Abstract

Among the many different factors that influence blood pressure, activity was once thought to be the major determinant of the circadian variation in blood pressure. Whereas the endogenous nature of the circadian rhythm in blood pressure is no longer disputed, there is great interest in monitoring activity concomitantly with blood pressure. Herein, we reanalyze a dataset on weeklong ABPM records obtained concomitantly with actigraphy from 20 clinically healthy young adults. The purpose of this investigation is to review different approaches available for the characterization of the circadian variation in physiological variables such as blood pressure, heart rate, and activity. Topics covered include rhythm detection, the estimation of rhythm parameters, and the visualization of their waveform. Methods to examine how circadian rhythms of different variables may relate to each other are also discussed