Post-Resuscitation Care Practices Following Cardiac Arrest At Six Regional Interventional Cardiology Centers In The United States 2007-2011

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Introduction

- Although recently clarified by AHA-sponsored Guidelines [1-3], post-resuscitation cardiac arrest (CA) care in the United States varies widely between centers and regions.
- We described standard practices, and evaluated variability in those practices among busy United States PCI centers between 2007-2011.
- The utilization and techniques of therapeutic hypothermia were carefully described.

Methods

- Six US Interventional Cardiology centers comprising the INTCAR-Cardiology research group retrospectively and prospectively evaluated 724 sequential cardiac arrest survivors admitted between 2007-2011. Data were de-identified and uploaded into a secure, web-based registry (INTCAR).
- Data entry was locally IRB-approved at all centers, and statistical analysis was performed at Maine Medical Center.
- Demographics, hospital course, adverse events, and treatments were recorded and categorized by center.

Multicenter logistic regression model was developed to analyze the associations of clinical and demographic factors with urgent cardiac catheterization.

Discussion

- Therapeutic hypothermia (TH) was routinely employed in encephalopathic CA survivors.
- 40% with PEA/Asystolic arrests, 39% in shock at presentation, and 26.5% with STEMI.
- EMS-initiated TH occurred infrequently (5%)
- Patients were cooled primarily with surface cooling techniques, ice packs and cold fluids.
- Cooling began on average ~3 hours after the arrest, and took ~3 1/3 hours to reach 32°C.

Most patients received neurovascular blockade and sedation during hypothermia.

- Adverse events occurred similar to published rates observed in other trials.
- Wide variability in case-mix existed between centers.

- Multicenter logistic regression suggested STEMI and initial rhythm, but not age of the admission hospital, were strong predictors of outcomes.

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