

## **WIDEBAND ENERGY REFLECTANCE IN VARIOUS MIDDLE EAR DISORDERS**

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Previous study showed that wideband energy reflectance (WBR) has the potential to detect the presence of middle ear disorder accurately with less time consuming. However, these studies only focusing on specific middle ear disorders. Thus, current study is intended to measure the ER and pattern of WBR among each type of middle ear disorders. In this study, WBR test with ReFlwin software with frequencies range from 280-8000 Hz was used to measure the energy reflectance(ER) and pattern of WBR from each group of middle ear disorders. Fifty subjects with 63 ears, represents five groups of middle ear disorders which are otitis media with effusion (n=22), tympanic membrane perforation (n=12), retraction pocket (n=18), otosclerosis (n=7), and type Ad tympanogram (n=4) were involved in this study. Generally, mean ER values that had been obtained from each group of middle ear disorders differ significantly only at certain frequencies. Specifically, ER values for group of otitis media with effusion and otosclerosis have higher ER values compared to group of tympanic membrane perforation and type Ad tympanogram. Besides that, WBR pattern that had been obtained from each group of middle ear disorders differs among each other. This WBR pattern for each group of middle ear disorders differs mainly at the frequencies lower than 1000 Hz.

Jaafar, M. 2011. Wideband Energy Reflectance in Various Middle Ear Disorders. Bachelor of Audiology Thesis. Universiti Kebangsaan Malaysia.