Relearning in semantic dementia

Laila Øksnebjerg,

1Danish Dementia Research Centre, Copenhagen, Denmark, Denmark.

Background: Relearning in semantic dementia Semantic dementia is a subtype of frontotemporal dementia, primarily affecting the anterior temporal lobes. The most distinct and early detectable symptom of semantic dementia is anomia, but semantic dementia is not just a problem of naming objects, it implies a deeper degradation of conceptual knowledge across modalities. In the early stages of semantic dementia episodic memory and other cognitive abilities are most often relatively spared, and recent studies have demonstrated that patients with semantic dementia can relearn names of objects through cognitive training. However, it has not been clearly demonstrated if any method of cognitive training can lead to both improved naming and relearning of semantic knowledge. We wanted to explore whether extensive multimodal cognitive training could improve both naming and enhance semantic knowledge in semantic dementia.

Methods: Three patients completed at 3 weeks individualized training program, which implied naming and knowledge training in a clinical setting and at-home training. Two methods of cognitive training were compared within subjects: extensive multimodal cognitive training and simple picture-word association training. Patients were assessed pre- and post-intervention on naming and knowledge of individualized items, presented as pictures.

Results: Results showed that the training program did improve naming and semantic knowledge of items. However there were no significant differences between the two methods of cognitive training. Unexpectedly we also found improvement in naming of some control-items, which were not trained. This indicates a possibility of a more generalized effect of cognitive training in semantic dementia.

Conclusions: This study supported the possible benefits of cognitive training in semantic dementia. More research is needed to develop methods which can improve both naming and semantic knowledge in patients with semantic dementia.