To the Editor:

We applaud Tagami et al1 for reporting their experience in caring for survivors of out-of-hospital cardiac arrest following the implementation of a regionalized postarrest system of care to deliver the fifth link of the chain of survival. The authors’ interrupted time series study suggests an improved rate of favorable neurological outcomes among survivors after regionalization of care. However, we question their assertion that regionalization of care, as opposed to overall improved postresuscitation care (the “fifth link”), was instrumental in improving outcomes.

The authors note that following implementation of the program, there were higher rates of both return of spontaneous circulation (ROSC) and admission rates to the intensive care unit. While differences in the rate of prehospital ROSC did not reach statistical significance and were unlikely to impact the observed differences in outcomes, the increase in rates of treatment within an intensive care unit are quite striking (8.7% before versus 53.0% after implementation). Could the improved survival and/or neurological outcome rates in the postintervention period be attributed in large part to the application of standard intensive care therapies, such as hemodynamic support and mechanical ventilation, irrespective of the application of therapeutic hypothermia and cardiac catheterization? Was the simple difference in intensive care unit admission rates adjusted for in the multivariable analysis that showed an independent effect of the fifth link of the chain of survival on rates of favorable neurological outcomes?

We are also curious about the notable differences in rates of postresuscitation care provided to patients with ROSC transported directly to the tertiary center as opposed to the outlying secondary centers (80.3% rate at the tertiary center versus 13.9% at nontertiary centers). This discrepancy existed despite similar rates of ROSC among study eligible patients between these 2 groups (29.5% versus 25.0%). It may be the fact that the latter population presented with longer transit times or less favorable physiological characteristics, but these details are not provided in the article. What is noted is that among survivors after regionalization, in which a minority (16.4%) of patients with ROSC at nontertiary centers were deemed suitable for transfer to the tertiary center for postarrest care, it would appear there was a lost opportunity for aggressive treatment and stabilization among the majority of patients with ROSC.

Disclosures

None.

References

Letter by Mark et al Regarding Article, "Implementation of the Fifth Link of the Chain of Survival Concept for Out-of-Hospital Cardiac Arrest"
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