PRE-EPILEPTIC SEIZURE DETECTION AND DIAGNOSIS

*Epilepsy is one of the most common and diverse set of chronic neurological disorders characterized by an abnormal excessive or synchronous neural activity in the brain that is termed "seizure", affecting about 50 million individuals worldwide. ElectroEncephaloGram (EEG) signal processing technique plays a significant role in detection and prediction of epileptic seizure. The aim of this work is to compare the automatic detection of EEG patterns using discrete wavelet transform (DWT) and automatic regressive (AR), and linear prediction methods. This method consists of EEGdata collection, preprocessing, feature extraction and classification stages. DWT, AR, linear prediction methods are used for features extraction. Effective features are extracted, such as relative energy, mean, standard deviation and then these features are sent into the support vector machine for training and classification. Comparing the performance of the three methods and to classify the EEG signal with seizure, no seizure and no probability for seizure. The study is carried out for EEG recordings of 5 epileptic patients and 5 normal patients. Experimental results demonstrate that the linear prediction method outperforms the other two methods in terms of efficiency toclassify seizure by analyzing EEG signals***.***