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RISK FACTORS AND OUTCOME OF VENTRICULAR FIBRILLATION BEFORE AND DURING PRIMARY ANGIOPLASTY AMONG PATIENTS WITH ST-ELEVATION MYOCARDIAL INFARCTION

Poster Contributions

Poster Hall B1

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Session Title: Arrhythmias and Clinical EP: VT

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Background: We aimed to assess the risk factors and outcome of ventricular fibrillation (VF) before and during primary percutaneous coronary intervention (PPCI) in patients with ST-segment elevation myocardial infarction (STEMI).

Methods: From 1999 to 2012, we consecutively enrolled 5,373 STEMI patients.

Results: Follow-up was performed with 5,230 STEMI patients, corresponding to 22,183 person-years. In total, 410 of the patients had VF before guided catheter insertion, and 88 had VF after guided catheter insertion till end of procedure (VF during PPCI). During a median follow-up of 3.6 years (95% confidence interval [CI] 1.3-6.7), 1,196 subjects died. A logistic regression model identified younger age, anterior infarct, Killip class >I, and a preprocedural TIMI flow grade of 0-I to be positively associated with VF before PPCI, while increased procedure duration, inferior infarct, and a preprocedural TIMI flow grade of 0-I were positively associated with VF during PPCI. The relationship between VF before or during PPCI and all-cause mortality was evaluated using the Cox regression model. Compared with the No-VF patients, patients with VF before or during PPCI had a significantly increased 30-day mortality, with an adjusted hazard ratio (HR)=3.40 (95% CI 1.70-6.70) and HR=4.20 (95% CI 1.30-13.30), respectively. However, for patients with VF before or during PPCI who survived for at least 30 days, there was no increase in the long-term mortality, with HR=1.04 (95% CI; 0.50-2.00) and HR=1.70 (95% CI; 0.69-4.20), respectively.

Conclusion: In this study, several risk factors were independently associated with VF before and during PPCI. The occurrence of VF before or during PPCI was associated with increased 30-day all-cause mortality but not with long-term mortality.