Accuracy of Indonesian National Program Self Pulse Palpation (MENARI) For Detecting Atrial Fibrillation in General Population

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Introduction: Early detection of atrial fibrillation (AF) is important because AF is often asymptomatic and its first manifestation may be a disabling stroke. MENARI (Self Pulses Assessment) is a national program to detect atrial fibrillation, but as far as we know, there was no study in Indonesia to measure its accuracy.

Methods: A total of 176 subjects (≥50 Yo) were collected from high risk patients in Yayasan Jantung Indonesia Malang raya, after brief information by a Resident of cardiology and vascular medicine. All participants were individually interviewed with a structured questionnaire for collecting baseline characteristics and the Mini-Mental State Examination (MMSE) score. Each participant underwent two methods of screening: a 60-second radial pulse check; 12-lead electrocardiogram (AF diagnosed by a cardiologist). Subjects unable to find the pulse were excluded (7.9%). We compared self pulse palpation with ECG for its accuracy for detecting atrial fibrillation.

Result: The mean age of these subjects was 53.8±10.9 Yo. We found 26.7% patients with AF and 74.4% subjects were female. AF commonly found among lower MMSE score than sinus rhythm (Mean 28.2±23 vs 28.7±0.75 respectively, p<0.000). We found that participants unable to feel their pulse had significantly lower MMSE score than participants able to feel their pulse (27.68±0.25 vs 28.45±0.48 respectively, p<0.000). Sensitivity of MENARI was 66.7% (95% confidence interval [CI], 64%-72%). Specificity was 69% (95% CI, 66%-72%). The positive likelihood ratio was 2.16, while the negative likelihood ratio was 0.48.

Conclusion: In this study, we suggest that pulse palpation has relatively lower sensitivity and specificity for detecting atrial fibrillation. We need to develop some clinical scoring to increase their accuracy.