

Prevalence of left ventricular diastolic dysfunction among hypertensive adults in Klang Valley, Malaysia

ABSTRACT

A large number of patients with heart failure suffer from Left Ventricular Diastolic Dysfunction (LVDD), but little is known about its prevalence among hypertensive adults, especially in the primary care setting. Thus, this quantitative study aims to evaluate the prevalence and factors associated with LVDD. A cross-sectional study was conducted among 359 hypertensive patients who underwent echocardiography tests to define their cardiac structure and function. The ratio peak of early to late diastolic filling velocity was used to assess the LVDD. The Framingham risk score was derived from the most recent blood test available in the previous year. SPSS version 19 was used to analyze the data. Echocardiography LVDD was found in 68% of the participants. Of the 243 hypertensive subjects who had LVDD, 69.5% had no left ventricular hypertrophy (LVH) while 30.5% had LVH. Age (odds ratio (OR) 1.11, 95% confidence interval (CI) 1.07-1.15), fasting blood sugar (OR 1.18, 95% CI 1.02-1.37), poor blood pressure control (OR 1.93, 95% CI 1.12-3.32), central obesity (OR 2.06, 95% CI 1.17-3.64), and LVH (OR 2.76, 95% CI 1.29- 5.90) were found to have a significant positive relation with LVDD. Poor hypertension control, diabetes, older age, central obesity, and LVH are the predictors for the development of diastolic dysfunction.

Keyword: Prevalence; Left ventricular diastolic dysfunction; Hypertension; Malaysia