

**FP10 STUDY ON FEASIBILITY OF APPLICATION 1 HOUR ALGORITHM IN RULE IN AND RULE OUT ACUTE MYOCARDIAL INFARCTION USING HIGH SENSITIVITY CARDIAC TROPONIN T IN EMERGENCY AND TRAUMA DEPARTMENT HOSPITAL KUALA LUMPUR**

Siti Hajar Hashim<sup>1</sup>, Mahathar Abd Wahab<sup>2</sup>, Abdul Muhaimin Noor Azhar<sup>3</sup>

<sup>1</sup> *Hospital Kuala Lumpur, Malaysia*

**BACKGROUND**

1 hour algorithm using high sensitivity cardiac troponin T (hs-cTnT) to rule in and rule out acute myocardial infarction (AMI) has been validated, but there is no data in our local setting. This study aim to evaluate the effectiveness of 1 hour algorithm using hs-cTnT by measured the incidence of major adverse cardiac event (MACE) in 30 days in the Emergency and Trauma Department, Hospital Kuala Lumpur (ETDHKL).

**METHOD**

A prospective single center observational study enrolling 103 patients who presented with acute chest pain to the ETDHKL. Hs-cTnT was measured at presentation and after 1 hour. Final diagnosis is made based on assessment in medical ward in rule in group, EST result and incidence of MACE within 30 days from initial visit to ED.

**RESULT**

103 patients were recruited in this study. 54(52%) patients were in rule in group and subsequently admitted into medical ward for further management. 49(48%) patients were in rule out group and were allowed discharged. 36(73.5%) patients from rule out group underwent EST and 13(26.5%) patients were referred to physician clinic. Patient who underwent EST, 29(80.6%) patients had negative EST, 3(8.3%) patients had positive EST and 4(11.1%) patient had inconclusive EST. Patient who had positive and inconclusive EST were referred to physician clinic for

further assessment. None of the patient in rule out group developed MACE in 30 days. Overall, this study showed complete 1 hour algorithm with hs-cTnT, serial ECG, heart score as pre-test probability and EST had achieved sensitivity and NPV of 100%, specificity and PPV of 98.0% and 98.1% respectively.

**CONCLUSION**

This study showed that the 1 hour algorithm in rule in and rule out AMI using hs-cTnT and delta change in the ETD HKL is effective and safe.