



Original Article

Prevalence of Cervicogenic Vertigo Among Patients with Cervical Spondylosis; A Cross Sectional Survey

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ABSTRACT

Cervical vertigo is a phrase used to describe to-and-fro vertigo and unsteadiness of gait caused by neck lesions. Cervicogenic dizziness is caused by cervical spine involvement. Cervical vertigo is caused by a variety of etiologies and processes. **Objective:** The study was to find Prevalence of Cervicogenic Vertigo Among Patients with Cervical Spondylosis. **Methods:** This study included 78 individuals who had a confirmed diagnosis of cervical spondylosis. Data was obtained from several hospitals in Lahore using a standardized vertigo questionnaire from all participants after clearance from the university ethics council and IRB UOL. Data was collected using a convenient sampling strategy. **Results:** Total of 78 people were selected in study. There were 45 men and 33 women among them. In this study, 65 people reported experiencing lightheadedness when dizzy, while 13 persons reported not experiencing lightheadedness when dizzy. In this study, 65 people reported experiencing blacking out when dizzy, whereas 13 persons reported not experiencing blacking out when dizzy. **Conclusion:** According to the findings of this investigation, cervicogenic vertigo is prevalent in senior individuals with cervical spondylosis.

INTRODUCTION

Cervical vertigo is a phrase used to describe to-and-fro vertigo and unsteadiness of gait caused by neck lesions. It has been identified as a possible cause of neurological disorders. The most prevalent cause of signs and symptoms has been identified as direct cervical compression of cervical nerve roots and spinal cord by osteophytes, degenerative discs, and misplaced vertebrae [1,2]. Patients complaining of dizziness often pose a diagnostic challenge because of the varied possible

etiologies responsible for this symptom [3,4]. Because many illnesses, both benign and dangerous, can induce dizziness, a thorough differential diagnosis for a patient complaining of dizziness is not only challenging but also necessary. Cervicogenic dizziness is dizziness caused by cervical spine involvement. Cervical vertigo is caused by a variety of etiologies and mechanisms [5,6]. Cervicogenic dizziness is caused by three processes, one of which is irritation of the cervical sympathetic nerve system. The

vertebral artery is mechanically compressed or stenosed. Involvement of upper cervical spine proprioceptors induced by functional abnormalities in segments C0-C3 [7,8]. Cervical vertigo associated with neck movement appears to be more common in individuals with cervical disorders than in the general population. Vertigo is known to be caused by cervical spine spondylitis alterations [9,10]. Walking is a common human movement, but sustaining postural balance requires a multisensory and sensorimotor capacity that includes biomechanics, sensory function, sensorimotor integration, and exercise-preprogrammed modifications. Even in elderly adults who show no signs of sickness, there is evidence of degeneration in several sensorimotor systems that enable postural regulation [11,12]. Without increasing mortality, dizzy older adults are more likely to become handicapped than those who are not. There is a severe lack of community-based research on the causes of dizziness, particularly in the elderly. Nonetheless, certain demographic studies indicate that patients over the age of 60 have a higher incidence of vertigo [13,14]. Dizzy patients are generally treated through primary care. Final diagnoses are classified into three categories: peripheral vestibular diseases, central neurological illnesses, and cardiovascular disorders. As a result, it appears that the primary care physician is having difficulty selecting the appropriate expert for referral and further examination of senior patients [15,16]. The goal of this study was to determine the prevalence of cervicogenic vertigo in geriatric individuals with cervical spondylosis. The importance of this study is that it will aid in understanding the balance and gait issues linked with vertigo in the elderly. This study will also aid in determining the potential injuries associated with vertigo in the elderly such as falls, bone fractures etc. The objective of this study was to find out the prevalence of cervicogenic vertigo in geriatric patients with cervical spondylosis.

METHOD

This study included 78 individuals of age ranging 45-70 years who had a confirmed diagnosis of cervical spondylosis. Data was obtained from different hospitals in Lahore and Faisalabad cities utilizing a standardized vertigo questionnaire from all participants after clearance from the university ethics council and IRB UOL [17]. Exclusion criteria was Past medical or surgical history related with cervical region, Presence of any metabolic or systemic diseases other than cervical spondylosis, Congenital cervical anomalies, Vertigo due to other cause than cervical spondylosis, Cervical disc prolapse and Recent cerebral stroke [17]. Before distributing the questionnaire to the participants, signed informed permission was obtained. Data were collected using a

convenient sampling strategy. Data were analyzed using SPSS version 21.0 after receiving informed written consent. All qualitative data, including gender, were provided as frequency, while quantitative data, such as age, were presented as mean \pm SD.

RESULTS

In this study, a total of 78 participants were included, out of which 45 were male and 33 were females. In this study, 7 participants reported that their dizziness first occurred during last 1 week, 6 participants reported it started in last 2 weeks, 13 participants reported it started in last 3 weeks, 13 participants reported it started in last 4 weeks, 4 participants reported it started in last 1 month, 4 participants reported it started in last 2 months, 2 participants reported it started in last 3 months, 3 participants reported it started in last 4 months, 8 participants reported it started in last 1 year, 5 participants reported it started in last 2 years and 13 participants reported it started more than 2 years ago, Table 1.

