



Evaluation of Changes in Brain Signals in Generalized Anxiety Disorder

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People with generalized anxiety disorder (GAD) concerns without being concerned with the portrayal of serious concern to be involved. and This makes them self-excitation is limited. So, the formation of brain activity as the primary cause of the disorder is evaluated. In this study, for the first time, we assess the brain signal characteristics in patients with generalized anxiety disorder. for this purpose, EEG signals in three channels in control group (n = 19) and GAD group (n=13), with a good record collection protocol was collected. After preprocessing the signals Includes AC noise removal, high frequency and low frequency noise removal, EOG artifact removal using adaptive filtering and and signal segmentation, time, frequency, wavelet and nonlinear features was obtained for the two series. Assessment these properties proves that nonlinear and wavelet features have a good representation of the behavior characteristics of brain in this disorder. In the classification phase, Support Vector Machine (SVM), with a accuracy of 93.7% made the diagnosis of GAD patients and healthy individuals possible. The results of this study show that the proposed method is able to detect generalized anxiety disorder with an acceptable accuracy.