THE INCIDENCE AND PREDICTORS OF IN-HOSPITAL DEATH IN PATIENTS WITH ST-SEGMENT ELEVATION MYOCARDIAL INFARCT WHO UNDERWENT PRIMARY PERCUTANEOUS CORONARY INTERVENTION

i2 Poster Contributions
Georgia World Congress Center, Hall B5
Sunday, March 14, 2010, 9:30 a.m.-10:30 a.m.

Session Title: DES I and Acute Coronary Syndromes
Abstract Category: PCI - Acute MI
Presentation Number: 2501-429

Authors: Young Jin Youn, Seung Hwan Lee, Sang Woo Han, Jun Won Lee, Joong Kyung Sung, Nam Seok Lee, Jang-Young Kim, Junghan Yoon, Kyung-Hoon Choe, Wonju Christian Hospital, Wonju, South Korea

Background: ST-segment elevation myocardial infarct (STEMI) is one of the most common life threatening diseases. TIMI risk score and GRACE risk score were known as predictor of 6-month mortality. But TIMI risk score was developed in the era of lytic therapy and both are not predictors for in-hospital death.

Methods: A total of 375 patients with STEMI who underwent primary percutaneous coronary intervention (PPCI) from 2003 to 2008 were analyzed. All subjects were divided into two groups according to the in-hospital death.

Results: 32 (8.5%) patients could not survive before discharge. Cause of death was 25 patients of pump failure and 7 patients of hypovolemic shock due to bleeding. There was no difference in sex but, non-survivors were older (61.2 ± 12.1 vs. 69.4 ± 12.4 yrs, p < 0.01). A history of previous myocardial infarct (MI) was more frequent in non-survivor group (7.6% vs. 21.9%, p < 0.01). Lower systolic (SBP) and diastolic blood pressure (DBP) at admission were observed in non-survivor group (SBP, mmHg, 123 ± 37 vs. 84 ± 19, p = 0.002; DBP, mmHg, 75 ± 23 vs. 58 ± 7; p < 0.001, respectively). Non-survivor group showed higher frequency of arrhythmic event (17.5 vs. 34.4%; p = 0.031). There was no difference in symptom to door and door to balloon time. Initial level of cardiac enzymes were similar but initial BNP level was higher in non-survivor group (912 ± 356 vs. 309 ± 58 pg/dL; p = 0.011). TIMI risk score were significantly higher in non-survivor group (3.7 ± 2.4 vs. 5.9 ± 2.0; p < 0.01). GRACE risk score were similar in both groups (85.0 ± 26.9 vs. 89.5 ± 23.1, p = ns). In multivariate regression analysis adjust for age, sex, arrhythmic event, previous myocardial infarct and Killip class, age and Killip class were independent predictors for in-hospital death (age, odds ratio (OR) 1.07, 95% confidence interval (CI) 1.025-1.117, p < 0.01; Killip class IV, OR 17.91, 95% CI 5.830-55.008, p < 0.01).

Conclusion: The incidence of in-hospital death is 8.5% in STEMI. Age and Killip class at admission are independent predictors of in-hospital death in patients underwent PPCI, more intensive and specialized therapeutic approach during PPCI will be needed.