Role of vitamin D and nutritional supplementation in cognitive performance in senile dementia

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Introduction: Alzheimer’s disease is the most common form of age-related cognitive impairment. The aim of the present study was to see the effect of vitamin D and calorie supplementation on cognitive function in the elderly.

Material and methods: A total of 80 subjects were enrolled based on Mini-Mental State Examination (MMSE) score < 24 and vitamin D deficiency. They were divided into two groups as Group A (case) and Group B (control), each group having 40 subjects. Both groups are on the same medical treatment. Intervention (Vitamin D and calorie supplementation) was given to only Group A. The assessment of dementia was done by Mini-Mental State Examination (MMSE) score. Nutritional assessment was done by Food frequency questionnaire (Designed by Indian Council of Medical Research). Oral nutritional supplementation was given twice daily for six months in addition to their usual diet. Two serving provide 600 Kcal. per day.120000 IU of cholecalciferol was given every month in the form of Calcirol granules.

Results: Gender, weight, height, BMI, residence and education were similar between the two groups. A significant change in MMSE score was observed in both Group A and Group B from baseline to 3 & 6 months and from 3 to 6 months, however, mean change was higher in Group A than Group B.

Conclusion: In conclusion, vitamin D and calorie supplementation cause significant improvement in the cognitive performance in subjects with senile dementia.

Biography
Sunita Tiwari working as Head of the Department of Physiology, King George’s Medical University, Lucknow, UP, India since January 2004. My core interest lies in teaching and training of undergraduate and postgraduate students and pursuing research. My field of interest is Obesity, Metabolic Syndrome-related risk factors and cognitive impairment in senile dementia. Several research projects funded by ICMR, DRDO, CCRYN, AYUSH & UPCST was undertaken in Neurophysiology lab for BAER, ANS & NCV testing, Spirometry lab, Molecular Lab, Sleep research lab and Exercise Physiology lab under my guidance as principal investigator. Presently I am chairing the IMA-AMS (UP chapter) and have successfully organized super specialty CME’s & workshop in collaboration with Apollo hospital New Delhi, Max Hospital New Delhi and others.

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