CHEST DECOMPRESSION

A. INDICATION:

1. Chest Decompression requires **MCP Order**.

2. Patient with a suspected tension pneumothorax.

   a. Closed or penetrating chest trauma with respiratory distress.

   b. Absent breath sounds on the side of the injury.

   c. SBP < 90 mm Hg in adults or SBP < 80 mm Hg in children, with signs of shock.

B. PROCEDURE:

1. Midclavicular

   a. Identify the second intercostal space on the side of the pneumothorax.

   b. Place a finger on the clavicle at its midpoint.

   c. Run this finger straight down the chest wall to locate the first palpable rib below the clavicle.

   d. The second intercostal space lies just below this rib, midway between the clavicle and the nipple line.

   e. Cleanse the area with an alcohol or Povidone-Iodine swab.

3. Select a 14 or 16 gauge, 3 ¼ inch IV catheter (Pediatric:16 gauge, 1 ¼ inch). Remove the flash chamber cap. Do not use needle-safe IV catheters.

4. Advance the needle into the second intercostal space above the third rib. Assure you enter the thoracic cavity by passing the needle just over the top of the rib to avoid interference with the blood vessels and nerves that run along the underside of the rib.

5. As you enter the pleural space, you will feel a pop and note a rush of air expelling.

6. Advance the catheter into the chest and then withdraw the needle. Be careful not to kink the catheter.

7. Attach a one-way flutter valve to the catheter:

a. Asherman Chest Seal, or similar device, over the barrel of the catheter.

b. Finger cut off of a latex or similar examination glove (secure to catheter hub prior to performing the chest decompression).

8. Secure the catheter in place with tape, being careful not to block the port or kink the catheter.

9. Monitor the patient's vital signs and breath sounds for a recurring tension pneumothorax.

10. If signs and symptoms are not relieved by the initial chest decompression, or signs and symptoms recur, decompress the chest again by placing additional catheters adjacent to the original catheter.

C. CONSIDERATIONS:

1. For an open pneumothorax, immediately cover the open area with a gloved hand. Once materials are available, cover the area with an occlusive dressing.

2. An open pneumothorax that has been sealed with an occlusive dressing may result in a tension pneumothorax. In that instance, the increase in pleural pressure may be relieved by briefly removing the dressing. If that air release does not occur or the patient's condition remains unchanged, gently spread the chest wound open with a gloved hand, allowing the trapped air to escape.