



## PA – 02

### Clinical events during follow up and use of risk assessment tools in patients with myocardial infarction

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**Background:** Killip classes, TIMI risk score (TRS), GRACE, are simple validated clinical risk scores (RS) used in risk stratification in STEMI.

**Objective:** To determine the association of commonly used risk scores (RS) with post-myocardial events.

**Methods:** Data was collected from 120 consecutive male patients with acute STEMI admitted to Teaching Hospital Karapitiya, during an one year period. They were followed up for one year for the occurrence of clinically significant events. The risk scores were calculated in the acute phase of myocardial infarction. Killip classes were categorized as I, II, III, IV with the evidence of heart failure. TIMI score groups were divided as TIMI score 0 -  $\leq 4$ ,  $>4 - \leq 8$  and  $>8$ . GRACE score ranged from 85 to 244, categorized as  $< 96$ ,  $96 - 112$ ,  $113 - 133$ ,  $>133$ . Data were analyzed using SPSS version 19.0.

**Results:** One hundred and twenty (n=120) male patients with the mean age of  $54 \pm 8$  years were studied. Their mean weight, body mass index, waist circumference, waist to hip ratio were  $56.3 (\pm 11)$  kg,  $21.3 (\pm 4)$   $\text{kgm}^{-2}$ ,  $77.3 (\pm 10)$  cm,  $0.91 (\pm 0.1)$  respectively. Cardiac troponin I was raised in 97.5% patients. Complications developed in 45.8 % of patients during the hospital stay. Killip I, II, III, IV categories include 66.7%, 28.3%, 1.3% and 3.3% patients respectively. TIMI score among the patients ranged from 0 to 10. Majority of the patients is (66.6%) in the TIMI category of  $0 - \leq 4$ . GRACE score categories were  $< 96$ ,  $96 - 112$ ,  $113 - 133$ ,  $>133$  and included 7.5%, 14.2%, 30.8% and 47.5% respectively. Only 32.4% of patients developed a significant clinical event during the follow up of one year. There were two (1.6%) deaths, seven (5.8%) recurrent myocardial infarction and thirty (25%) patients developed unstable angina. Seven (5.8%) patients needed interventional treatment, while the rest of the patients were managed medically. GRACE score categories were not significantly associated with post myocardial events for the follow-up time intervals which included first month ( $p = 0.97$ ),  $>1-3$  months ( $p = 0.73$ ),  $>3-6$  months ( $p = 0.09$ ) and  $>6 - 12$  months ( $p = 0.92$ ). Further more TIMI risk score categories did not show significant association with post myocardial events for the follow-up time intervals which included first month ( $p = 0.109$ ),  $>1 - 3$  months ( $p = 0.547$ ),  $3 - 6$  months ( $p = 0.956$ ),  $>6 - 12$  ( $p = 0.084$ ). The development of an event was significantly associated with age in the first 30 days ( $p = 0.031$ ) and during  $6 - 12$  months ( $p = 0.005$ ), but not in the  $1 - 3$  months ( $p = 0.136$ ) and in the  $3- 6$  months ( $p = 0.125$ ) period.

**Conclusions:** The development of significant clinical events following STEMI is uncommon in this follow-up study. GRACE and TIMI score categories are not significantly associated with occurrence of events.

**Keywords:** STEMI, Killip class, TIMI score, GRACE score, follow up