CARDIOPULMONARY RESUSCITATION

Improved survival rates possible after prolonged resuscitation attempts

Increased duration of cardiopulmonary resuscitation after in-hospital cardiac arrest might improve the likelihood of return of spontaneous circulation and survival to hospital discharge, according to an observational analysis of the Get With The Guidelines—Resuscitation registry. “Prolongation of resuscitation attempts by 10 or 15 min might have only slight effects on resources once efforts have already begun,” say the researchers, “but could improve outcomes.”

The investigators identified 64,339 patients from the registry who had suffered a cardiac arrest while in one of 435 hospitals in the USA or Canada between January 2000 and August 2008. Overall, the median duration of resuscitation attempts was 17 min. Return

of spontaneous circulation was achieved in 48.5% of patients (median duration of resuscitation 12 min). The remaining 51.5% of patients died when resuscitation attempts were terminated (median duration 20 min).

The investigators divided the hospitals into quartiles according to the duration of resuscitation efforts in nonsurvivors. Interestingly, they found that patients had a higher likelihood of return of spontaneous circulation (adjusted risk ratio [RR] 1.12, 95% CI 1.06–1.18, $P < 0.0001$) and survival to hospital discharge (adjusted RR 1.12, 95% CI 1.02–1.23, $P = 0.021$) if their cardiac arrest occurred in a hospital with the longest resuscitation attempts (~25 min) than in one with the shortest (~16 min). Duration of resuscitation attempts was not associated with a difference in favorable neurological status at discharge from hospital.

Although long-term outcomes need to be assessed in survivors of cardiac arrest, in an editorial that accompanied the report published in the *Lancet*, Jerry Nolan from Bath, UK and Jasmeet Soar from Bristol, UK comment that the “study reassures clinicians that prolonged resuscitation attempts do not seem to result in a substantial increase in severe neurological injury in survivors. If the cause of cardiac arrest is potentially reversible, it might be worthwhile to try for a little longer.”

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