

Sex Differences in Latency and Amplitude Changes for Binaural Stimulation in Auditory Brain-stem Responses *

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The study was carried out in a sound treated room of Audiology Department, AIISH, Mysore. Thirty-two normal hearing (20 dB HL ANSI 1969) subjects in the age range of 18 years to 28 years 2 months (mean age 20 years, 9 months). Subjects were divided into 2 groups, Group-I and Group-II. Group-I consisted of 16 males and Group-II consisted of 16 females. As stated in the methodology the subjects were in supine position and 3 electrodes were used, active, ground and reference. ERA-TA-1000 was used. Logon stimulus was presented through the earphones. The frequencies of the Logon stimuli used were 2 KHz and 4 KHz. These stimuli were presented for 2048 times at a rate of 20 times/sec. 10 msec, sample time was used, The intensity of Logon stimulus was 80 dB HL.

The stimulus was presented monaurally (Right or Left ear) and bilaterally. In half of subjects from Group-I and half of the subjects from Group-II, stimulus was presented in right ear and in other half of the subjects from both the groups, the stimulus was presented in left ear for the monaural presentation.

ΔL , ΔA , ΔL_V , and AL_{ss-1} values were determined for 2 KHz and 4 KHz

* Master's Dissertation, University of Mysore, 1985.

logon stimuli, at 80 dB HL, and these values are compared between male and female groups.

Conclusions

The following conclusions have been drawn :

- (1) There is no significance of difference for $\Delta L_{2\text{KHz}}$, of I to VI peaks, between males and females.
- (2) There is no significance of difference for $\Delta L_{4\text{KHz}}$, OF I to VI peaks, between males and females (except for peak III).
- (3) There is no significance of difference of I to VI peaks, between $\Delta L_{2\text{KHz}}$, and $\Delta L_{4\text{KHz}}$, in males.
- (4) There is no significance of difference of I to VI peaks, between $\Delta L_{2\text{KHz}}$ and $\Delta L_{4\text{KHz}}$, in females.
- (5) There is no significance of difference for $\Delta A_{2\text{KHz}}$ of I to VI peaks, between males and females (except for peak II, at 0.05 level of significance).
- (6) There is no significance of difference of $\Delta A_{4\text{KHz}}$ of I to VI peaks, between males and females.

- (7) There is no significance of difference of I to VI peaks, between $\Delta A_{2\text{KHz}}$ and $\Delta A_{4\text{KHz}}$ in males.
- (8) There is no significance of difference of I to VI peaks, between $\Delta A_{2\text{KHz}}$ and $\Delta A_{4\text{KHz}}$ in females.
- (9) There is no significance of difference for $\Delta L_{2\text{KHz}}(\text{V-I})$ and $\Delta L_{4\text{KHz}}(\text{V-I})$, between males and females.
- (10) There is no significance of difference for $\Delta L_{2\text{KH}}(\text{III - I})$ and $\Delta L_{4\text{KH}}(\text{III-I})$, between males and females.