cervicogenic dizziness/vertigo due to dysfunction of the somatosensory system of the neck.” **[Reinforces the concept of chiropractic nerve interference]**

CONCLUSIONS

“Pain, disability and dizziness were found to be strongly associated in neck pain patients.”

“These associations were significantly stronger for those patients who had suffered trauma/injury compared to those who had not.”

KEY POINTS FROM DAN MURPHY

- (1) Women are more injured than men in whiplash trauma.
- (2) 80% to 90% of whiplash sufferers report dizziness and vertigo.
- (3) Dizziness is significantly associated with chronic neck pain, indicating those with dizziness have a poor prognosis for neck pain recovery.
- (4) Dizzy subjects were significantly more likely to have suffered from trauma.
- (5) Female patients are significantly more likely to suffer neck pain and dizziness than males.
- (6) "Cervical vertigo" has been described in the literature since at least 1955.
- (7) The basic model presented in this article is that trauma causes "dysfunctional cervical spine structures" resulting in altered "joint and neck mechanoreceptor" function, causing both pain and dizziness.
[This supports the chiropractic subluxation complex with altered afferent neurology nerve interference model]