The role of fragmanted QRS (fQRS) as a predictor of major adverse cardiac event within 30 days in acute coronary syndrome patients: a retrospective cohort study

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Abstrak

<i>Background: some studies show fragmanted QRS (fQRS) as a marker of myocardial scar, ventricular arrhythmia, ventricular remodelling and worse coronary collaterals flow, which can increase the incidence of major adverse cardiac event (MACE) after infarction. This study aimed to identify the role of fQRS as one of the risk factors for MACE (cardiac death and reinfarction) in acute coronary syndrome patients within 30 days observation.

Methods: a cohort retrospective study was conducted using secondary data of acute coronary syndrome patients at Intensive Cardiac Care Unit Cipto Mangunkusumo Hospital from July 2015 to October 2017. Multivariate analysis were done by using logistic regression with GRACE score (moderate and high risk), low eGFR (< 60 ml/min), low LVEF ($< 40\%$), diabetes mellitus, age more than 45 years and hypertension as confounding factors.

Results: three hundred and fifty three (353) subjects were included. Fragmented QRS was found in 60,9 % subjects. It was more frequent in inferior leads (48.8%) with mean onset of 34 hours. Major adverse cardiac events were higher in fQRS vs. non-fQRS group (15.8% vs. 5.8 %). Bivariate analysis showed higher probability of 30 days MACE in fQRS group (RR 2.72; 95%CI 1.3 -5.71p=0.08). Multivariate analysis revealed adjusted RR of 2.79 (95% CI: 1.29 - 4.43, p<0.05). Low eGFR was a potential confounder in this study.

Conclusion: persistent fQRS developed in ACS during hospitalization is an independent predictor of 30 days MACE cardiac death and re-infarction.</i>