

Project No : 3453/2006

A Study of Neuro psychophysiology of Depression in Service Personnel

Principal Worker

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Unit

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Objectives

Study has a objective to determine neuropsychological correlates, changes in the awake EEG of depression, and to quantify structural changes in the brain structure on MRI.

Method

Sample for the study comprised of 50 diagnosed cases of depression on ICD 10 criteria in the age group of 21-50, as a study group. 50 age and sex matched healthy subjects formed a control group. After a socio demographic questionnaire & Beck Depression Inventory (BDI), Winconsin card sorting test and Minnesota Multi-phasic Personality Inventory (MMPI) were administered for assessment of cognitive function and establishing concurrence on clinical parameter. Study and control group had undergone 16 channel awake EEG & MRI. Findings of EEG, MRI and cognitive functioning were correlated with clinical status. Data was analyzed using SPSS 16.

Results

Study revealed that the depressed patients found to be having reduced left hippocampal volume as compared to healthy controls. The depressed group performed poorly on several measures of executive functions (WCST parameters). There was a significant perseverative responses and non perseverative responses as a measures of cognitive function. Findings suggest the role of left hippocampus in mediating performance on executive functions test. The regression analysis demonstrated that higher the right hippocampal volume more is the chance of sustaining the conceptual orientation in cognitive domain.

Recommendations

Evidence of cognitive deficits in the depressed group should be addressed with neuropsychological intervention and these measures should be incorporated as part of treatment.