

The use of brain electrical activity mapping (BEAM) and p300 evoked waves to differentiate between elderly demented and depressed patients and elderly normal persons

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The study was made for detection of brain mapping and P300 evoked potential abnormalities among elderly demented and depressed patients. 2- Comparing brain mapping and P300 evoked potentials waves between elderly demented, depressed and normal subjects. The subjects of the study consisted of 3 groups :Elderly demented group consisting of 15 demented patients aged above 65 years, elderly depressed group consisting of 15 depressed patients aged above 60 years and control group consisting of 15 normal subjects aged above 60 years. Both the patients and control groups were subjected to MMSE, Hamilton depression rating scale, Quantitative EEG (Brain mapping) for each subject and P300 evoked waves for each subject.

The study revealed that there was significant increase in delta and theta powers in demented patients in comparison with old depressed and normal control.

There was significant decrease in alpha and beta powers in demented patients in comparison with old depressed and normal control.

There was significant increase in alpha powers in depressed patients in comparison with old normal control. There were non significant results in other powers (delta, beta and theta) in old depressed patients in comparison with normal control.

There was significant increase in latency and significant decrease in amplitude for P300 waves in demented patients in comparison with old depressed and old normal control.

There were non significant results of P300 waves in comparing depressed patients with old normal control.

It may be said that mapping of EEG and P300 evoked potential in demented, old depressed and old normal subjects were able to visualize dementia and depression EEG changes and P300 evoked potential changes.