Early PCI Is Associated with Short- and Long-Term Outcome After Out-of-Hospital Cardiac Arrest

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Background: Whether to perform or not an immediate percutaneous coronary intervention (PCI) after out-of-hospital cardiac arrest (OHCA) is still debated. The aim of this study was to evaluate the early and late impact of PCI on survival in OHCA patients admitted after successful resuscitation (ROSC).

Patients and methods: All non-trauma OHCA patients admitted in a Parisian cardiac arrest center were prospectively included after successful ROSC from 2000 to 2012. The association between PCI and survival was assessed at day-30, year-2 and year-10 endpoints and analyzed among other potential predicting factors using logistic regression and Cox multivariate analysis, respectively. Additionally conditional logistic regression and stratified Cox analysis were performed to evaluate the influence of PCI on day-30 and long-term survival on matched patients using propensity score method.

Results: During the study period, 1,723 patients (71.5% male, median age 59.9 [49.6,72.2] years) were analyzed and median of follow-up reached 2 years. OHCA was located in a public place in 32.2%, witnessed in 86.7% and with an initial shockable rhythm (VF/VT) in 54.6% patients. Therapeutic hypothermia (TH) and immediate PCI were performed in 71% and 27.8% of cases. Day-30, year-2 and year-10 survival rates were 43%, 40.1% and 38% in patients receiving PCI compared to respectively 27.5%, 23.4% and 20.2% in patients who did not. PCI was associated with a better day-30 survival and long-term survival (adjOR 0.72, 95%CI [0.55,0.95]; p=0.02 and adjHR 0.43, 95%CI [0.26,0.69]; p<0.01, respectively). In the propensity score matched cohort, the adjusted HR for long-term survival was also favorable for PCI (adj HR 0.52; 95%CI [0.31,0.87]; p-value).

Conclusion: Immediate PCI following OHCA is associated with both short- and long-term outcome whatever the presentation of patients. These findings should encourage early coronary angiogram and PCI if appropriate in OHCA patients following successful ROSC.

Disclosure:  