

Extracorporeal Cardiopulmonary Resuscitation in OHCA



Out-of-hospital cardiac arrest (OHCA) without return of spontaneous circulation (ROSC) despite conventional resuscitation is common and has poor outcomes. Adding extracorporeal membrane oxygenation (ECMO) to cardiopulmonary resuscitation (extracorporeal-CPR) is increasingly used in an attempt to improve outcomes.

A new study analysed a prospective registry of 13,191 OHCA's from May 2011 to January 2018, and compared survival at hospital discharge with and without extracorporeal-CPR. They also identified factors associated with survival in patients given extracorporeal-CPR.

Findings of the study show that survival was 8% in patients given extracorporeal-CPR and 9% in patients given conventional-CPR. Extracorporeal-CPR was not associated with hospital survival. By conditional logistic regression with matching on a propensity score (including age, sex, occurrence at home, bystander CPR, initial rhythm, collapse-to-CPR time, duration of resuscitation, and ROSC), similar results were found. In the extracorporeal-CPR group, factors associated with hospital survival were initial shockable rhythm, transient ROSC before ECMO, and prehospital ECMO implantation.

Overall, results of this study show that OHCA's treated with extracorporeal-CPR was not associated with increased hospital survival. Early ECMO implantation may improve outcomes. The initial rhythm and ROSC may help select patients for extracorporeal-CPR.

Source: [European Heart Journal](#)

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