



## **A PROSPECTIVE EVALUATION OF THE CLINICAL AND DEMOGRAPHIC FEATURES OF VERTIGO PATIENTS**

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### **ABSTRACT**

Vertigo being a common complaint in clinical practice is encountered as symptom associated with varying underlying diseases. But there are very few reports in literature about its prevalence in India. The categorization is as Peripheral (vestibular) and Central. The known epidemiological status is 20.5-32.5% of total population. To explore the clinical profile, prevalence and incidence of vertigo in a tertiary care teaching Hospital. To find out the prevalence, the incidence of various types and investigates the epidemiological status of vertigo in various age groups of study population. A Hospital based prospective study on clinical profile, and determining study population by recruitment criteria. The data collection was done in a specially designed form and results were reported. Age group of 40-60 years has highest prevalence of 43.48%. Also 43, 48% of total population has co morbidity, out of which 19.57% had Hypertension. 51.18% of total patients had Peripheral vertigo and rest Central vertigo and others. 26.09% were presented with C/o Giddiness. Several factors of central vertigo were analysed. Impact of vertigo symptoms were studied and revealed restriction on social activities. Vertigo seemed to be a condition of more clinical concern with requisituon of differential diagnosis and accurate categorization. The peak age is found to be a mean value of 50 years and peripheral vertigo is found to be more prominent than central vertigo.

**Key Words:** Vertigo, BPPV, Meniere's disease, Gaze palsy, Ataxia, CSOM.

### **INTRODUCTION**

Vertigo is an illusion of movement (mostly spinning) caused due to imbalance of the vestibular system. In spite of being a common symptom associated with varying underlying diseases, there are very few reports in literature about prevalence of vertigo in India [1]. After headache, vertigo is the most common symptom encountered in patients in neurological outpatient facilities around the world [2, 3]. Vertigo itself may either be of peripheral or central type [4]. The most common causes of peripheral vertigo are vestibular disorders including Benign Paroxysmal Positional Vertigo (BPPV) and Meniere's disease (MD) and vestibular neuritis. Patients are variously affected depending on the underlying cause of vertigo. For example, in BPPV, vertigo develops

suddenly, lasts about 1 Minute and is typically induced by changes of head or body position. By contrast in MD, attacks can last up to several hours [5].

Central type vertigo is caused by lesion of the central nervous system and is often associated with focal neurologic deficits such as hemi paresis, hemi sensory loss, speech disturbance, ataxia or gaze palsy [6, 7]. The most commonly reported presenting symptom is dizziness although symptoms can also include loss of balance, nausea, vomiting, light-headedness and difficulty in standing or walking [8, 9].

Vertigo is a very common complaint in clinical practice. The epidemiological knowledge on vertigo, mainly on its prevalence or incidence character is limited [10]. The prevalence of vertigo, in questionnaire-based population studies has been reported ranging from 20.5% - 32.5%. Vertigo is more likely to be reported by women than men, and the prevalence increases with age [11]. It

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was reported that about 2-3rd of the people with vertigo may have a vestibular etiologic diagnosis [12]. The prevalence increases with age and may be as high as 30% in those over 65 years of age [13]. In United States, vertigo accounts for 5.6 million clinic visits per year, 17-42% of them were due to BPPV. So BPPV is the most common cause of vertigo [14].

Vertigo is one of the most challenging symptoms in medicine. It is difficult to define, impossible to measure, a challenge to diagnose, and troublesome to treat". Due to the enormous range of possible causes, it is understandable that vertigo is a common human experience, yet it is rather difficult to ascertain exactly how common it is. There are several reasons for this difficulty. The first is the variety of clinical presentations of "vertigo", reflected by the broad range of descriptive terminology used by patients, clinicians and researchers. The second is difficulty in establishing a cause in many cases, which is made worse by the limited diagnostic tools available. The third is the range of ways in which vertigo is studied and reported in the medical and scientific literature, making results apparently discrepant from one another and difficult to compare [15]. The study was aimed to explore the clinical profiles, prevalence and incidence of vertigo in a tertiary care teaching hospital and to investigate the types of vertigo and their incidence as well as epidemiological status of vertigo in various age groups of study population.

