Audiological Findings in Geriatric : A Comparative Study

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The present investigation was undertaken to study the audiological test results in geriatric population (50-59, 60-69 and 70-79 years) and to compare the results with the younger age population (20-29 years). A sample of 40 subjects ranging in age from 20 years to 79 years were selected randomly from the general population. The sample was categorised into four age groups as foilows : 20-29 years, 50-59 years, 60-69 years, and 70-79 years Equal number of male and females was constant in each age groups.

A detailed case history was taken for each subject to rule out middle ear pathology, ototoxicity, noise exposure, diabetes and other systemic diseases.

Air conduction pure tone audiometric testing, impedance audiometric testing and brain stem evoked response audiometric testing was carried out for each subjects in a sound treated room. The pure tone thresholds, static compliance, acoustic reflex thresholds, auditory brain stem response (I, II, V), inter peak latency (I-III, Ill-V, I-V) and amplitude of peak (I and V) were obtained. The data was presented in graphical and a tabular form. The results were analysed statistically.

Conclusions

The following conclusion can be drawn from the findings of the present study :

1. Significant changes occurs in hearing acuity as age advances.
2. The hearing threshold at higher frequencies was affected greater than the lower frequencies in the geriatric population.
3. Hearing thresholds are affected at higher frequencies for both males and females.
4. The hearing acuity changes in the right and the left ear is similar in the geriatrics population.
5. Static compliance decreases as age advances. This change is common for both males and females.
6. A significant elevation in the acoustic reflex thresholds in the geriatric population is found.
7. No significant difference in acoustic reflex threshold among male and female was found.
8. An increase in latency for the different peaks (I, III and V) of auditory brain stem response takes place in geriatric population.
9. There was no significant difference in the interpeak latency value (I-II, III-V, I-V) in geriatrics.
10. A lower amplitude value for peaks I and peak V was observed in the geriatric group compared to the younger groups.

Suggestions

1. The rate of progression of hearing loss as a function of age and sex may be studied.
2. Similar study may be carried out on a larger population.