

Additional Prognostic Factors Other Than Therapeutic Hypothermia in Patients with Cardiac Arrest

Yusuf Ziya Şener

To the editor;

I read with great interest the article published by Ko et al., which was about usefulness of therapeutic hypothermia to improve survival in patients with out-of-hospital cardiac arrest. The authors reported that in hospital survival and neurologic functions at discharge were better in the therapeutic hypothermia performed group.¹

Therapeutic hypothermia is the only known recommended treatment to reduce neurologic ischemic injury and improve survival in patients with cardiac arrest.² Seizure is a common manifestation of ischemic brain injury and it is related with worse outcomes. In animal studies; adding valproic acid on therapeutic hypothermia resulted in better survival and neurological outcomes than treatment with therapeutic hypothermia only in resuscitated rats due to asphyxial cardiac arrest.³ In another study; it is demonstrated that antiepileptic drugs have beneficial effects on neurologic functions depending on the presence of background cortical activity detected by electroencephalography in patients with cardiac arrest.⁴

Primary percutaneous coronary intervention (PCI) is the preferred treatment in patients with myocardial infarction with ST segment elevation (STEMI). Multivessel

disease can be detected in a part of patients with STEMI and intervention to lesions other than culprit lesion is onfliting. A recent study (COMPLETE trial) revealed that complete revascularization was superior to culprit-lesion-only PCI in reducing the risk of cardiovascular death and recurrent myocardial infarction.⁵

To conclude; both the use of antiepileptic drug use and complete revascularization have beneficial effects on outcomes after cardiac arrest including neurologic functions and survival. Therefore, we think that it could be better if the antiepileptic drug use and revascularization type (complete vs. culprit-lesion-only) were also evaluated in the present study.

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Department of Cardiology, Hacettepe University Faculty of Medicine, Ankara, Turkey.

Corresponding author: Dr. Yusuf Ziya Şener, Department of Cardiology, Hacettepe University Faculty of Medicine, Sıhhiye, Ankara, Turkey. Tel: +90 5058598853, +90 3123051781; E-mail: yzsener@yahoo.com.tr