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Cortical motor potential alterations in chronic fatigue syndrome.

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Premovement, sensory, and cognitive brain potentials were recorded from patients with Chronic Fatigue Syndrome (CFS) in four tasks: i) target detection, ii) short-term memory, iii) self-paced movement, and iv) expectancy and reaction time (CNV). Accuracy and reaction times (RTs) were recorded for tasks i, ii, and iv. Results from CFS patients were compared to a group of healthy normals. Reaction times were slower for CFS patients in target detection and significantly slower in the short-term memory task compared to normals. In target detection, the amplitude of a premovement readiness potential beginning several hundred milliseconds prior to stimulus onset was reduced in CFS, whereas the poststimulus sensory (N100) and cognitive brain potentials (P300) did not differ in amplitude or latency. In the memory task, a negative potential related to memory load was smaller in CFS than normals. The potentials to self-paced movements and to expectancy and RT (CNV) were not different between groups. The findings in CFS of slowed RTs and reduced premovement-related potentials suggest that central motor mechanisms accompanying motor response preparation were impaired in CFS for some tasks. In contrast, measures of neural processes related to both sensory encoding (N100) and to stimulus classification (P300) were normal in CFS.

Publication Types:

Clinical Trial

Controlled Clinical Trial

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