

Clinical Presentations and Risk Factor of Patients with Peripheral Vertigo at a Tertiary Care Hospital, Bikaner Rajasthan

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Abstract

Background: Vertigo is an unpleasant symptom of diseases such as labyrinthitis, Meniere's disease, migraine, multiple sclerosis, and cervical spine osteoporotic lesions.

Methods: 50 patients, age 20-80 years, presented with peripheral vertigo in the department of ENT & Medicine, Sardar Patel Medical College, Bikaner, India during the period of 4 months were included in this study.

Results: Spinning plus about to faint was found as the major clinical manifestation in 24 patients (48.00%) patients. Among these, significant risk factor was found in the patient with ear infection (36.00%).

Conclusion: The result concluded that prevalence of incidence was significantly found in females of age group 40-59 with clinical presentation of both spinning and about to faint. Risk factor of ear infection was significantly found.

Keywords: Vertigo, Light-headiness, Spinning, Disequilibrium.

Introduction

Vertigo is an unpleasant symptom of diseases such as labyrinthitis, Meniere's disease, migraine, multiple sclerosis, and cervical spine osteoporotic lesions. Vertigo prevalence is estimated to be 1.8% among young adults

and more than 30% in the elderly. ¹ Its incidence increases with age, 13-38% of the referrals of patients over 65 years old in America are due to vertigo. ²

Causes of Vertigo

Vertigo is often caused by an inner ear problem. Some of the most common causes include:

BPPV. These initials stand for benign paroxysmal positional vertigo. BPPV occurs when tiny calcium particles (canaliths) clump up in canals of the inner ear. The inner ear sends signals to the brain about head and body movements relative to gravity. It helps you keep your balance.

BPPV can occur for no known reason and may be associated with age.

Meniere's disease. This is an inner ear disorder thought to be caused by a buildup of fluid and changing pressure in the ear. It can cause episodes of vertigo along with ringing in the ears (tinnitus) and hearing loss.

Vestibular neuritis or labyrinthitis. This is an inner ear problem usually related to infection (usually viral). The infection causes inflammation in the inner ear around nerves that are important for helping the body sense balance

Less often vertigo may be associated with:

- Head or neck injury
- Brain problems such as stroke or tumor

- Certain medications that cause ear damage
- Migraine headaches

Usually, vertigo does not increase the risk of mortality but it can affect the patient’s quality of life. The best treatment modality is still a matter of question. Currently, various therapeutic strategies such as medication, surgery, rehabilitation, and physical maneuvers are available. ³ Most cases of vertigo are caused by benign and self-restricting diseases. Differentiation of central types of vertigo, which require hospitalization and supplementary diagnostic and therapeutic measures, is of great importance.

Based on above-mentioned, this study was designed to evaluate the epidemiologic characteristics of vertigo patients referred to the emergency department (ED).

Methods

Selection Patients

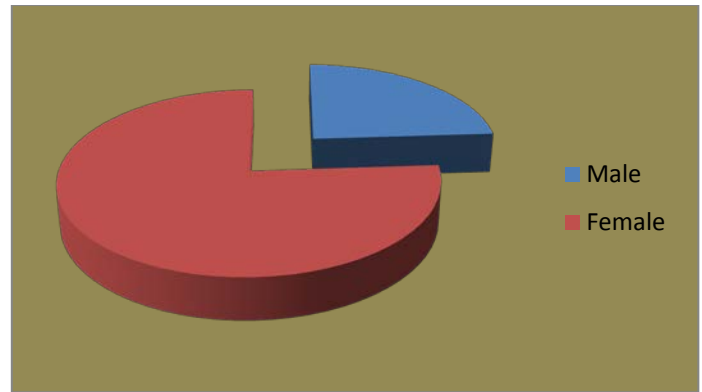
50 patients, age 20-80 years, presented with peripheral vertigo in the department of ENT & Medicine, Sardar Patel Medical College, Bikaner, India during the period of 4 months were included in this study. A detailed clinical examination and history had been taken out. Patients below age 20 years and above 80 years, patients with central vertigo, vertebra basilar artery insufficiency, CNS tumours and with multiple sclerosis were excluded from the study. Consent was obtained from the patient or their relatives.

Statistical analysis

Analysis was done using statistical software SPSS (Version 22). Chi square test was used to know the significant difference between the groups. P < 0.05 was considered as significant.

Results

Total 50 patients of age 20-79 years were included in this study. There were total 12 males and 38 females in the 4 months study period.



The prevalence of incidence was significantly higher found in females.

Table 1: Distribution of clinical features of patients with peripheral vertigo.

| Clinical feature | No of patients | Percentage |
|---------------------------|----------------|------------|
| Spinning | 12 | 24.00 |
| About to faint | 7 | 14.00 |
| Spinning + About to faint | 24 | 48.00 |
| Light-headiness | 3 | 6.00 |
| Disequilibrium | 4 | 8.00 |

The clinical manifestations presented were spinning, about to faint, light-headiness, disequilibrium and both spinning and about to faint. Spinning plus about to faint was found as the major clinical manifestation in 24 patients (48.00%) patients.

Table 2: Risk factor

| Risk factor | No of patients | Percentage |
|--------------------|----------------|------------|
| Ear infection | 18 | 36.00 |
| Oto-toxic drugs | 6 | 12.00 |
| Hypertension | 8 | 16.00 |
| History of surgery | 8 | 16.00 |
| Trauma | 10 | 20.00 |

The distribution of risk factors was ear infection, ototoxic drugs, history of surgery, trauma. Among these,

significant risk factor was found in the patient with ear infection (36.00%).

Discussion

Results of the study revealed that the prevalence of incidence was significantly found in females. The major clinical presentation was spinning plus about to faint. The prevalence was found to be increased with age. In our study, we could find a maximum incidence in the 35-60 years age. It has been generally considered as the vertigo increased with age and reached its peak in the 60s, for both male and female. Gender ratio of 2:1 female: male was reported by Neuhauser et al.⁴ Similarly, in community based studies found that the prevalence of dizziness ranges from 1.8% in young adults to more than 30% in the elderly.^{5,6} Similarly, Katsarkas in a study on dizziness in the elderly reported that the prevalence of 63% in women when compared to 37% in men.⁷

According to Hanley et al.⁸ the presentations of symptoms of vertigo can be clinically diagnosed in most cases.

The most common risk factor found in the study was ear infection. Patients with otitis media often complain of vertigo due to the proximity of the vestibular end organs to the middle ear and the infectious process may extend to these structures. Similarly, the other causes reported were labyrinthitis- a peripheral disorder characterized by inflammation of the canals of the inner ear- commonly occurs following otitis media or an upper respiratory infection, it is thought to be a consequence of viral or bacterial infection.

Conclusions

The result concluded that prevalence of incidence was significantly found in females of age group 40-59 with clinical presentation of both spinning and about to faint. Risk factor of ear infection was significantly found.

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