Pleural Decompression

Paramedic Use Only

Indications

1. Suspected Tension Pneumothorax (not simple pneumothorax) with hemodynamic compromise, severe respiratory distress, unilateral absent or severely diminished breath sounds
2. Considered for patients who remain in PEA after treatment of other reversible causes of PEA have been unsuccessful.
3. Traumatic arrest, refer to **Traumatic Arrest-Treatment Protocol**

Presentation of Tension Pneumothorax

1. A tension pneumothorax will have at least one of the following:
   A. Severe respiratory distress in the conscious/breathing patient with **hemodynamic compromise (hypotension)**.
   B. Difficult ventilation in the hypotensive, unconscious/apneic patient in the presence of a confirmed, correctly positioned endotracheal tube.

Technique

1. Evaluate and maintain the airway, provide oxygenation, and support ventilations.
2. Decompression procedure:
   A. Assemble equipment
      a. Adults (>14 years of age): large bore IV catheter - 14 gauge or larger and at least 3.5 inches in length (catheter should not have any type of flow restricting valve) OR other MCA approved commercial device, per MCA selection.
      b. Pediatrics (≤14 years of age): 18 gauge or 20 gauge over the needle catheter (catheter should not have any type of flow restricting valve) OR other MCA approved commercial device, (per MCA selection).

MCA Approved Commercial Device Use

Adults	Pediatrics
☑ Yes	☑ Yes
☐ No	☐ No

MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster to MDHHS

c. Antiseptic swabs
d. Dressing and tape

B. Identify landmarks and insertion site

NOTE: Midclavicular is the preferred site for pediatrics (≤ 14 years of age)

a. Anterior axillary at the fourth intercostal space just above the fifth rib.
b. Midaxillary at the fourth intercostal space just above the fifth rib.
c. Midclavicular (if unable to access axillary) line at the second intercostal space just above the third rib
   i. Midclavicular is the preferred site for pediatric patients.

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.