

ABSTRACT

EFFECT OF PAPILLARY MUSCLE ON LEFT VENTRICULAR FUNCTION MEASUREMENT IN PATIENTS WITH PREMATURE VENTRICULAR CONTRACTION WITH CARDIAC MRI

Paulina Yessica Pramadita Megaputri¹, Lina Choridah², Sudarmanta²

¹Resident and ²Staff Departement of Radiology
Faculty of Medicine, Public Health and Nursing
Gadjah Mada University
Yogyakarta – Indonesia

ABSTRACT

Background: The major cause of cardiac arrest is ventricular arrhythmia. Cardiac arrest occurs in 50–100 cases per 100,000 people in Europe and the United States. Imaging plays a role in diagnosing and assessing left ventricular function, which is a marker of heart disease. There are two methods of delineation of ventricle volume on the papillary muscle: inclusion and exclusion.

Objective: To compare the effect of papillary muscle on left ventricle function measurement in patients with premature ventricular contraction.

Methods: This study was conducted at Dr. Sardjito Public Hospital in Yogyakarta using secondary data from 27 patients in 2023 who underwent cardiac MRI in patients with PVC. Left ventricular function (end-diastolic volume, end-systolic volume, and ejection fraction) values were compared. These values were analyzed using an independent sample T-test.

Result: The EDV and ESV values were lower, the EF value was higher in the papillary muscle exclusion method. Independent sample T-test analysis showed significant differences in ESV ($p = 0.023$) and EF ($p = 0,001$).

Conclusion: There were significant differences in ESV and EF, and there were no significant differences in EDV from the papillary muscle measured in LV function of PVC with cardiac MRI. The EF of papillary muscle exclusion methods was higher than that of the inclusion methods.

Keywords: papillary muscle, left ventricular function, ventricular arrhythmia, PVC