



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Critical Care Medicine

ESPS manuscript NO: 22256

Title: Prognostic factors associated with hospital survival in comatose survivors of cardiac arrest

Reviewer's code: 02454185

Reviewer's country: China

Science editor: Fang-Fang Ji

Date sent for review: 2015-08-23 16:37

Date reviewed: 2015-08-23 20:24

Table with 4 columns: CLASSIFICATION, LANGUAGE EVALUATION, SCIENTIFIC MISCONDUCT, CONCLUSION. It contains checkboxes for various evaluation criteria like 'Grade A: Excellent', 'Priority publishing', 'Google Search', etc.

COMMENTS TO AUTHORS

The study addressed a scientifically sound question and it is clinically relevant for prognostication of ICU patients with cardiac arrest. The sample size is very large. There are several comments I would like to raise for the improvement of the manuscript. 1. "Therapeutic hypothermia, regardless of method used (e.g., rapid infusion of ice cold fluids, topical ice, 'arctic sun', passive rewarming, 'bair hugger') and location initiated (e.g., pre-hospital, emergency department, intensive care) was associated with increased survival."-----this statement should be clarified in the abstract whether it is concluded from univariate or multivariable analysis. As this can be influenced by other potential confounders. 2. In the method section, I did not find more detailed description of therapeutic hypothermia, its time frame relative to the occurrence of cardiac arrest, the target temperature. The performance of hypothermia should be described in method for aid judgment by readers. 3. In table 2, there is an interesting finding that patients with rapid cooling (time to temp) are more likely to die. Is this an incidental finding resulting from random error or there are some underlying mechanisms? This can be discussed further. 4. It is also strange time to target temp is shorter before 2002, the year



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of the publication of the landmark study. Shorter time indicates more rapid response and initiation of cooling. Why after strong evidence supporting the use of hypothermia the response slowed down? The proportion receiving HT increased, which is expected, after 2002. 5. I suggest presentation of the result of multivariable analysis in tables. 6. The primary end point is survival. However, I am also interested in the GCS score at discharge. In my experience, many cardiac arrest patients will end with normal vital signs but also poor GCS, or some of them are in vegetative states. Thus, I suggest the report of coma scales on survivors. 7. Since the work in focus on risk factors of survival, some other factors merit reporting. Those include some universal risk factors such as lactate, use of vasopressors, serial organ functions. Or some of them need to be discussed if data are not available. Some literature may be relevant (e.g. *J Thorac Dis.* 2014 Jul;6(7):995-1003. *BMJ Open.* 2014 May 23;4(5):e004752.). one shortcoming is lack of some important risk factors.



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Critical Care Medicine

ESPS manuscript NO: 22256

Title: Prognostic factors associated with hospital survival in comatose survivors of cardiac arrest

Reviewer's code: 03219381

Reviewer's country: Canada

Science editor: Fang-Fang Ji

Date sent for review: 2015-08-23 16:37

Date reviewed: 2015-09-24 02:03

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		[Y] No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

This is an interesting an article describing the experience of a single center on the outcomes of cardiac arrest patients admitted to the intensive care unit. The paper addresses an important issue and its major strength is the large population. However I do have some comments/questions: a) How as comatose defined. Was it a GCS and if so what was the cut-off. Could they have been comatose as a result of medications administered during or right after the arrest b) The introduction mostly refers to hypothermia in cardiac arrest. However this is not the aim of the paper and the introduction should reflect this c) The methods section should be clear about which versions of the APACHE score was used and in what circumstances d) The study included patients from 1993 but APACHE scores were only available post 1999. Doest this men that the multivariate analyses did not include APACHE scores or was it restricted to post 1999. e) What variables were included in the model. Was admission before/after 2002 used as a variable in the model. f) How was the possibility of temporal trends n survival accounted for in the model. g) A minor point: Capitalize trade names (ex Bair Hugger and Artctic Sun) as well as APACHE scores consistently h) The medial LOS



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for hospital seems very short (5 days). Did it include mortalities as well