First occurrence of dizziness	Frequency	Percent
Last 1 Week	7	9.0%
Last 2 Weeks	6	7.7%
Last 3 Weeks	13	16.7%
Last 4 Weeks	13	16.7%
Last 1 Month	4	5.1%
Last 2 Months	4	5.1%
Last 3 Months	2	2.6%
Last 4 Months	3	3.8%
Last 1 Year	8	10.3%
Last 2 Years	5	6.4%
More Than 2 Years	13	16.7%
Total	78	100%

Table 1: First occurrence of dizziness Among participants

In this study, 65 participants reported when they are dizzy, they experience lightheadedness while 13 participants reported they don't experience lightheadedness when they are dizzy. 65 participants reported when they are dizzy, they experience loss of consciousness while 13 participants reported they don't experience loss of consciousness when they are dizzy. 65 participants reported when they are dizzy, they experience tendency to fall to the right, to the left, forward, backward and 13 participants reported they did not experience tendency to fall to the right, to the left, forward, backward. 65 participants reported when they are dizzy, they experience nausea or vomiting, and 13 participants reported they did not experience nausea or vomiting. 65 participants reported they are completely free of dizziness between attacks and 13 participants reported they are not completely free of dizziness between attacks. 65 participants reported changes of position made them dizzy and 13 participants reported changes in position did

not make them dizzy. 65 participants reported they know of anything that will stop their dizziness or make it better and 13 participants reported they did not know of anything that will stop their dizziness or make it better. 65 participants reported they know of anything that will make your dizziness worse and 13 participants did not know of anything that will make your dizziness worse. 17 participants reported they had a head injury and 61 participants reported they did not have any head injury. All 78 participants reported they take their medicines regularly, Table 2.

Conditions during Dizziness		Frequency	Percent
Lightheadedness	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Loss of consciousness	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Tendency to fall	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Nausea or vomiting	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
No dizziness between attacks	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Changing position make dizzy	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Changing position make dizzy	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Knowledge of anything that will Stop dizziness	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Knowledge of anything that will Make Dizziness worse	Yes	65	83.3%
	No	13	16.7%
	Total	78	100%
Injured head	Yes	17	21.8%
	No	61	78.2%
	Total	78	100%
Regular medicines	Yes	78	100%

Table 2: Conditions of participants during dizziness

30 participants reported they did not experienced numbness of face or extremities, 24 participants reported they constantly experienced numbness of face or extremities and 24 participants reported they experienced numbness of face or extremities in episodes. 30 participants reported they did not experience blurred vision or blindness, 24 participants reported they constantly experienced blurred vision or blindness and 24

participants reported they experienced blurred vision or blindness in episodes.

Experiences during dizziness	Frequency	Percent	
Numbness of face or extremities	No	30	38.5%
	Constant	24	30.8%
	In Episodes	24	30.8%
	Total	78	100%
Blurred vision or blindness	No	30	38.5%
	Constant	24	30.8%
	In Episodes	24	30.8%
	Total	78	100%

Table 3: Experience of numbness or Blurred vision during dizziness.

We can say that cervicogenic vertigo is prevalent in males whose ages are above 54 and in females that are above 65 years, Table 4.

Gender	N	Age (Mean+SD)
Male	45	54.4+3.6
Female	33	65.1+3.1

Table 4: Group statistics

DISCUSSION

Previous research revealed that dizziness can be a sign of a variety of illnesses. Some of these disorders can only be managed with Physical Therapy. Musculoskeletal problems that cause disequilibrium-type dizziness are frequently treatable with merely Physical Therapy. Many illness processes that cause dizziness, however, necessitate a medical-surgical referral instead of or in addition to proper Physical Therapy treatments. This demonstrates the importance of both a comprehensive screening examination and, if the screening examination suggests that the patient is suitable for Physical Therapy, a Physical Therapy differential diagnosis to determine additional relevant tests and procedures. The findings of this investigation and the prior study were identical [18,19]. As in earlier research, women were shown to suffer equally or more than men in terms of reported dizziness and impairment. Females reported higher dizziness/unsteadiness symptoms than males. Females ligamentous structures of the neck may be more vulnerable to injury and/or biomechanical stressors due to less muscle support, resulting in discomfort and impairment --[20,21]. Numerous variables each showed a modest relationship with dizziness. This is unsurprising given that dizziness is a feeling of disequilibrium or instability caused by a mismatch or failure in one or more of the several domains that contribute to stability. Dizziness as a geriatric syndrome does not rule out the possibility that a particular illness is predominantly responsible for dizziness in a subgroup of people. [22,23]. This study emphasizes hypotensive cardiovascular diseases, a case

not previously addressed, as a prevalent contributing cause of dizziness. Cardiovascular illnesses were responsible for 28% of the symptoms, whereas peripheral vestibular disorders, such as vestibular neuronitis, benign positional vertigo, and Meniere's disease, were responsible for 18% of the symptoms. Radiographically verified cerebrovascular illness, severe cervical spondylosis, bilateral substantial carotid artery stenosis, drop attacks, and basilar migraine all contributed to symptoms in 14% of patients. This research did not agree with our findings since it focused on different causes of vertigo [24,25]. Although it is commonly missed, dizziness is a common migraine symptom. migraine patients' dizzy episodes were debilitating and severe enough to merit tertiary referral to a university medical Centre. Nausea and vomiting were common complaints, as were hypersensitivity to motion, sleep relief, and postural instability. Many of the patients noted vertigo, which is defined as a sensation of motion in one's surroundings or in relation to oneself that occurs in discrete, recognized episodes. The remaining patients described a motion-sickness-like sensation inside their minds as swimming or rocking, but with no sense of movement in relation to their surroundings. While the dizziness came in fits and starts, it frequently lasted days to weeks. Long bouts of motion sickness were regularly broken by bouts of vertigo. This study contradicted our findings since it focused on different causes of vertigo [26,27].

CONCLUSION

This study revealed that cervicogenic vertigo is common in individuals with cervical spondylosis, and it is more common in males over the age of 54 and females over the age of 65. Cervicogenic dizziness is a diagnosis defined by dizziness and disequilibrium in individuals with cervical disease and neck discomfort.

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