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DOES SEROTONIN AUGMENTATION HAVE ANY EFFECT ON COGNITION AND ACTIVITIES OF DAILY LIVING IN ALZHEIMER'S DEMENTIA?: A DOUBLE-BLIND CLINICAL TRIAL

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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 are involved. 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. One hundred and twenty two patients aged 55-85 years, suffering from 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 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.

Conclusion: 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. Although our study is preliminary and larger double blind studies are needed to confirm the results.