INTERACTION BETWEEN TIME TO TREATMENT AND TYPE OF REPERFUSION THERAPY IN STEMI: A POOLED ANALYSIS OF ONE-YEAR MORTALITY IN THE COMPARISON OF ANGIOPLASTY & PREHOSPITAL THROMBOLYSIS IN ACUTE MYOCARDIAL INFARCTION (CAPTIM) AND WHICH EARLY ST-ELEVATION MYOCARDIAL INFARCTION THERAPY (WEST) TRIALS

ACC Poster Contributions
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Session Title: Acute Myocardial Infarction—Can Primary PCI Be Facilitated?
Abstract Category: Acute Myocardial Infarction—Therapy
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Background: Although primary percutaneous coronary intervention (PPCI) is believed superior to fibrinolysis (FL) for ST-elevation MI (STEMI), time to treatment likely modulates this. We tested the interaction of reperfusion strategy & time on 1-year mortality in the CAPTIM & WEST trials.

Methods: Individual data; CAPTIM (n=840; 97-2000) & WEST (n=328; 03-05) were pooled. All CAPTIM pts were pre-hospital: WEST randomized at 1st medical contact, including pre-hospital.

Results: Of 1168 pts: median age was 58 yrs, 81% men & 41% anterior MI; 640 pts received FL vs 528 pts PPCI. Median time (min) from symptoms to randomization was similar for FL and PPCI (105, (IQR: 72-158) vs. 106(74-162), p=0.712). For CAPTIM and WEST, rescue PCI rates for FL were 26 & 27% & 30 d PCI was 70and 71 % respectively. One-year mortality was not different for FL and PPCI (4.4% vs. 6.3%, p=0.164). In the 59% of pts presenting <2h, mortality was lower with FL (2.8%) compared to PPCI<2h (6.9%, p≤0.014) and compared to either reperfusion treatment ≥2h (FL, 6.9%; PPCI, 6.0%). This advantage for early FL persisted after multivariable adjustment (Figure; interaction (presentation delay+treatment), p=0.019).

Conclusions: There is an interaction between time to treatment and reperfusion strategy in STEMI: a strategy of early FL with rescue and discretionary PCI reduces 1-year mortality compared to primary PCI in early presenters. Time from symptom onset is a crucial consideration when selecting reperfusion therapy for STEMI.