**Abstract: P1727**

**Prognosis predictors of patients with initial cardiogenic shock complicated acute myocardial infarction treated with primary angioplasty and intense antiplatelet therapy. PRAGUE-18 shock substudy.**

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**On behalf:** Prague-18 study group

**Topic(s):**
Acute Coronary Syndromes: Shock

**Citation:**
BACKGROUND. Early reperfusion of the infarct related artery is the only treatment improving prognosis of patients with initial cardiogenic shock (CGS) complicated acute myocardial infarction (AMI) (Killip class IV at admission).

PURPOSE. The analysis focused on subgroup of patients with initial CGS randomized into the multicenter PRAGUE-18 study (prasugrel vs. ticagrelor in primary PCI).

METHODS. In the PRAGUE-18 study, patients with acute myocardial infarction (AMI) (n=1230) treated with primary percutaneous coronary intervention (pPCI) were immediately randomized to prasugrel or ticagrelor with intended treatment duration of 12 months. 53.6% (n=659) switched to clopidogrel after discharge. Major ischemic and bleeding events were followed throughout the entire study period. Beside standard laboratory tests, efficacy of ticagrelor and prasugrel was measured by flow cytometric VASP evaluation in patients selected for a laboratory sub-study (n=218). Acute heart failure (KILLIP > 1) was present in 11.8%, and 46 patients (3.7%) randomized to the study were in CGS.

RESULTS. Patients with CGS were older [66.7 (48.3; 83.3) years] than those without CGS (KILLIP < 4), and had the highest prevalence of bundle branch block on the initial ECG (RBBB in 6.5%, LBBB in 8.7%, p=0.003 for difference in bundle branch blocks). Time delay to hospital admission [1.7 (0.4; 36.0) hs] was significantly shorter than in patients KILLIP < 4 [2.8 (0.8; 28.3hs; p = 0.003]. Significantly more CGS patients had history of previous MI (19.6% vs 7.9%, p=0.011) and bypass graft surgery (6.5% vs 1.5%, p = 0.041). 67.4% of CGS patients had multivessel disease and in 17.4 % of these patients primary PCI was evaluated as suboptimal result or procedural failure (compared to 4.3% in patients without shock, p < 0.001).

No difference was observed in clinical (primary and secondary endpoints, p=0.564) or laboratory efficacy between prasugrel and ticagrelor treated patients with CGS (p=0.800 for VASP index difference between
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No difference was observed in clinical (primary and secondary endpoints, p=0.564) or laboratory efficacy between prasugrel and ticagrelor treated patients with CGS (p=0.800 for VASP index difference between prasugrel and ticagrelor 20±4 hs after loading doses). We did not find any difference in initial platelet activation (VASP index before P2Y12 inhibitors administration) in patients without acute heart failure (KILLIP I) [83.2 (54.1–94.2) %] and with KILLIP > I [82.5 (65.7–96.9), p=0.999], and this was also confirmed for the difference between KILLIP I and KILLIP IV patients (p=0.416).

CONCLUSION. Results of the present analysis and defined predictors of mortality showed that prognosis of patients with initial cardiogenic complicated AMI treated with pPCI cannot be influenced by more potent platelet inhibition (than in AMI patients without CGS). Furthermore, the concluding evidence underscored adherence to the current guidelines’ recommendation of the earliest possible reperfusion of infarct related artery as well as administration of prasugrel or ticagrelor.