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A Study of Peripheral Vertigo

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ABSTRACT

Vertigo is an illusory sense of motion when the patient is still1. Vertigo is an awareness of disordered orientation of the body in space.Peripheral vertigo is characterized by sudden onset, episodic and objective feeling of swaying with deafness, nausea and vomiting. Aim of this study is an evaluation of peripheral vestibular disorders, based on clinical, radiological and relevant audiovestibular studies to establish the site, type and severity of the lesions. Over a period of 6 months,25 cases were selected based on thorough history, otoneurological examination and relevant audiovestibular studies. Males were more predominant than females. Vertiginous disorders were more commonly seen in 4th and 5th decade of life. Maximum number of cases were due to inner ear and systemic lesion(32% each). Amongst the middle ear lesions, CSOM(AAD) was found in 12% cases. Amongst the inner ear pathology, Meniere's Disease(24%) formed the major part, while the incidences of labyrinthitis was 8%.

KEYWORDS : Peripheral Vertigo,Caloric Test & Meniere's Disease

INTRODUCTION

Vertigo, dizziness and disequilibrium represent 5–10 percent of all patients seen in general practice, and 10–20 percent of all patients seen by neurologists and otolaryngologists[2].Vertigo is an awareness of disordered orientation of the body in space. Peripheral vertigo is characterized by sudden onset, episodic and objective feeling of swaying. If the mechanism of balance is disrupted, one can experience a variety of sensations which can be included under the banner of 'Vertigo'. Deafness, nausea and vomiting are characteristics of peripheral vertigo. Vertigo with abnormal caloric response together with hearing loss signifies a peripheral pathology. Evaluation of nystagmus induced by warm or cold water irrigation of the external canals has been used to measure vestibular function since the beginning of the twentieth century[3].

It is an unpleasant truth that patients with vertigo get little justice from a clinician. The underlying cause is not that we do not know the subject, but we presume that little can be done to these distressed patients and we have nothing in our hand but a vague assurance and consolation to offer. Though vertigo is a multidisciplinary subject, peripheral vertigo is a classical entity of E.N.T. domain.

AIM OF THE STUDY

This study is an evaluation of peripheral vestibular disorders, based on clinical, radiologolical and relevant audiovestibular studies to establish the site, type and severity of the lesions.

MATERIALS & METHOD

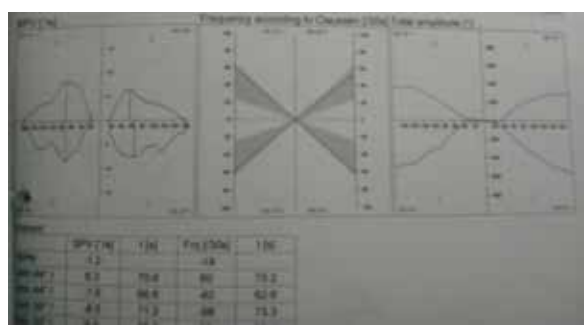
This study was conducted in Govt. ENT Hospital,Koti,Hyderabad, over a period of 6 months.

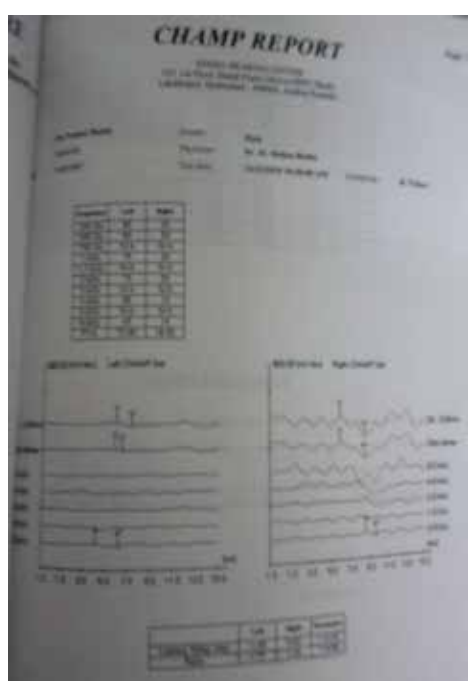
25 cases were selected based on thorough History, Otoneurological examination and relevant audiovestibular studies.

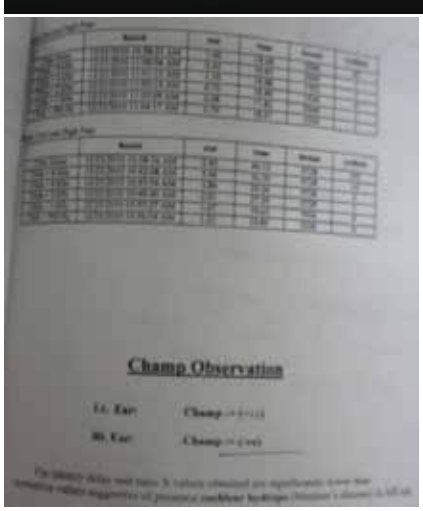
INVESTIGATIONS

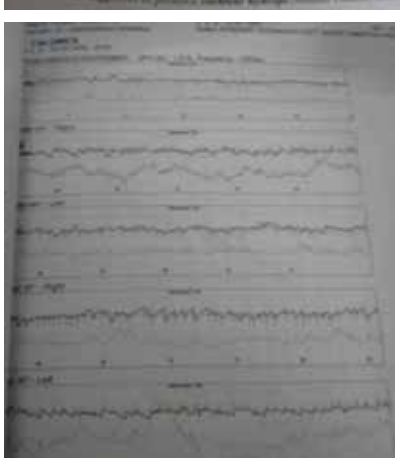
Audiological- 1. PTA
2. Impedance
3. BERA