## METHODOLOGY

The study was conducted at department of General Medicine and department of ENT in Karuna

Medical College Hospital Chittur, Palakkad, which comprised of 92 vertigo patients over a duration of six months. Study criteria was set as inclusion of patients of age greater than 18 years and those who are diagnosed with vertigo in associated condition, and exclusion of patients who had recent ear surgery, who are not willing to participate, or pregnant or lactating or even psychiatric patients. A data collection form was designed to collect patient's data and was proceeded so.

## RESULTS

From the total of 92 cases with conformational diagnosis of vertigo, the highest prevalence of 43.48% was in the age group of 40-60 years, followed by age group of 60-80 years with 34.78% prevalence of vertigo. The least prevalence was seen in the age group of 20-40 years as 21.74%; as shown in figure 1.

Out of 92 patients, 43.48% had comorbidity and 19.57% had hypertension (18/92), which was the highest as depicted in table no. 1.

51.08% of total patients (92) comprises peripheral vertigo with a major fraction of BPPV with 17 cases and followed by CSOM with 11 cases. In case of central vertigo the fraction of participants was as 21.74% of total (92) with highest prevalence of cervical spondylosis induced vertigo which constitutes 75% of all central vertigo cases, as denoted in table no.2. 26.09% of total study population presented exact manifestation of vertigo or giddiness, followed by 14.13% with hearing loss as shown in table No.3.

**Table 1. Comorbidity Wise Distribution Among Study Population**

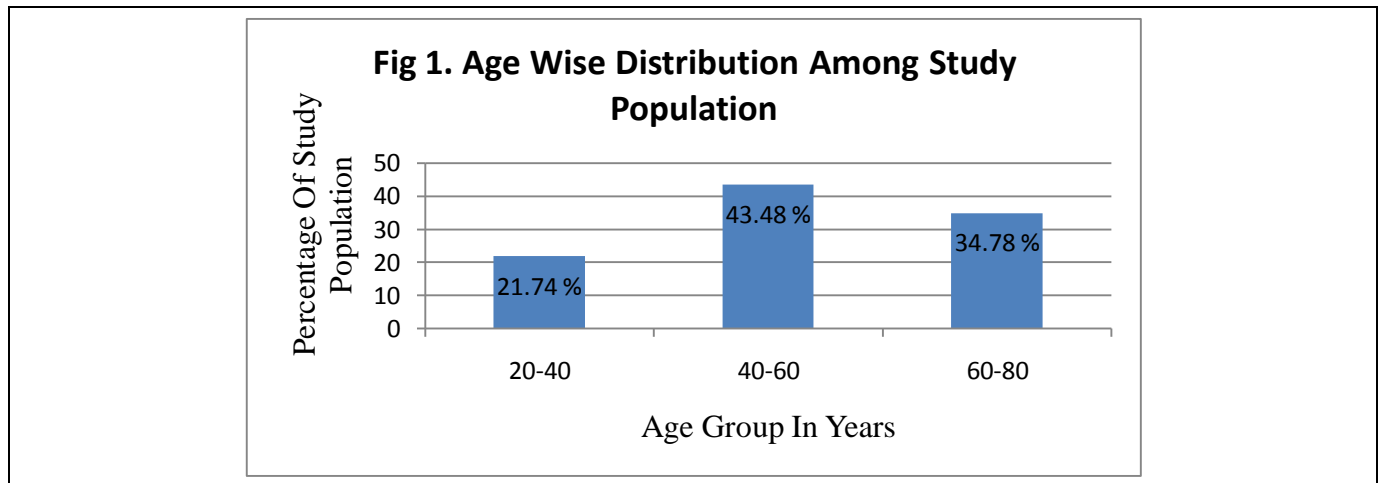
S.No	Comorbidity Diseases	Number of Patients (n=92)	Percentage of Patients (%)
1	Hypertension	18	19.57
2	Type 2 DM	10	10.87
3	Dyslipidemia	1	1.09
4	Anemia	5	5.43
5	UTI	2	2.17
6	Others	4	4.35
TOTAL		40	43.48

