Stent Thrombosis is Not Increased in Cardiac Arrest Patients Undergoing Therapeutic Hypothermia: An Analysis of 15,079 Procedures

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Stent Thrombosis is Not Increased in Cardiac Arrest Patients Undergoing Therapeutic Hypothermia: An Analysis of 15,079 Procedures

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Background
- After a resuscitated cardiac arrest, patients often undergo cardiac catheterization with possible percutaneous coronary intervention (PCI).
- There is paucity of data regarding stent thrombosis rates in resuscitated cardiac arrest (CA) patients following PCI.
- Cardiac arrest patients, especially those with ventricular tachycardia or fibrillation (VT/VF arrest), often undergo therapeutic hypothermia (TH) to improve neurologic outcomes.
- TH alters pharmacokinetics of antiplatelet medications and may lead to higher rates of acute stent thrombosis.
- There is conflicting data in literature regarding effect of therapeutic hypothermia on stent thrombosis.

Methods
- Inclusion criteria: Patients >18 years with resuscitated CA undergoing PCI with or without institution of therapeutic hypothermia.
- Exclusion criteria: Stent thrombosis (996.72) as the primary diagnosis.
- Primary outcome: Stent thrombosis after PCI.
- Comorbidities were defined using Deyo’s modification of Charlson’s co-morbidity index (CCI) (Range 0-33).
- Multivariate hierarchical logistic regression models, with hospital ID incorporated as random effects within the model, were created to determine predictors of stent thrombosis.
- Model was adjusted for therapeutic hypothermia, age, sex, Deyo Charlson comorbidity index, weekend admission, insurance status, teaching hospital status, hospital bed size and hospital region.

Results
- Total of 15,079 subjects from 2002-2011.
- 260 (1.7%) underwent therapeutic hypothermia.
- Overall, 687 (4.6%) stent thrombosis events
- 11 (4.2%) ST in the TH group
- 676 (4.6%) ST in the no TH group.
- TH was not an independent predictor of stent thrombosis (OR 0.84, p=0.59).

Conclusions
- Primary PCI in acute MI patients presenting with cardiac arrest is associated with high rates of stent thrombosis (4.6%).
- The incidence of stent thrombosis is not increased with therapeutic hypothermia.

REFERENCES: