

## Short-term risk stratification using CADILLAC risk score in patients with ST elevation myocardial infarction

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**Background:** The recent reperfusion therapy for ST-elevation myocardial infarction (STEMI) has made the length of hospital stay shorter without adverse events. CADILLAC risk score is reportedly one of the risk scores predicting the long-term prognosis in STEMI patients.

**Purpose:** To investigate the usefulness of CADILLAC risk score for predicting short-term outcomes in STEMI patients.

**Methods:** Consecutive patients admitted to our university hospital and our medical center with STEMI (excluding shock, arrest case) who underwent primary PCI between January 2012 and April 2018 (n=387) were enrolled in this study. The patients were classified into 3 groups according to the CADILLAC risk score: low risk (n=176), intermediate risk (n=87), and high risk (n=124). Data on adverse events within 30 days after hospitalization, including in-hospital death, sustained ventricular arrhythmia, recurrent myocardial infarction, heart failure requiring intravenous treatment, stroke, or clinical hemorrhage, were collected.

**Results:** In the low risk group, adverse events within 30 days were significantly less observed, compared to the intermediate and high risk groups (n=13, 7.4% vs. n=13, 14.9% vs. n=58, 46.8%, p<0.001). In particular, all adverse events occurred within 3 days in the low risk group, although adverse events, such as heart failure (n=4), recurrent myocardial infarction (n=1), stroke (n=1), and gastrointestinal bleeding (n=1), were substantially observed after day 4 of hospitalization in the intermediate and high risk groups.

**Conclusions:** In STEMI patients with low CADILLAC risk score, better short-term prognosis was observed compared to the intermediate and high risk groups, and all adverse events occurred within 3 days of hospitalization, suggesting that discharge at day 4 might be safe in this study population. CADILLAC risk score may help stratify patient risk for short-term prognosis and adjust management of STEMI patients.

Comparison of adverse events between low risk and intermediate-high risk groups

	Low risk (n=176)	Intermediate-high risk (n=211)	P-value
Adverse event during hospitalization	13 (7.4%)	71 (33.6%)	<0.001
In-hospital death	1 (0.6%)	7 (3.3%)	0.125
Sustained VT/VF	4 (2.3%)	3 (1.4%)	0.808
recurrent MI	1 (0.6%)	1 (0.5%)	1.000
HF requiring i.v. treatment	9 (5.1%)	61 (28.9%)	<0.001
Stroke	0 (0%)	1 (0.5%)	1.000
Clinical hemorrhage	0 (0%)	5 (2.4%)	0.109
Others	2 (1.1%)	5 (2.4%)	0.601

