

EEG dynamics in neurological disorders: Parkinson's disease and stroke

Abstract

The electroencephalogram (EEG) signals provide oscillatory dynamics and valuable information about brain function. In fact, this permits the detection of changes in neurological state which are especially useful in the limited clinical examinations. Perhaps, the close relationship of EEG metabolism with cerebral blood flow enables EEG to be useful in the sensitive evaluation of neurodegenerative disorders such as Parkinson disease (PD) and Stroke. In addition, significant advances have been made in neuroscience concerning the understanding of oscillatory brain activities with EEG. This article reviews main findings of EEG abnormalities in PD and Stroke patients performed in last few decades. This abnormal relationship is highly evident in assisting the affected people disorders and behaviors, such as depression, suicide, emotional deficits, aggression etc. Further studies in this field could benefit from new technological improvements in data acquisition, accuracy of differential diagnosis and early detection of disorders are proposed which helps in better understanding of normal and disturbed brain networks.

Keywords — Electroencephalogram, emotional deficits, neurodegenerative disorders, parkinson's disease, stroke