Pleural Decompression

Purpose: Decompression of a tension pneumothorax. **This procedure is for Paramedic use only.**

Indications

1. Suspected Tension Pneumothorax (not simple pneumothorax) with hemodynamic compromise.
2. Considered for patients who remain in PEA after treatment of other reversible causes of PEA have been unsuccessful.
3. Direct medical control physician order.

Presentation of Tension Pneumothorax

A tension pneumothorax will have at least one of the following:

1. Severe respiratory distress in the conscious/breathing patient with hemodynamic compromise.
2. Difficult ventilation in the unconscious/apneic patient in the presence of a correctly positioned endotracheal tube with hypotension.

Pre-Medical Control

PARAMEDIC

Technique

1. Evaluate and maintain the airway, provide oxygenation and support ventilations.
2. **Decompression procedure:**
   A. Assemble equipment
      a. Large bore IV catheter - 14 ga or larger and at least 2” in length; or other MCA approved commercial device.
      b. Antiseptic swabs
      c. Dressing and tape
   B. Identify landmarks
      a. Insert needle in the mid-clavicular line at the second intercostal space just above the third rib.
   C. Prep the area with antiseptic swab.
   D. Remove flash chamber cap from IV catheter.
   E. Insert the catheter over the top of the rib until air rushes out. Advance catheter over the needle. Remove needle leaving catheter in place.
   F. Reassess breath sounds and patient's condition (patient's condition should improve almost immediately).
   G. Secure catheter with tape.

NOTE: ***REMEMBER** to go just above the rib due to all of the major structures (arteries, veins, and nerves) which lie below the rib. The closer you stay to the top of the rib, the less chance of complication.

Pediatric Considerations

1. To perform needle decompression use an 18 or 20 gauge over the needle catheter inserting the needle in the mid-clavicular line at the second intercostal space, just above the third rib.