The authors describe studying these patients for 30 days. They report an improvement in phrenic nerve function in a few of their patients, but most patients had not improved by 30 days. It will be interesting to hear the results as the authors follow these patients for a longer period of time to document the electrophysiologic recovery of the phrenic nerve. It may be that the phrenic nerve will not recover in some patients or, if it does, the underlying lung will be “trapped” and function will not be restored.

As we move forward in this era of managed care, postoperative outcomes will come under more severe and intense scrutiny. In the past, the absence of death in the postoperative period was considered a success. In the future, the absence of any noticeable symptoms will be the norm. Phrenic nerve dysfunction, although a relatively minor problem in the past, will take on more importance because of the need to demonstrate improved clinical outcomes. I congratulate the authors on their electrophysiologic documentation of phrenic nerve dysfunction. New strategies must be developed and evaluated to reduce the incidence of, or to prevent, phrenic nerve dysfunction in postoperative cardiac surgery patients.

John C. Alexander, Jr., MD, FCCP
Evanston, Illinois

From the Division of Cardiovascular and Thoracic Surgery, Evanston Hospital.

Open-Chest Resuscitation and Postcardiac Surgery Arrest

Unexpected cardiac arrest following cardiac surgery can be a devastating complication and is associated with significant morbidity and mortality. The reported incidence of unexpected cardiac arrest following open heart procedures varies from 3 to 0.7%. Precipitating factors include arrhythmias, mechanical problems such as tamponade and graft torsion, perioperative myocardial infarction, and strokes. All of these mechanisms may lead to decreased coronary perfusion pressure, resulting in an arrest.1,2

At times, perioperative infarcts may be predicted if ST wave monitoring is used both in the operating room and during the postoperative period. Usually, cardiac tamponade (which on occasion may be totally unexpected) is accompanied by elevations in filling pressures on the right side, followed by elevating filling pressures on the left, subsequent decreased systemic pressures and cardiac index, decreased urine output, and acidosis. Strokes may occur at any time and result from arrhythmias, carotid stenosis with decreased perfusion pressures, aortic disease, or from unknown causes. Firm guidelines are lacking, as are advanced cardiac life support protocols for resuscitation involving postoperative cardiac surgical patients. These existing protocols are written for patients who are in a nonsurgical arena of care, and as such, these patients probably should not have open cardiac resuscitation outside a hospital setting because of prohibitive complications and death rate, which may or may not be associated with the procedure vs the initiating cardiac arrest. Also, trained personnel and equipment would not be available in these settings. This would only lead to delays in cardiac resuscitative efforts, and the results would be essentially unchanged from what is now in place.

In patients who arrest in the ICU following cardiac surgery, open-chest resuscitation should be carried out without hesitation. Several studies have supported this practice, and unless there is an arrhythmia (associated with or without a pacemaker) that may be immediately corrected by external pacing or cardiac defibrillation, either synchronously or asynchronously, closed-chest resuscitation is of minimal benefit, and immediate open resuscitation should be done.1,2

In this issue of CHEST (see page 15), Anthi and coworkers revisit a point that has been made in the literature on several occasions, that in the postcardiac surgery patient who is in an ICU setting and who arrests, re-exploration and sternotomy should be performed in order to resuscitate the patient. In preparation for this, closed-chest resuscitation may be carried out until the equipment and personnel are available, but time should not be wasted in opening the chest.

Ronald C. Hill, MD, FCCP
Morgantown, West Virginia

Professor, Section of Cardiovascular and Thoracic Surgery, West Virginia University.

REFERENCES

Identification of Benign Pulmonary Nodules by Needle Biopsy

Although the majority of solitary pulmonary nodules are benign, malignancy is sufficiently common to warrant resective surgery unless benignity...