Abstract

Heart Rate Variability (HRV) is defined as the variations between consecutive instantaneous heart rates that occur in the heart as a consequence of a complex internal dynamic balance. Nonlinear analysis of HRV is helpful to assess the cardiac health noninvasively. Approximate Entropy and Sample Entropy are mathematical algorithms to measure the predictability or repeatability with in a time series. This paper compares the approximate entropy and sample entropy on different data lengths, which are 20 minutes, 10 minutes, 5 minutes, 3 minutes and 2 minutes respectively. In addition it has been observed that the measuring time of sample entropy can be reducing beyond 5 minutes.

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Index Terms

Computer Science

Applied Sciences

Keywords
Heart Rate Variability, ECG, Approximate Entropy, Sample Entropy, Data Lengths.