Background: The immediate clinical benefit of extracorporeal cardiopulmonary resuscitation (E-CPR) for cardiac arrest victims received E-CPR or conventional CPR (C-CPR) and investigated the clinical characteristics of long-term survivors.

Methods: A total of 31 adult in-hospital cardiac arrest victims received E-CPR for more than 10 minutes from 2003 to 2009. The long-term survival and neurological impairment of E-CPR (n=85) and C-CPR (n=321) were compared using propensity score-matched analysis.

Results: The 2-year survival with minimal neurological impairment was 4-fold higher in E-CPR than in C-CPR group (23.5% vs. 5.9%, hazard ratio (HR) = 0.57, 95% confidence interval (CI) = 0.37–0.87, p = 0.001). In the E-CPR group, the independent predictors associated with minimal neurological impairment were: age ≤65 years (HR = 0.47, 95% CI = 0.26–0.81; p = 0.008), CPR duration ≤35 min (HR = 0.38, 95% CI = 0.18–0.76; p = 0.007), and subsequent cardiovascular intervention including coronary intervention or cardiac surgery (HR = 0.36, 95% CI = 0.18–0.68; p = 0.002).

Conclusions: The initial survival benefit of E-CPR for cardiac arrest patients was maintained at 2 years.

TCT-375
Optimizing Rotational Atherectomy in High-Risk Percutaneous Coronary Intervention. Insights from the PROTECT II study

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Background: Rotational Atherectomy (RA) is currently recommended for heavily calcified lesions in which standard percutaneous coronary intervention (PCI) techniques would result in suboptimal stent expansion. We sought to determine the optimal RA use associated with minimal incidence of myocardin in patients undergoing high-risk PCI supported by either intraaortic balloon (IABP) or microaxial flow pumps (Impella).

Methods: We performed a subgroup analysis of patients treated with RA in the PROTECT II trial. The objective was to examine the relationship between myocardin and the technical parameters of number of passes/patient, lesion, and RA time.

Peri-procedural myocardial infarction (MI) was defined in the study as increase of CK-MB or Troponin >3ULN. Continuous variables were expressed as means ± SD. A P value <0.05 was considered significant.

Results: RA was used in 52 patients of the 448 PROTECT II patients (11.6%). Compared to patients treated without RA, patients undergoing RA were older (72 vs. 67 yo, p = 0.001), were more likely to have heart failure (96% vs. 86%, p = 0.001), prior CABG (48 vs. 32%, p = 0.02), higher STS score (8.1 vs. 5.7, p = 0.04), and higher Syntax score (40 vs. 29, p < 0.0001). Myocardin occurred in 25% of RA cases. of note, lesion length was similar in patients with and without myocardin (39 vs. 38 mm, p = 0.96). Prolonged RA time was associated with increased incidence of peri-procedural myocardin (Table).

Conclusion: RA continues to be utilized in high-risk PCI procedures. Our study suggests that longer RA time is associated with myocardin in patients undergoing high-risk PCI. Optimal RA technique must balance the risk of myocardial infarction against the imperative to achieve a good luminal result.

TCT-376
SIMPLIFIED E DE Study - Single center IMPella LVAD supported PCI in High Risk group of patients – Detroit Medical Center Experience - Clinical Outcomes
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Background: Advances in percutaneous interventional techniques and technology have made rotational atherectomy or cutting balloon (PCI) for left main and other high risk lesions a viable option. Left main intervention was re-classified in the recent ACC guidelines from III to IIb based on the large randomized Syntax trial. Though patients with high syntax score still continue to benefit from CABG, in ‘real-world’ clinical practice patients

TCT-374
Long-term Survival and Neurological Outcome of In-hospital Cardiac Arrest Patients Rescued by Extracorporeal Cardiopulmonary Resuscitation
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