ABSTRAK

Latar Belakang: Infark miokard merupakan salah satu dari penyebab utama kematian manusia di dunia. Target waktu dari standar *wire crossing time* menurut ESC adalah <90 menit yang masih sulit dipenuhi di Indonesia. Penelitian ini dilakukan untuk mencari tahu pengaruh dari *wire crossing time* terhadap mortalitas pasien IMA-EST.
Tujuan: Mengetahui pengaruh dari *wire crossing time* terhadap mortalitas pasien infark miokard akut dengan elevasi segmen-ST yang dilakukan intervensi koroner perkutan primer di RS Sardjito.
Metode: Penelitian ini menggunakan metode studi kohort retrospektif berdasarkan data rekam medis pasien yang diambil dari data registri *Sardjito Cardiovascular Intensive Care Registry* (SCIENCE). Selanjutnya data *wire crossing time* dibagi menjadi dua berdasarkan *cutoff* dari analisis ROC.
Hasil: Analisis ROC menunjukkan cutoff optimal dari *wire crossing time* pada angka 134,5 menit, AUC 0,687 (95% CI: 0,631--0,742), sensitivitas 67%, dan spesifisitas 65,9%. Analisis bivariat terhadap luaran intra rumah sakit dan 30 hari menunjukkan pengaruh signifikan dari *wire crossing time* (p <0,001). Analisis multivariat terhadap luaran intra rumah sakit menunjukkan *wire crossing time* signifikan (p <0,001; OR 2,961; 95% CI 1,727–5,075). Begitu juga terhadap luaran 30 hari (p <0,001; OR 3,414; 95% CI 1,832–6,362).
Kesimpulan: *Wire crossing time* >135 menit berpengaruh signifikan tetapi tidak sebagai prediktor tunggal terhadap pasien dengan IMA-EST yang dilakukan intervensi koroner perkutan primer di RS Sardjito.
Keywords: Infark miokard, Infark miokard akut dengan elevasi segmen-ST, IMA-EST, Intervensi koroner perkutan primer, *Wire crossing time*

ABSTRACT

Background: Myocardial infarction is one of the leading causes of death worldwide. The target time for the standard wire crossing time according to the ESC is <90 minutes. This target time is difficult to achieve in Indonesia. Wire crossing time which takes too long will have an effect to patient's outcome and prognostic. This study was conducted to determine the effect of wire crossing time on mortality in patients with ST-segment elevation myocardial infarction.

Objective: To determine the effect of wire crossing time on mortality among patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention at Dr. Sardjito Hospital.

Methods: This study used a retrospective cohort design based on patients' medical records obtained from the Sardjito Cardiovascular Intensive Care Registry (SCIENCE). Wire crossing time data were then divided into two groups based on the cutoff value obtained from receiver operating characteristic (ROC) analysis.

Results: ROC analysis showed an optimal cutoff value for wire crossing time of 134.5 minutes with an AUC of 0.687 (95% CI: 0.631–0.742), sensitivity of 67%, and specificity of 65.9%. Bivariate analysis of in-hospital and 30-day outcomes showed a significant association between wire crossing time and mortality ($p < 0.001$). Multivariate analysis of in-hospital outcomes showed that wire crossing time was significant ($p < 0.001$; OR 2.961; 95% CI 1.727–5.075). Similarly, for 30-day outcomes ($p < 0.001$; OR 3.414; 95% CI 1.832–6.362).

Conclusion: Wire crossing time >135 minutes significantly affecting mortality of STEMI patients with primary PCI in RS Sardjito but not as an only predictor.

Keywords: Myocardial infarction, ST-segment elevation myocardial infarction, STEMI, Primary percutaneous coronary intervention, Wire crossing time