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**Purpose:** **To provide a process for the assessment and management of the patient in either ventricular Asystole or PEA. This protocol will ALWAYS be used in conjunction with the Cardiac Arrest Protocol.**

**NOTE:** **<u>No asystolic patient may be transported prior to medical Control contact. If extenuating circumstances suggest that transport may be indicated, contact Medical Control ASAP.</u>**

**<u>Contact Medical Control before transporting wide-complex rhythm PEA conditions with a rate less than 30 bpm; transport all narrow complex PEA patients unless they meet Dead on Scene Criteria.</u>**

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**I. Assessment Information**

A. If asystole is found, verify monitor settings and all connections between monitor and patient. Asystole must be verified in at least two EKG leads.

B. **Evaluate and, when possible, treat for suspected causes of cardiac arrest:**

- Hypoxia
- Hypovolemia
- Hydrogen ion (acidosis)
- Hyperkalemia/Hypokalemia
- Hypothermia
- Hypoglycemia
- Tablets (drug overdose)
- Tamponade (cardiac)
- Tension pneumothorax
- Thrombosis – heart (AMI)
- Thrombosis – lungs (PE)

**II. Management**

A. CPR per current AHA/ARC guidelines.

B. Establish and maintain airway, provide oxygen and support ventilations.
- Intubation, Combi-tube, OPA/NPA or other approved airway devices.
- Secure advanced airway devices; commercial tube holders must be used for oral ETT's.
- If tension Pneumothorax is suspected, reassess ETT placement and decompress according to the Pleural Decompression Procedure. (Paramedic only)

C. Obtain IV/IO
1. Concurrently with intubation if possible.
2. Administer a fluid bolus; 300cc, reevaluate then repeat as necessary.

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D. **Medication Administration**

1. **Vasopressin:** **(ADULTS ONLY)** 40U IVP/IO to replace first or second dose of epinephrine

2. **Epinephrine:** **(ADULT)** 1mg of 1:10,000 IVP/IO
   **(PEDS)** 0.01mg/kg 1:10,000 IVP/IO

   a. Repeat epinephrine every 3-5 minutes
   b. In Pediatric patients, if the IV/IO is unsuccessful:
      1.) 0.1mg/kg 1:1000 ETT

3. For **ADULT** patients in asystole or in PEA with a <u>rate less than 60bpm,</u> administer **Atropine:** 1mg IV/IO

   a. Repeat **atropine** every 3-5 minutes to max of 3mg
   b. Atropine is not utilized in peds, use epinephrine

4. Consider **Sodium Bicarbonate:** 1mEq/kg (adult or peds)

   a. **Administer only after adequate ventilation**
   b. **Bicarb should not be routinely used in cardiac arrest patients unless they have:**
      i. Diabetic ketoacidosis
      ii. Tricyclic antidepressant overdose
      iii. Aspirin overdose
      iv. Cocaine overdose
      v. Diphenhydramine (benadryl) overdose
      vi. Renal Failure patient in arrest
   c. In pediatric pt's < 1 yr. old, the bicarbonate solution should be diluted to 4.2% with normal saline.
   d. Authorization is limited to one dose only

**CONTACT MEDICAL CONTROL**

E. **Possible orders post-radio contact:**
   1. **Terminate resuscitative efforts**[*]
      a. Termination of resuscitation may not be indicated in electrocution, drowning, hypothermia or pediatric patients.
      b. At minimum, patients must receive an advanced or supraglottic airway, medication route (IV/IO), vasopressin and epinephrine, and atropine as appropriate, with sufficient time intervals for therapeutic effects prior to requesting termination of efforts.
   2. **Calcium chloride** 1 gm IVP (for renal failure patients only)
   3. Transport and further orders only upon physician direction.

**III. Terminating Care on Scene**

A. When contacting Medical Control, initiate the radio conversation with **"This is an asystolic patient call."**

B. When resuscitative efforts are terminated by Medical Control physician:
   1. Record the time.
   2. Notify a police authority, if not already present, and request a medical examiner for County where the death occurred. The medical examiner or designee must specifically authorize removal of the body.
   3. Personal belongings such as clothing, valuables and identification, are not to be removed from the body by any individual other than a police officer or representative from the Medical Examiner's office.
   4. Advanced airways and IV's should remain in place until the body is released by the medical examiner and permission to remove them has been received.

   5. Document the information on the EMS Medical Record.
      a. Two- (2) EKG strips of the two- (2) leads used to verify asystole should be attached to documentation.
      b. Document the specific circumstances of the resuscitation.

C. Clear the scene as appropriate.
   1. EMS personnel may clear the scene after the arrival of police agency or medical examiner investigator.
   2. Obtain medical control physician signature on the run form.

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7/1/04
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