OTOLARYNGOLOGY

Openventio PUBLISHERS

ISSN 2470-4059 Open Journal http://dx.doi.org/10.17140/OTLOJ-SE-1-e001

Special Edition
"Central Auditory Processing Disorder in Children"

Editorial

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Special Edition 1
Article Ref. #: 1000OTLOJSE1e001

Article History
Received: August 20th, 2016
Accepted: August 22nd, 2016
Published: August 22nd, 2016

Citation
Sanju HK, Kumar P. Central Auditory Processing Disorder in Children. *Otolaryngol Open J*. 2016; SE(1): Se1-Se2. doi: 10.17140/OTLOJ-SE-1-e001

Central Auditory Processing Disorder in Children

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Auditory processing disorder, commonly called as Central Auditory Processing Disorder (CAPD) that affects 5% of school aged children. According to Chermak et al, 2007, the prevalence of CAPD is 2-3% in pediatric population and nearly 70% in geriatric population.[1] The professional dealing with these children from screening, diagnosis and management are Audiologists. Recently, there has been huge increase in public and professionals awareness of Auditory Processing.

CAPD is a broad term which indicates a mixture of disorder that has an impact on the way our brain processes the auditory signals or auditory information. Although the Children with CAPD have normal outer, middle and inner ear functioning, they cannot able to process the auditory information in the same way as other children process it, which causes difficulties in understanding speech and interpreting sound. Studies in this area reported that this difficulty happens due to dysfunction in central auditory nervous system. CAPD can affect children as well as adult and literature also reported that males are twice as likely to have CAPD compared to females.[1] According to Keith[2] in 1986 CAPD refers to the inability or impaired ability to attend to, discriminate, recognize or comprehend information presented auditory, even though the person has normal intelligence and hearing sensitivity. Similarly, Boone[3] in 1987 defined CAPD is defined as difficulty in processing and understanding both verbal and non-verbal auditory stimuli, delivered to be the result of auditory stimuli reaching the brain with inadequate processing of the perceived stimuli. American Speech and Hearing Association (ASHA)[4] in 1996 reported that any difficulties in behavioral phenomena like sound localization, sound lateralization, auditory pattern recognition, auditory discrimination, temporal aspect of audition, auditory performance in competing acoustic signal and auditory performance in adverse listening condition can be sign of CAPD.

The National Institute on Deafness and other Communication Disorder (NIDCD) reported that children with CAPD often have difficulty in paying attention and remembering information given aurally, and may cope up better with visually acquired information. These children are also having problem in carrying out multi-step command instructed aurally. NIDCD also stated that children with CAPD have poor listening skills and require more time to process the auditory information. These children have low academic performance and behavior problems. NIDCD also stated that children with CAPD have language difficulties and also having difficulty in reading, comprehension spelling and vocabulary.

CAPD can be acquired or developmental. If we talk about acquired, CAPD can occur due to head injuries, long duration ear infection or any damage in central auditory nervous system, whereas in the majority of individuals with CAPD, the cause is unknown. CAPD can occur due to lesion at one or more sites of central auditory nervous system which includes cochlear nucleus, superior Oliver complex, lateral lemniscuses, inferior colliculus, medial geniculation body and auditory cortex. Lesion at different site has different signs and symptoms of CAPD. Researchers and experts in this area have classified sign and symptoms of CAPD as different processes affected, like monaural low redundancy, auditory closure, binaural separation, binaural interaction, binaural integration and temporal processing. These processed happens at different site of central auditory nervous system i.e. cochlear nucleus, superior Oliver

ISSN 2470-4059 http://dx.doi.org/10.17140/OTLOJ-SE-1-e001

complex, lateral lemniscuses, inferior colliculus, medial geniculation body and auditory cortex. Classification of different auditory processes helps the professional to communicate with other professionals regarding diagnosis and management of individuals with CAPD. It helps the professional to understand the specific auditory processes affected in an individual for better management of CAPD. Different diagnostics tests developed by experts and researchers to assess different processes help the professionals to come up with the proper diagnosis. Proper diagnosis (specific auditory process deficit) of the individuals with CAPD is important for a better management, where professional can focus to improve the specific auditory processes to improve the quality of life among these individuals.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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