



Amherst Fire District Procedure

Chest Decompression

Clinical Indications:

- Tension pneumothorax
- Symptomatic Spontaneous pneumothorax

Procedure:

1. Confirm presence of a tension pneumothorax or identify strong clinical evidence:
 - a. A rapid deterioration in a patient's condition that experienced blunt or penetrating trauma accompanied with labored breathing and diminished or absent lung sounds.
 - b. Suspected spontaneous pneumothorax presenting with a sudden onset of chest pain and increased pain when breathing or coughing. Shortness of breath with increased respiratory rate. Usually occurs as a complication of lung disease.
2. Locate the insertion site at the second intercostal space at the midclavicular line on the affected side of the chest.
3. Prep the insertion site using alcohol swab(s).
4. Using a 3.25 inch, 14 gauge angiocath (1¼ inch, 18 gauge angiocath in patients less than 8 years) attach a prefilled 10cc saline syringe partially filled with saline. Advance the needle by directing it just over the top of the third rib (2nd intercostal space) to avoid intercostal nerves and vessels which are located on the inferior rib borders.
5. Advance the catheter 1-2 inches (¾ - 1 inch in patients less than 8 years) through the chest wall pulling back on the plunger of the syringe as the needle is advanced. Tension should be felt until the needle enters the pleural space. Once in the pleural space, bubbles should be evident within the saline or a "pop" should be noted, do not advance the needle any further.
6. Withdraw the needle and advance the catheter until flush with the skin. Listen for a gush or "hiss" of air which confirms placement and diagnosis. Caution: this is frequently missed due to ambient noise.
7. Dispose of the needle properly and **never reinsert into the catheter**.
8. Secure the catheter to prevent removal.
9. Rapidly transport the patient providing appropriate airway assistance. Patient will require on-going assessment during treatment and transport.

(Remember to use caution when decompressing a chest. When you do this the Pt will most likely have to have a chest tube placed once in the hospital).

Certification Requirements:

- Successfully complete an annual skill evaluation inclusive of the indications, contraindications, technique, and possible complications of the procedure.