



INDICATION:

Decompression of tension pneumothorax causing hemodynamic instability in a pediatric chest injury victim.

SIGNS AND SYMPTOMS OF TENSION PNEUMOTHORAX :

Signs include:

- Chest injury, either blunt or penetrating (often with flail chest, palpable subcutaneous air, or "sucking" chest wound on side of suspected pneumothorax).
- Absence of breath sounds on the side of the suspected pneumothorax (if breathing); with presence of breath sounds on side without pneumothorax.

Symptoms include:

- Progressive dyspnea or respiratory arrest
- Poor perfusion and altered mental status.

PROCEDURE:

- Explain procedure to patient if conscious and able to understand.
- Assemble equipment:
 - 1.25 inch, 16 gauge catheter over needle if estimated weight 40 Kg (90 lbs) or less, use adult decompression needle (minimum 2.5 inch length) if estimated weight greater than 40 Kg.
 - Antiseptic skin wipes
 - Sterile Vaseline gauze
- Identify second intercostal space, midclavicular line.
- Prepare site with sterile skin wipe.
- Insert needle using steady pressure and ninety-degree angle (perpendicular) to chest wall in lower aspect of the second intercostal space within the midclavicular line.
- Advance needle until one of the following are recognized:
 - A sudden rush of air is expelled through the needle
 - A "popping" or "giving way" is felt as the tip of the needle enters the chest cavity
 - Air, blood or fluid is expelled through the needle when chest cavity has been entered
 - Once chest cavity is entered, advance needle and catheter ¼ inch and no further, remove needle, leaving catheter in place.
 - Arrange Vaseline gauze at base of catheter to stabilize and seal area and leave in place (do not reinsert needle into catheter due to risk of shearing apart plastic catheter).

Approved:

Review Date:
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