

Needle Thoracostomy

Procedure

Douglas County KS EMS System

March 2022

Approved Provider: Paramedic

Reference Protocols: [General Trauma](#)

Indications

- Tension pneumothorax
 - A clinical diagnosis which should be considered when the following signs/symptoms are presented:
 - Progressing severe respiratory distress
 - Increasing difficulty to bag
 - Decreased or absent breath sounds on the involved side
 - Jugular venous distention
 - Tympany to percussion on the involved side
 - Unequal chest rise
 - Tracheal deviation away from the involved side
 - Tension pneumothorax is most common in the patient with:
 - Chest trauma
 - The intubated patient with high airway pressures

Contraindications

- None

Precautions

- Intercostals vessels are below each rib, therefore always go above the rib

Procedure

- Locate the 2nd or 3rd intercostal space in the mid clavicular line on the involved side of the chest.
- Cleanse with betadine or alcohol as time permits.
- Insert a 14 gauge catheter (use 18 gauge if < 2 months old)
- Insert the needle/catheter with attached flutter valve into the chest just over the top of the rib along the mid clavicular line.
- As you enter the pleural space air and/or blood will escape.
- Advance catheter and remove the needle.
- Secure in place.
- The catheter has a tendency to kink. If re-accumulation of air in the pleural space is occurring, proceed with repeat needle thoracotomy.

Complications

- Creation of pneumothorax.
- Damage to lung or viscera.
- Bleeding
- Infection

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Documentation

- Indications for procedure
- Technique used
- Response to intervention

Fig. 1

