TYMPANOMETRIC NORMS FOR MALAY YOUNG ADULTS USING QUANTITATIVE APPROACH

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Typanometric normative data are influenced by race (Wan & Wong 2002), gender (Roup et al. 1998) and age (Margolis & Heller 1987). Tong (1999) reported that 48% of South Chinese Children who failed middle ear screening were diagnosed to have normal middle ear function when interim normative data by ASHA (1990) was used as screening criteria. This current study aimed to obtain tympanometric normative data of Malay young adult quantitative approach. Three parameters were measured which include peak Compensated Static Acoustic Admittance (Peak $Y_{tm}$), Equivalent Ear Canal Volume ($V_{ea}$) and Tympanometric Wdth (TW). The results obtained were compared between genders within this study. Data were also compared with data obtained by Roup et al. (1998). 96 subjects (154 ears) involved consisted 49 males and 47 females. Subject selection criteria included pass otoscopic examination, normal hearing, pass ipsilateral acoustic reflex screening and no history of otological problems. Results from this study showed that the mean values for peak $Y_{tm}$, TW and $V_{ea}$ for Malay young adults were 0.72 mmhos, 106.16 daPa and 1.31 cm³ respectively. Statistical analysis showed significant differences ($p<0.05$), of mean values for peak $Y_{tm}$ (0.81 mmhos) and $V_{ea}$ (1.48 cm³) of males compared to Peak $Y_{tm}$ (0.63 mmhos) and $V_{ea}$ (1.12 cm³) of females. No significant differences found in mean values of TW between genders. The 90th percentile of each parameter was also compared between genders. Males showed Peak $Y_{tm}$ between 0.37-1.48 mmhos. TW 28.42-279.50 daPa and $V_{ea}$ between 1.00-2.10 cm³; while female showed Peak $Y_{tm}$, between 0.29 -1.07 mmhos, TW between 43.33-208.75 daPa and $V_{ea}$ between 0.68 -162 cm³. Mean Peak $Y_{tm}$ and mean $V_{ea}$ from this study showed no significant difference by Roup et al. (1998), ($p>0.05$). However mean TW between studies showed significant difference. This current study suggests that gender determines the normative data of Peak $Y_{tm}$ and $V_{ea}$ in Malay young adults. Study also suggests that normative data of Peak $Y_{tm}$ and $V_{ea}$ by Roup et al. (1998) can be applied on Malay young adults.