



PERIPHERAL VERTIGO IN OTOLARYNGOLOGY PRACTICE: REVIEW OF CLINICAL, RADIOLOGICAL AND AUDIO VESTIBULAR FINDINGS

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ABSTRACT

Objective to evaluate the clinical, radiological and audio vestibular findings in patients with peripheral vertigo. Forty seven patients treated at ENT clinic with vertigo of peripheral origin were enrolled in the study. All patients were underwent detailed history taking and a through general examination, systemic examination, otoneurological examination and relevant audio vestibular studies. Majority of patents were seen in the third and fourth decade of life with male: female ratio 3:1. Benign paroxysmal positional vertigo was the commonest disorder encountered in our study, seen in 12 cases (25.5%) followed by Attico-antral CSOM was found in 9 cases (19.1%). Peripheral vertigo is considered as a common symptom in general and otolaryngology practice; Special emphasis should be given to thorough otoneurological examinations and Audio vestibular studies in order to be capable of diagnosing and locating the pathologies that cause vertigo.

Key Words:- Peripheral vertigo, Benign paroxysmal positional vertigo, Otoneurological examination.

INTRODUCTION

Vertigo can be defined as an illusion of movement, usually rotational. With ageing process, vertigo becomes a common complaint in this age group. The word "dizzy" is often used to describe a variety of sensations from lightheadedness to feeling weak or unsteady. Vertigo however, is dizziness is defined as the sense that you or your surroundings are moving around (Baloh RW, 1998).

Acute attacks are well-defined isolated spells of vertigo with a distinct onset and offset, whereas chronic vertigo is defined as a continuous or chronic sensation. Recurrent attacks of vertigo are addressed as chronic vertigo (Hotson JR & Baloh RW, 1998).

Balance disorders are significant risk factors for

falls in elderly individuals. Falls have been estimated to be the leading cause of serious injury and death in persons older than 65 years (Sloane PD & Baloh RW, 1989; Norrving et al., 1995).

The aim of this study is to evaluate the peripheral vestibular disorders, based on clinical, radiological and relevant audio vestibular studies to establish the site and type of the lesions.

MATERIAL AND METHODS

The sample of this study was conducted in the period from March 2003 to April 2006, in the Department of otolaryngology, royal medical services (Amman-Jordan).

After institutional ethical committee clearance and written informed consent, forty seven patients treated at ENT clinic with vertigo of peripheral origin were enrolled in the study.

All patients were underwent detailed history

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taking and a through general examination, systemic examination, otoneurological examination and relevant audio vestibular tests.

Audiological tests included the following, pure tone audiometry, speech discrimination and short increment sensitivity index tests. Evaluation of Vestibular system were balance tests, examination of spontaneous nystagmus, positional tests, electronystagmography (ENG) and brain stem evoked response audiometry (BERA). Radiological studies included mastoids and cervical spines X ray, MRI of brain and internal auditory meatus. Blood tests included serum biochemistry for blood sugar, Kidney Function Test, Liver function test and hematological investigations like hemogram were done as and when required.

RESULTS

Majority of patents were seen in the third and fourth decade of life and 85% of patients were seen between the ages of 25-45 years. Majority was Males i.e. M: F=3:1.

The spectrum of disorders causing peripheral vertigo was divided into four groups:

Group I: Diseases of Middle ear

-Un safe CSOM was found in 9 cases (19.1%).

-Post middle ear surgery was found in 3 cases (6.4%).

Group II: inner ear lesions

-Benign paroxysmal positional vertigo (BPPV) seen in 12 cases (25.5%).

-Meniere's disease seen in 4 cases (8.5 %).

- Labyrinthitis seen in 3 cases (6.4%).

-Sudden deafness seen in 3 cases (6.4%).

Group III: Vestibular nerve disorders

- Vestibular neuronitis seen in 2 cases (4.3%).

- Acoustic neuroma seen in 4 cases (8.5%).

Group IV: Systemic disorders

- Vertebro-basillar insufficiency seen in 5 cases (10.6%).

- Hypothyroidism seen in 2 cases (4.3%).

DISCUSSION

Vertigo is considered as a common symptom in general, and otolaryngology practice. Usually patients describe it as a sensation of self or environmental motion (Clark MR et al., 1994; Bird JC et al., 1998; Froehling DA et al., 1998). With proper history taking we can better clarify this complaint. The duration of attacks of vertigo in addition to the presence or absence of other auditory

symptoms can helpful in reducing the differential diagnosis and reaching the actual cause (Hoffman RM et al., 1999; Baloh RW, 1998; Rosenberg ML & Gizzi M, 2000).

