Cognitive rehabilitation in Alzheimer’s disease

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The literature on Alzheimer’s disease (AD) describes principally three types of cognitive interventions: cognitive stimulation, cognitive training and cognitive rehabilitation. Cognitive stimulation involves a set of group activities and discussions and targets general cognitive and social functioning. Cognitive training addresses specific aspects of cognition using guided practice on standardized tasks. Cognitive rehabilitation targets specific functional difficulties relevant to everyday life in individually-tailored interventions using cognitive techniques. Cochrane reviews have reported insufficient evidence to support cognitive training in AD. Cognitive stimulation however has been found to improve cognition as measured by short cognitive tests but not to ameliorate instrumental activities of daily living (IADL). According to the Adaptive Control of Thoughts model, executive functions, episodic and working memory are involved in the first phases of procedural learning that underlie IADL. This model thus supports the utilization of memory training techniques for rehabilitation of IADL. The presentation will illustrate this point using the results of a block-randomized cross-over controlled study that has assessed the effectiveness of a cognitive rehabilitation program using errorless learning and spaced retrieval memory techniques to re-learn forgotten IADL in 20 AD patients. There has been a significant difference between the trained and untrained group on the direct measure of training (IADL). Improvements on IADL were maintained during 3 months. Furthermore, patients registered a reduction of delusions during the second half of the study, whereas aberrant motor behaviors increased more in the treatment condition than in the control condition. Challenges and future directions of cognitive rehabilitation in AD will be discussed.

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Dementia, Hearing Loss, and Auditory Plasticity

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Hearing loss is a primary factor that increases the risk of dementia. As hearing loss worsens, the risk of dementia in older adult increases with the rate of cognitive decline correlated positively with the increased severity of the hearing loss. The provision of hearing aids, we conjecture could decrease cognitive decline in older adults with untreated hearing loss. This hypothesis was tested in three groups of listeners (i.e., hearing loss/no dementia, hearing loss/diagnosed with dementia, hearing loss/diagnosed with dementia and previously fit with hearing aids) fit with contemporary hearing aids. In this presentation, results from our undertaking highlight cognitive and audiometric results over a six-month span for each of the three groups. Findings and future implications are discussed.

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