EARLY DETECTION OF PRE-HYPERTENSION IN WORKERS AT UKRIDA HOSPITAL USING HEART RATE VARIABILITY ANALYSIS

Ronald Winardi Kartika[1], Yuvensius Gerry Atmaja[2], Suparto Suparto[2], hartanto hartanto[2], Yosephin Sri Sutanti[2]

[1]Jakarta, Jakarta, Indonesia. [2]universitas kristen krida wacana, Jakarta, Indonesia

Abstract

Blood pressure is a fundamental measurement for cardiovascular hypertension. Regional Health Research (RISKESDAS) in 2018 showed an increase prevalence hypertension aged> 18 years was 25.8% to 34.1%. Purpose in this research was early detection of pre-hypertension in UKRIDA Hospital workers with Heart Rate Variability Analysis (HRV). Data collection was carried out using a purposive sampling technique. There were 81 research sample, health worker in UKRIDA HOSPITAL which age 20-55 y.o. All subject got blood pressure and HRV measurement in the same time. Subjects were women 43 subjects (53.1%), age 20-30 years the highest 44 (54.3%) subjects. The most occupational categories were nurses with 29 subjects (35.8%) Normal blood pressure in 41 subject (50.6%), pre-hypertension 35 subjects ((43.2%) and hypertension 5 subjects (6.2%). Correlation test on pre-hypertensive subjects obtained SDNN values of 20-30 ms (awareness) for 16 (19.8%) subjects with a correlation value of 0.510 (moderate correlation). Evaluation of RMSDD in those subjects obtained values of 10-20 ms (awareness) for 13 (16.1%) subjects, pearson correlation value 0.471 (moderate correlation). HRV measurements (SDNN and RMSDD values) can be used as a method early detection of pre-hypertension in UKRIDA Hospital workers.

Keywords: Pre-Hypertension, Heart Rate Variability, Hospital Worker