Abstract

In this paper we propose an artificial neural network as a based classifier for prediction of Paroxysmal Atrial Fibrillation (PAF). PAF is a really life threatening disease and it is the result of irregular and repeated depolarization of the atria. We used PAF prediction data base which include 30-min. period of 100 ECG recorded signals. We divide the 30-min preceding the PAF into 6 periods with 5-min each. In each suggested period we get the classification result using ANN. The results show that we can predict the PAF accurately in 5-min & 20-min prior the PAF. In these two periods, the measured sensitivity, specificity, positive predictivity and accuracy show better and significant results comparable to the other periods. Also the results outperform the obtained results in the same field in the literature.

References

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Index Terms

Computer Science  
Artificial Intelligence
Keywords

PAF prediction  ECG signal  continuous wavelet transform  artificial neural network

(ANN)
Feature Extraction.