

AUDIOLOGICAL RESULTS OF EAR CANAL RECONSTRUCTION

Zarina Zaharim

This study was done to analyze the audiological results of ear canal reconstruction. Twelve subjects (14 ears) aged 10 to 30 years old, who had undergone surgery for congenital aural atresia, were involved. This study was done by recording the recent tympanogram results and getting the value of air conduction threshold (ACTH), bone conduction threshold (BCTH) and air-bone gap (ABG) for three different time range which is before operation, after operation (3-months post-operative) and recent (mean follow-up 3.07 years). Pure tone audiometry was carried out to measure hearing thresholds for frequencies 250-8000 Hz and average frequencies at 500, 1000 and 2000 Hz. Comparison was done to see the changes of hearing thresholds before and after operation, before operation and present, and after operation and present. Those comparisons were analyzed using Wilcoxon Signed Ranks test to see the significant difference between hearing thresholds. For the tympanogram results, majority of the subjects obtained type A with normal ear canal volume. For the hearing threshold measurement, results showed significant changes ($p < 0.05$) for ACTH and ABG for time range between before and after operation, and before operation and present. No significant changes were seen for hearing threshold after operation when compared with recent for ACTH, BCTH and ABG. As a conclusion, hearing thresholds improved after operation. However, some degradation may occur in hearing levels beyond the initial post-operative year.

Zaharim, Z. 2002. Audiological Results of Ear Canal Reconstruction. Bachelor of Audiology Thesis. Universiti Kebangsaan Malaysia.