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Characteristics of Etiological Factors Related to Tinnitus in Patients Attending Tertiary Care Hospital in DMCH, Darbhanga

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Abstract **Original Research Article**

Objective & Aim: Variation of causes, patient's diversity and subjective nature of tinnitus it is difficult to analyse its etiological factors. The main aim of this study was to find the prevalence and characteristics of etiological factors related to tinnitus in patients attending tertiary care hospital in Bihar. ***Method:*** Eighty two patients (N=82) with history of tinnitus were included in this observational study. All necessary investigations, clinical examination and history were noted in a pre-designed data sheet and by using SPSS 16.0 software statistical calculation executed. Content was taken from all pattens regarding study procedure. ***Results:*** Initially 92 patients were selected and 10 patients because of a co-existing psychiatric problem were excluded from the study. Mean age of all patients was 42.13±16.18 and 59% of the patients were <40 years. 68% were female as females were affected more than males. Among various occupation housewife and businessmen were having highest in number among participant. As compare to the left earright ear was affected more. Among etiological factor distribution, sensorineural hearing loss and conductive hearing losswere mainly responsible, whereas in 22.4% of cases were an unknown cause. ***Conclusion:*** Decrease in the quality of life was caused by tinnitus with its distressing symptom. Sociodemographic factors and main etiological factors related to tinnitus is important to find, as these findings willimprovement in quality of life by find out remedial measures.

Keyword: Tinnitus, etiological factors, prevalence.

INTRODUCTION

For more than 5 min perception of sound at a time defined as tinnitus, in the absence of anyelectrical stimulation of the ears or any external acousticaland not occurring immediately after exposure to loud noise [1]. From 10.1% to 14.5% are the prevalence of tinnitus in adult as per the study performed by Davis and Rafaie [2]. However,around 7.2% and mainly in the urban populationwho seek medical advice due to prevalence of clinical tinnitus [3]. To investigate the causative factors of tinnitus, several studies have attempted [4-10].

Variation of causes, patient's diversity and subjective nature of tinnitus it is difficult to analyse its etiological factors. The main aim of this study was to find the prevalence and characteristics of etiological factors related to tinnitus in patients attending tertiary care hospital in Bihar.

METHOD

Eighty two patients (N=82) with history of tinnitus were included in this observational study. All necessary investigations, clinical examination and history was noted in a pre-designed data sheet and by using SPSS 16.0 software statistical calculation executed. Content was taken from all pattens regarding study procedure.

All patients underwent to a careful detailed medical history after collection of personal datato identifytinnitus-related pathologies and other health diseases and otological examination. Tympanometry and Pure-tone audiogram, middle/inner ear high-resolution computerized tomography scan (CT), Doppler ultrasonography (USG Doppler) and magnetic resonance imaging/angio-CT (MRI/angio-CT) was done along with blood investigations were conducted to find our etiological factors which are associated with.

RESULT

Initially 92 patients were selected and 10 patients because of a co-existing psychiatric problem were excluded from the study. Mean age of all patients was 42.13±16.18 and 59% of the patients were <40 years. 68% were female as females were affected more than males (Table 1).

Table-1: Demographic details

Parameters	Frequency	Percentage	Mean±SD
Age			
> 40 Years	34	41%	44.18±18.28
< 40 Years	48	59%	39.26±19.46
Male	26	32%	
Female	56	68%	

Among various occupation housewife and businessmen were having highest in number among participant (Table 2).

Table-2: Distribution of occupation

Occupation	Frequency	Percentage
Student	8	10%
Teacher	13	16%
Housewife	29	35%
Bisunessmen	19	23%
Carpenter	6	7%
Farmar	7	9%

As compare to the left earright ear was affected more (Table 3)

Table-3: Distribution of site of affected ear

Site of ear affected	Frequency	Percentage
Right	34	41%
Left	17	21%
Bilateral	31	38%
Total	82	100%

Among etiological factor distribution, sensorineural hearing loss and conductive hearing losswere mainly responsible, whereas in 22.4% of cases were an unknown cause (Table 4).

Table-4: Distribution of etiological factors

Etiological Factor	Frequency	Percentage
Chronic otitis media-mucosal	16	20%
Chronic otitis media-squamous	3	4%
Eastchian tube dysfunction	8	10%
Wax	3	3%
Noice including hearing loss	7	9%
Ototoxic drug use	1	1%
Presbycusis	8	10%
Meniere's disease	5	6%
Vestibular Schwannoma	1	1%
Diabetes Mellitus	3	3%
Hypothyroidism	1	1%
Hypertension	8	10%
Unknown	18	22%

DISCUSSION

Varying degrees of annoyanceused to havecomplained of tinnitus patients along with complain of impact on quality of their life. Regarding age distribution there are varying degrees of epidemiological data. There is a strong association of tinnitus with increasing age as 59% of the patients were <40 years observed in this study. Between 61 and 70 years followed by lower decades of 41-50 years was the

prevalence tinnitus as shown in various others trials [11, 12]. As because the old population from the village areas did not come to hospital this vast difference in the age group in our study was observed.

In this study it was found that females were affected more than males which also min line with few previous study [13,14], whereas males were affected more than females was also found in some other trials [15,16].

Business holders and housewives were mainly affected by tinnitus as observed in our study. Because of more frequency of television watch with high volume of sound was the main reason for which high frequency of tints observed in housewives and noice pollution for business holders are the problem reasons.

As compare to the left earright ear was affected more in this trial but it opposite finds of few such trials doe earlier [17, 18].

Study performed by Axelsson, correlated with this study as it was observed that the etiological factor sensorineural hearing loss causing tinnitus [19].

Sample size was the main limitation of the study. Further large population study in future was need to be done to reestablish the findings of this trial.

CONCLUSION

Decrease in the quality of life was caused by tinnitus with its distressing symptom. Sociodemographic factors and main etiological factors related to tinnitus is important to find, as these findings willimprovement in quality of life by find out remedial measures.

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