**THERAPEUTIC HYPOTHERMIA IN CARDIAC ARREST SURVIVORS WITH PRE-EXISTING CONGESTIVE HEART FAILURE IS NEPHROPROTECTIVE**

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**Objective:** The impact of therapeutic hypothermia on kidneys in cardiac arrest survivors with known congestive heart failure (CHF) is not known. Weak evidence suggests higher risk of acute kidney injury(AKI) with hypothermia.

**Method:** This analysis includes 1417 comatose cardiac arrest survivors that achieved return of spontaneous circulation on hospitalization and had a previous left ventricular ejection fraction (LVEF) assessment within last 1 year. Detailed chart review of these patients was performed. CHF was defined as either prior episode of congestive heart failure or presence of LVEF <50%. Odds ratio (OR) and 95% confidence intervals (CI) for association of hypothermia and acute kidney injury as well as hemodialysis at discharge among patients with and without CHF were computed using multivariable adjusted logistic regression.

**Results:** Overall, 1417 cardiac arrest patients (mean age 62.5±14.6 years, 60.2% males, 67.2% white and 29.7% black) were included in this analysis, out of which 467 (33.0%) were treated with therapeutic hypothermia and known CHF was present in 624 (44%). AKI developed in 25.2% of CHF patients that were not treated with hypothermia while, only in 18.0% among CHF patients treated with hypothermia (OR 0.56; 95% CI 0.32 - 0.96, p = 0.03). There was an decrease in trend of requiring hemodialysis at discharge among CHF patients treated with hypothermia compared with CHF patients that were not treated with hypothermia (8.1% vs. 19.62%, p = 0.019) among CHF patients not treated with hypothermia . However, there was no significant result.

**Conclusion:**Hypothermia is associated with nephroprotective effects among patients with cardiac survivors with pre-existing CHF. Future research is needed to identify subgroups that derive benefit from therapeutic hypothermia after cardiac arrest.