INTRODUCTION

Technological innovations in hearing aids have made phenomenal strides in allowing individuals to function better in the social environment. Unfortunately, however, there are many who are unable to address the resultant auditory processing deficits due to the presence of hearing loss. Specifically, impaired dichotic listening has been correlated with decreased verbal and cognitive flexibility (Rosser, 1965). Left ear deficits as dichotic test scores have also been found in the elderly and those with Alzheimer’s Dementia, which were postulated to due to critical attention networks deficiencies, olfactory atrophy and increased subcortical white matter lesions (Schaette & McAlpine, 2012).

Central auditory processing disorders (CAPD) has mostly evolved separately from audiologist and otologist. The core of CAPD is the dichotic listening test, which has been used as a tool to assess the hearing aid benefit and to determine whether hearing aids are worth prescribing. The existence of normal dichotic listening scores and CAPD has been shown to be independent (Plates, 1981). This has led to increased interest in applying CAPD-based auditory training to the hearing impaired population.

Contemporary CAPD auditory training paradigms like dichotic listening training for those with deficits in dichotic listening, binaural integration or spatial or interaural symmetries have shown increased success (Rosser, 1965). Successful use of these training paradigms has been reported in individuals with CAPD and normal hearing children with mild to severe hearing loss in general improvements into natural listening environments, academic performance and attention span in children (Johnson & Weatherholtz, 2003).

Lack of auditory processing presents a challenge for those with dichotic listening training programs which utilize interaural loudness differences to improve auditory processing. The hearing loss that is experienced by people who use hearing aids can cause changes to the way they process information. A study conducted by Johnson et al. (2003) found that dichotic listening performance was significantly improved in older adults who used hearing aids. This suggests that hearing aids can help improve auditory processing in older adults.

Central auditory processing disorders (CAPD) can typically be caused by a variety of factors, including sensorineural hearing loss, noise exposure, and brain injury. The presence of CAPD can lead to difficulty in understanding speech in noisy environments, reduced academic performance, and decreased quality of life. The use of integrated auditory training approaches, such as dichotic listening training, can help improve auditory processing and reduce the impact of CAPD on daily life.

The study supports the use of SDLT in the form of C™ in adults with hearing loss and CAPD. These findings suggest that the presence of a mild or moderate peripheral hearing loss does not preclude individuals from participating in SDLT where dichotic deficits are expected. Future research investigating the use of SDLT as part of an aural rehabilitation program for appropriate individuals is strongly supported.