

European Guidelines for Resuscitation after Cardiac Surgery

The incidence of cardiac arrest after cardiac surgery is around 0.7% to 2.9% and has reduced in recent years. The most remarkable statistic regarding these patients is the relatively good outcome with 17%-79% of patients suffering a cardiac arrest surviving to hospital discharge, a far higher proportion than can be hoped for when cardiac arrest occurs in other settings. The reason for this superior survival is the high incidence of reversible causes for the arrest. Ventricular fibrillation (VF) accounts for the rhythm in 25-50% of cases and, in the intensive care unit (ICU) setting, this is immediately identified and treated. In addition, tamponade and major bleeding account for many arrests and both conditions may be quickly relieved by prompt resuscitation and emergency re-sternotomy where appropriate.

Because many patients may potentially be saved by prompt treatment, ICU staff must be well versed in managing cardiac arrests. Practising protocol-based arrest management has been shown to halve the time to chest reopening and reduce complications in the conduct of the re-sternotomy after cardiac surgery

The EACTS Clinical Guideline Committee of the European Association for Cardio-Thoracic Surgery have now published a set of clear clinical guidelines to apply specifically to resuscitation after cardiac surgery. A variety of methodologies have been used to create these guidelines in order to obtain as wide a range of opinions as possible from the cardiothoracic surgical community and beyond:

1. Where there was a published body of evidence to guide practice, a structured literature review was performed and published in the ICVTS. These topics were open for website commentary for 2 months, and comments were published together with the literature review in the full print edition of this journal.
2. A survey was conducted on CTSnet (www.ctsnet.org) from January to June 2008 on a wide range of issues pertaining to resuscitation of cardiac surgical patients and this was used to guide decision-making by the committee.
3. Finally, a range of cardiac arrest protocols were tested on manikins with personnel from cardiothoracic surgery and ICU teams and these tests were recorded on video, analysed and evaluated for usability and practicality during 17 courses teaching resuscitation in patients after cardiac surgery.

The SCTS support the EACTS guidelines for resuscitation in cardiac arrest after cardiac surgery and encourage you to download the following resources so that you may discuss with your unit whether this is a guideline that you might be able to implement in your unit.

Guideline for resuscitation in cardiac arrest after cardiac surgery Joel Dunning, Alessandro Fabbri, Philippe H. Kolh, Adrian Levine, Ulf Lockowandt, Jonathan Mackay, Alain J. Pavie, Tim Strang, Michael I.M. Versteegh, Samer A.M. Nashef and on behalf of the EACTS Clinical Guidelines Committee Click here for the link to the European guidelines for resuscitation after cardiac surgery : <http://dx.doi.org/10.1016/j.ejcts.2009.01.033>

J.H. Mackay, S.J. Powell, J. Osgathorp and C.J. Rozario, Six-year prospective audit of chest reopening after cardiac arrest, Eur J Cardiothorac Surg 22 (3) (2002), pp. 421-425 Click here for this article : [http://dx.doi.org/10.1016/S1010-7940\(02\)00294-4](http://dx.doi.org/10.1016/S1010-7940(02)00294-4)

J. Dunning, J. Nandi, S. Ariffin, J. Jerstice, D. Danitsch and A. Levine, The Cardiac Surgery Advanced Life Support Course (CALs): delivering significant improvements in emergency cardiothoracic care, *Ann Thorac Surg* 81 (5) (2006), pp. 1767-1772.

Click here for this article :

<http://dx.doi.org/10.1016/j.athoracsur.2005.12.012>

The Cardiac Surgery Advanced Life Support course : Click here to view this resource :

<http://www.csu-als.com>

To view a video of this protocol in Practice click here :

<http://www.youtube.com/watch?v=PHqYZDgQJgc>

To view a handbook of this protocol click here :

<http://www.lulu.com/content/4428266>