

Is it the time to integrate “sono cardiopulmonary resuscitation” in cardiopulmonary resuscitation algorithm of traumatic cardiac arrest?

Sir,

American Heart Association 2010 advanced cardiac arrest life support (ACLS) guidelines have stressed on the quality of cardiopulmonary resuscitation (CPR) by monitoring various physiological parameters such as end-tidal CO₂. However, there is a paucity of literature about how to early and effectively identify and manage the potentially treatable causes of cardiac arrest (5 “H” and 5 “T”) as per ACLS algorithm.^[1]

The term “sono CPR” refers to applications of ultrasonography (USG) while performing CPR. The point of care USG may be performed during the brief pauses taken for pulse and rhythm check, after every 2 min of a CPR cycle. Hence, chest compressions are not interrupted nor there is any deviation from the standard ACLS guidelines.

Authors practice AIIMS-CLIP, a protocol which refers to sequential scanning of cardiac (C) and lung (L) windows followed by an assessment of inferior vena cava (IVC) diameter using USG. Using “sono CPR,” approximately 40% of the potentially treatable causes (5 “H” and 5 “T”) of cardiac arrest

may be assessed and managed in time.

In traumatic cardiac arrest (TCA), cardiac scan can detect tamponade (T) and pulmonary thromboembolism (T), lung scan can detect tension pneumothorax (T), and IVC scan can detect hypovolemia (H). From the prognostic point of view, a cardiac scan showing the absence of cardiac motion during resuscitation of patients in cardiac arrest would be highly predictive of inability to achieve a return of spontaneous circulation and a poor prognosis.^[2-5] Ultrasound evaluation of cardiac contractility increases the success rate of accomplished CPR.^[5]

In the light of above knowledge, would it be right to keep ourselves blind regarding detectable and treatable causes of cardiac arrest while performing CPR and awaiting for the cardiac activity to return or to actively use “sono CPR” and search for treatable causes so that timely intervention could be done? Future research may explore the integration of point of care sonography as an adjunct to CPR in TCA.

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Conflicts of interest

There are no conflicts of interest.

**Sanjeev Bhoi, Tej Prakash Sinha,
Prakash Ranjan Mishra**

Department of Emergency Medicine, JPN Apex Trauma Centre, All India
Institute of Medical Sciences, New Delhi, India

Correspondence:

Dr. Sanjeev Bhoi, Department of Emergency Medicine,
JPN Apex Trauma Centre, All India Institute of Medical Sciences,
New Delhi, India.

E-mail: sanjeevbhoi@gmail.com

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