Vestibular tests- 1. Dix hallpike test
2. ENG
3. Caloric test

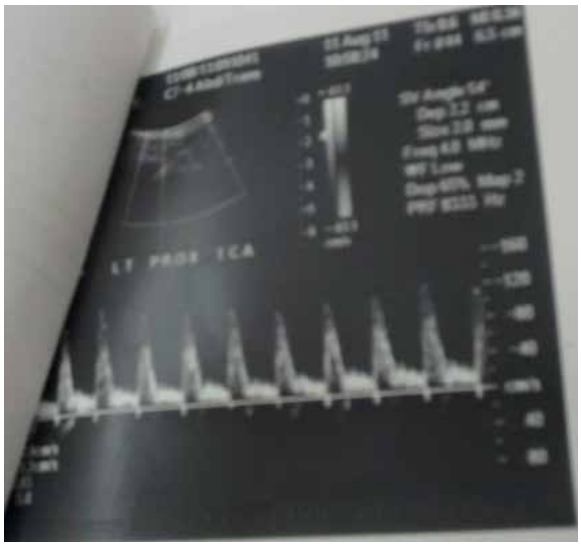








Radiological tests-
1.X ray-Mastoids/cervical spine
2.CT/MRI
3.Carotid Doppler



Hematological tests- Routine and Specific as needed Other Tests—1. CHAMP. & 2.Cochleography.

OBSERVATIONS
Males (15) were more predominant than females (10)

AGE DISTRIBUTION
Vertiginous disorders were more commonly seen in 4th and 5th decade of life. The disease was less common above 60 years and was rare below 20years.

Age in Yrs	No.of Cases
0---10	0
11-20	2
21-30	5
31-40	3
41-50	7
51-60	5
61-70	3
Total	25

SITE OF LESION
Maximum number of cases were due to inner ear and systemic lesion(32% each).The rest of cases were mainly due to lesions in middle ear(16%).

Site	No.of Cases	Percentage
Middle Ear	4	16
Inner Ear	8	32
Systemic Lesion	8	32
Post Traumatic	2	8
Others	3	12
Total	25	100

MIDDLE EAR LESIONS
Amongst the middle ear lesions, CSOM(AAD) was found in 12% cases, post operative vertigo was found in nearly 4% of the cases.

Lesion	No.of Cases	Percentage
CSOM (AAD)	3	12
Post Mastoidectomy	1	4
Total	4	16

INNER EAR LESIONS
Amongst the inner ear pathology, Meniere's Disease(24%) formed the major part, while the incidences of labyrinthitis was 8%.

Lesion	No.of Cases	Percentage
Meniere's Disease	6	24
Labyrinthitis	2	8
Total	8	32

SYSTEMIC DISORDERS

Systemic disorders manifesting as peripheral vertigo were detected in cervical spondylosis (24%), and vascular lesions (4%), which included vertebro-basillar insufficiency. A case of astrocytoma/medulloblastoma was seen.

Lesion	No.of Cases	Percentage
Cervical Spondylosis	6	24
Vertebrobasillar Insufficiency	1	4
Astrocytoma/Medulloblastoma	1	4
Total	8	32

Post traumatic vertigo was seen in 8% of cases. Other lesions included Ametropia and Psychological causes (4% each).

DISCUSSION

Disturbances in integrative process of vestibular system can lead to dizziness, which is the ninth most common cause of visits to primary care physicians and the most common among patients over 75 years[4,5].To make a diagnostic evaluation of peripheral vertigo, prime importance should be given to thorough history. Above examinations and investigations are done to confirm diagnosis and it is likely that in 80% of cases, if one does not have an idea of the diagnosis at the end of history, one is unlikely to have it at the end of the examinations and investigations, which are procedures mainly for confirmation. Simple procedures like caloric test can still offer a lot before recourse is made to more sophisticated methods of investigations. Special emphasis should be given to thorough neurological examinations.

CONCLUSION

With the help of thorough history, and relevant investigations, one can diagnose a case of peripheral vertigo. Management becomes easy once the site and type of the lesions are known. Knowledge of the structure and function of the vestibular

system in the normal as well as in the pathological situation is essential for the understanding of diseases affecting the sensory end organ for balance and equilibrium.

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References:

1. Glasscock-Shambaugh text book on Surgery of the Ear, 6th edition, Peoples medical publishing house-2010, page no 118.
2. Scott-Brown's Otorhinolaryngology,Head and Neck Surgery 7th edition, Hodder Arnold.2008, vol 3 page no 3673.
3. Barany R. Untersuchungen iiber den vom vestibular apparat des Oh res reAektorisch ausgelosten rythmischen Nystagmus und seine Begleiterscbeinungen. Mschr Ohrenheilkd 1906;40: 193-297.
4. Kroenke K, Arrington ME, Mangelsdortf AD. The prevalence of syrnptoms in medical outpatients and the adequacy of therapy. Arch Intern Med 1990;150:1685-89.
5. Kroenke I<, Mangelsdorff AD. Corn1non symptoms in ambulatory care: Incidence, evaluation, therapy, and outcome. Am J Med 1989;86:262-6.