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# DOES SEROTONIN AUGMENTATION HAVE ANY EFFECT ON COGNITION AND ACTIVITIES OF DAILY LIVING IN DEMENTIA RELATED TO ALZHEIMER'S? A DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIAL

**Arash Mowla, Masoud Mosavinasab, Hasan Haghshenas and Afshin Borhani Haghighi**

Shiraz University of Medical Sciences, Iran

**Objective:** Recent studies suggest that cholinergic dysfunction does not provide a complete account of age-related cognitive deficits and other neuronal systems like monoaminergic hypofunction. In several studies, selective serotonin reuptake inhibitors demonstrated promotion in neurogenesis in the hippocampus and enhanced memory and cognition. The aim of this study is to survey the effect of serotonin augmentation on cognition and activities of daily living in patients with Alzheimer's disease.

**Method:** The trial was designed as a 12-week randomized, placebo controlled, double-blind study. 122 patients aged 55 to 85 years with mild-to-moderate Alzheimer's dementia were randomly allocated in one of the three treatment groups: fluoxetine plus rivastigmine, rivastigmine alone or placebo group. Efficacy measures comprised assessments of cognition, activities of daily living and global functioning. Hamilton depression scale also was used to assess changes in mood throughout the study.

**Result:** Fluoxetine plus rivastigmine and rivastigmine groups demonstrated improvement on measures of cognitive and memory without any significant difference. However, the former group did better in their activities of daily living and global functioning. Patients taking placebo had significant deterioration in all the efficacy measures. Patients taking rivastigmine or rivastigmine plus fluoxetine had improvements in Hamilton depression scale without significant differences.

**Conclusions:** Concomitant use of selective serotonin-enhancing agents and acetyl cholinesterase inhibitors can provide greater benefit in activities of daily living and global functioning in patients with cognitive impairment. Because our study is preliminary, larger double-blind studies are needed to confirm the results.

mowlaar@sums.ac.ir