

Presbycusis - A study in 40 cases

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Abstract

The aim of the study was to find the relation between ageing and hearing loss. We also studied the correlation between Presbycusis and the effect of other systemic diseases on its prevalence and progress. **Methods:** The study was conducted over a period of one year. Patients complaining of hearing loss above the age of 60 years were selected for the study. Pure tone audiometry was done for all the cases in the study group. **Results:** There is a definite relation between age and hearing loss. As the age advances the prevalence of Presbycusis also increased up to the age of 70 yrs. But after 70yrs it decreased. Other diseases like hypertension, DM, drugs, addictions etc also have a definite role in enhancing the loss. Almost 42% patients had vertigo along with SHNL which makes it more of an audio vestibular condition. **Conclusion:** Sensorineural hearing loss in old age is more common after the age of 60years. Vertigo and tinnitus are seen amongst 40 to 45% of the individuals. Other systemic diseases such as HT, DM, IHD, noise pollution, ototoxic drugs do influence an early incidence, progress and severity.

Keywords: Sensorineural deafness, vertigo, tinnitus, puretone audiometry, Presbycusis.

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Age groups

1. 60 - 64 years
2. 65 – 70 years
3. above 70 years

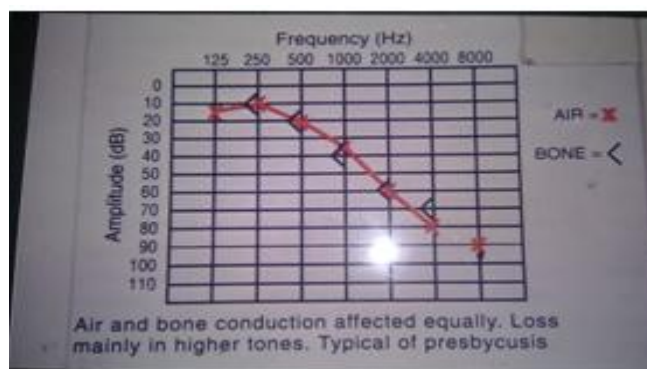
Patients were evaluated clinically with chief complaint of deafness. Associated symptoms such as vertigo, and tinnitus were taken into consideration. Factors such as use of ototoxic drugs (Antituberculous drugs), smoking, alcoholism, noise pollution etc were included in the history .History of systemic illnesses such as hypertension, diabetes mellitus, ischemic heart disease, acute viral infections like measles, mumps, chronic ear infections ,previous ear surgeries were included..After clinical examination and tuning fork tests with 256,512 and 1024Hzt, patients were sent for pure tone audiometry (PTA).

INTRODUCTION

Presbycusis is commonly known as hearing of old age. Genetic factors do play a role in determining the extent and character of ageing. It is largely a matter of impairment of hearing for higher pitched sounds which is sensory neural in nature and specifically associated with loss of speech discrimination. It is the most common cause of deafness. Human beings can hear frequencies from 20Hzt to 20000Hzt. But humans rarely use frequencies above 8000Hzt and so they become aware of hearing loss only when frequencies below 8000Hzt are affected.

MATERIALS AND METHODS

A comprehensive study of auditory function was carried out. The cases selected were above 60 years. They were classified into 3 age groups.



OBSERVATIONS AND RESULTS

Analysis of data

We studied 40 cases of bilateral sensorineural deafness and analyzed the information as mentioned below in table form as follows

Table 1: Incidence of presbycusis in 40 cases

Age Group	Males	Females	Total	%
60 – 64 yrs	08	04	12	30
65 – 70 yrs	13	05	18	45
Above 70 yrs	07	03	10	25
Total	28	12	40	M- 70 F- 30

M: F = 2.5: 1 Approximately

Table 2: Severity of deafness in different age groups

Deafness	Total No. Of Cases	%
Mild	01	2.5
Moderate	06	12.5
Severe	32	80
Profound	01	2.5

Table 3: Incidence of vertigo and tinnitus in presbycusis

Symptom	Male	Female	Total	%
Vertigo	05	12	17	42.5
Tinnitus	10	08	18	45

Note-Patients with vertigo and tinnitus had variable frequency and intensity of the symptoms. Vertigo M:F 1:2 and Tinnitus M:F 1:1 approximately.

Table 4: Other factors associated with presbycusis

Disease	No. of cases	%
Hypertension	06	15
Diabetes meliitus	05	12.5
Ischemic heart d.	01	2.5
Drug toxicity	00	0.0
Addiction	01	2.5
Trauma	00	0.0
Infection	00	0.0
Total	13	32.5

RESULTS

After analyzing the above data we found that Presbycusis was more common in males than females. The ratio was 2:1. It increased up to the age of 70 years and then declined after the age of 70 yrs..Vertigo was seen amongst 42.5% of the patients more common in females where as tinnitus was common in males and total incidence was almost 45%. Majority of the patients showed moderate to severe sensorineural deafness mostly the 65 to 70 yrs age group. Whereas 60 to 65 yrs age group showed mild to moderate SN hearing loss. Presbycusis was more prevalent in patients with systemic diseases such as HT and DM, 15% and 12.5%respectively.

SUMMARY

40 cases of Presbycusis were studied with audiological evaluation including clinical assessment. Audio vestibular involvement is fairly common in old age. Other systemic conditions such as hypertension, diabetes mellitus, ishchemic heart disease etc. definitely have role in its early prevalence and progress.

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