**Table 2. Distribution of Types of Vertigo among Study Population**

Types of Vertigo		Number of Patients	Percentage of Patients (%)
Peripheral Vertigo (N=47) [51.08%]	BPPV	17	36.17
	SNHL	10	21.28
	Otosclerosis	1	2.13
	Neuronitis	3	6.38
	CSOM	11	23.40
	Others	5	10.64
Central Vertigo(N=20) [21.74%]	Cervical Spondylosis	15	75
	Stroke	5	25
Other Vertigo		25	55.56

**Table 3. Distribution of Symptoms and Manifestation in the Study Population**

S. No.	Symptoms	Number of patients(n=92)	% of Patients
1.	Giddiness/vertigo	24	26.09%
2.	Neck pain	10	10.87%
3.	Ear Imbalance	12	13.04%
4.	Hearing Loss	13	14.13%
5.	Head ache	12	13.04%
6.	Nausea and Vomiting	11	11.96%
7.	Others	10	10.87%



**DISCUSSION**

In this study, we identified that a presenting complaint of lightheadedness, altered mental state, focal neurological signs and symptoms, raised blood pressure and history of stroke were associated factors for central vertigo and, otological abnormalities and dysfunctions were for vestibular vertigo [1]. Attacks of swaying or spinning vertigo are often of higher clinical relevance because of longer duration and impact on social activities compared to attacks of vertigo according to mentioned complaints though both draw the same picture medically [2]. Detailed analysis of vestibular vertigo threw a good deal of light on all possible etiological factors of previously less concerned ear imbalance. An interesting finding is co-occurrence of different types of vertigo. The diagnostic entity of vestibular vertigo has reached international acceptance recently. Yet there are other clusters of vertigo symptoms such as vestibular migraine induced vertigo, somatoform dizziness etc. to be studied. Subjective nature of clinical symptoms makes it difficult to assign to a specific category [3].

Another important finding is the high impact of vertigo symptoms on restriction of social activities pointing to the high clinical relevance of vertigo [4]. Dizziness is a common complaint for adult of all ages, but making a specific diagnosis for a dizzy patient in the busy schedules are often difficult. The study lucidifies the requisition to investigate and explore more on vertigo

problems, its manifestations, management and so on on large basis [5].

The study revealed a wider hand of vestibular symptoms than central vertigo. The presentation of patients to practitioners of different departments due to lack of specified ideas created issues in confirmational diagnosis [6]. In our study, the areas concentrated were Department of General Medicine and ENT. Since the imagery is of rural area patient awareness was to be established initially.

In case of peripheral or vestibular vertigo, BPPV and CSOM constitute the major fraction, as there was presentation of multiple episodes in those cases at higher severity levels. Where as in case of central vertigo, cervical spondylosis induced 75% of the issues reported. Other than these divisions, anaemia, hypotension, UTI, etc. caused vertigo at minimal frequency and lower severity levels.

The strength of the study was the well begun initiation with informed consent form, prospectives for differential diagnosis with a study population of 92 patients from a rural area, for a condition which is difficult to define and troublesome to differentiate. The limitations of the study were the carefree concern towards other types of vertigo than central and peripheral categories.

**CONCLUSION**

Vertigo draws out to be a picture of high clinical concern as possessing association with other comorbidities and health issues. The requisition of more advanced studies

is emphasised by this study on its epidemiological status. The differentiation of symptoms and categorization of vertigo is needed for accurate diagnosis. The peak age is seemed to be a mean of 50 years, and peripheral vertigo seems to be more prevalent than central vertigo.

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Nil

#### CONFLICT OF INTEREST

No Interest

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