

AIRWAY MANAGEMENT – CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

Indications:

1. Patients with respiratory distress due to:
 - a. Pulmonary Edema (CHF, near drowning)
 - b. Asthma exacerbation
 - c. COPD exacerbation
 - d. Pneumonia

Contraindications:

1. Unconsciousness or altered mental status (GCS>14)
2. Inability of patient to cooperate and/or maintain airway due to worsening lethargy, combativeness, etc.
3. Hypotension (<90mmHg systolic)
4. Vomiting
5. Suspected pneumothorax (this can be nontraumatic)
6. Trauma
7. Facial Abnormalities
8. Inability to obtain mask seal
9. Use with extreme caution in pulmonary fibrosis (ie, only as a last resort if nonrebreather does not work)

Procedure:

1. Goal is to increase pressure in airways and increase gas exchange
2. Verbally coach patient in procedure
3. Apply monitor and waveform capnography (if available)
4. Apply CPAP mask with a setting of 5-10 cm H₂O
5. Coach the patient and reassure, monitor closely over first 2-3 minutes
6. Reassess lung sounds and vital signs every 3-5 minutes
7. In-line nebulizer treatments may be administered at the same time
8. Provider can administer **Nitroglycerin** while using CPAP by lifting mask off momentarily
9. Remove CPAP if patient continues to worsen and consider advanced airway measures

Precautions:

1. CPAP may cause a drop in BP due to increased intrathoracic pressure
2. Watch for GI distention, which may lead to vomiting
3. Patients can become claustrophobic or unwilling to tolerate mask during initial administration, watch closely and coach

Special Notes:

1. Proceed to advanced airway for patients with worsening respiratory distress or respiratory failure
2. Should not be used in children <12 years
3. Advise receiving hospital of CPAP use so they can prepare