In our study the cases of vertigo of peripheral origin were seen more between 3rd and 4th decade of life. The disease was rare above 50 years and below 20 years of age. Males are three folds more affected than females. Similar findings were reported by other studies (Rattan GD, 1992).

In patients with vertigo, we have diagnosed the cases on the basis of clinical history with the classical triad of episodic vertigo, fluctuating hearing loss and tinnitus. Recruiting type of sensorineural hearing loss is present in all patients as revealed by audiometry.

Benign paroxysmal positional vertigo was the commonest disorder encountered in our study, seen in 12 cases (25.5%). Similar frequency was reported by Montadon 1984, 28% (Dix MR & Hallpike CS, 1952); and Deka et al 1985, 17%.

Other inner ear lesions contribute to vertigo was Meniere's disease seen in 4 cases (8.5 %), Labyrinthitis in 3 cases (6.4%) and sudden deafness seen in 3 cases (6.4%). All cases of Labyrinthitis were due to chronic middle ear disease where as in sudden deafness no definite cause could be found.

Middle ear lesions comprised of 25.5% in our study. In any patient with vertigo, you have to rule out the presence of any middle ear disease.

Regarding vestibular nerve pathology; Acoustic neuroma accounts for about 13.6% of cases, as compared to Montadon (1984) 4% and Deka (19, 85) 10%. While Vestibular neuronitis seen in 2 cases (4.3%).

Systemic disorder presented as peripheral vertigo was recorded. Vertebro-basillar insufficiency accounted for 10.6% cases and hypothyroidism seen in 2 cases (4.3%) which is in agreement with the results of other studies (Grad A, Baloh RW, 1989; Rybak LP, 1995).

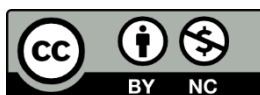
CONCLUSION

Peripheral vertigo is considered as a common symptom in general and otolaryngology practice; Special emphasis should be given to thorough otoneurological examinations and Audio vestibular studies in order to be capable of diagnosing and locating the pathologies that cause vertigo.

REFERENCES

- Baloh RW. Differentiating between peripheral and central causes of vertigo. *Otolaryngol Head Neck Surg*, 119, 1998, 55-9.
Baloh RW. Vertigo. *Lancet*, 352, 1998, 1841-6.

- Bird JC, Beynon GJ, Prevost AT, Baguley DM. An analysis of referral patterns for dizziness in the primary care setting. *Br J Gen Pract*, 48, 1998, 1828-1832.
- Clark MR, Sullivan MD, Fischl M, *et al.* Symptoms as a clue to otologic and psychiatric diagnosis in patients with dizziness. *J Psychosom Res*, 38, 1994, 461-470.
- Deka RC *et al.* Clinical profile of vertigo. *IJLO journal*, 37, 1985, 144-146.
- Dix MR, Hallpike CS. The pathology, symptomatology and diagnosis of certain common disorders of the vestibular system. *Proc R Soc Med*, 45, 1952, 341-54.
- Froehling DA, Silverstein MD, Mohr DN, Beatty CW. The rational clinical examination. Does this dizzy patient have a serious form of vertigo? *JAMA*, 271, 1994, 385-8.
- Grad A, Baloh RW: Vertigo of vascular origin. Clinical and electronystagmographic features in 84 cases. *Arch Neurol* 1989; 46:281-284
- Hoffman RM, Einstadter D, Kroenke K. Evaluating dizziness. *Am J Med*, 107, 1999, 468-78.
- Hotson JR, Baloh RW. Acute vestibular syndrome. *N Engl J Med*, 339, 1998, 680-5.
- Montadon, *et al.* Relevance of Otopathological findings in the treatment of dizzy patients. *Annals of otolaryngol*, 93: Supplement 112, 1984, 12-16.
- Norrving B, Magnusson M, Holtas S. Isolated acute vertigo in the elderly; vestibular or vascular disease? *Acta Neurol Scand*, 91, 1995, 43-8.
- Rattan GD. (1992) Aetiology of vertigo in urban population of Union Territory of Chandigarh. Department of ENT, Post-Graduate Institute of Medical Education and Research, Chandigarh. *Unpublished thesis*.
- Rosenberg ML, Gizzi M. Neuro-otologic history. *Otolaryngol Clin North Am*, 33, 2000, 471-82.
- Rybak LP. Metabolic disorders of the vestibular system. *Otolaryngol Head Neck Surg*, 112 (1), 1995, 128-32.
- Sloane PD, Baloh RW. Persistent dizziness in geriatric patients. *Journal American Geriatrics Society*, 37, 198, 1031-8.



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