

AIRLINK CRITICAL CARE TRANSPORT

CPAP/BIPAP

Objective:

1. Define contraindications, indications, risks, procedure and documentation for the use of BiPAP/CPAP.
2. To improve gas exchange.
3. To decrease work of breathing.
4. To decrease the need for endotracheal intubation.

Indications:

1. CPAP

Respiratory distress/hypoxemia secondary to CHF, acute pulmonary edema, pneumonia, asthma, and/or COPD without ventilatory failure.

2. BiPAP

Respiratory distress/hypoxemia secondary to CHF, acute pulmonary edema, pneumonia, asthma, and/or COPD with impending or existing ventilatory failure.

Equipment:

1. LTV 1200 ventilator, Non-Vented mask, vent circuit, head strap
2. Oxygen and connectors

Procedure:

1. Obtain report from sending agency
2. Assess patient
3. Explain procedure
4. Apply mask and ensure a good fit with minimal leak

BiPAP

- a. Utilize current patient settings if available
- b. If initiating BiPAP start with 12 of IPAP and 4 of EPAP
- c. Titrate to patient comfort and/ or vital sign improvement

CPAP

- a. Initiate CPAP at 5- 7.5 cmH₂O
 - b. Titrate to patient comfort and vital sign improvement
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7. Reassess for adequate ventilation , oxygenation and comfort
 - a. Breath sounds
 - b. Oximetry
 - c. Patient comfort and anxiety
 8. Obtain ABG in hospital or in route on the Istat analyzer
 9. Discontinue BiPAP/ CPAP and consider intubation if
 - a. Significant decline in mental status
 - b. Decrease in BP < 90 systolic
 - c. Worsening ABG's, hypoxemia, or respiratory fatigue

Contraindications

1. Pneumothorax
2. Respiratory arrest
3. Decreasing level of consciousness
4. Hypovolemic shock

5. Chest trauma
6. Persistent nausea and vomiting
7. Facial anomalies/ stroke/ facial trauma
8. Active GI bleeding or recent gastric surgery
9. Nausea and vomiting

Side Effects

1. Gastric distention, vomiting ,aspiration
2. Hypotension
3. Pneumothorax
4. Drying of secretions/ mucous plugging
5. Corneal drying
6. Anxiety

Documentation

1. Document IPAP, EPAP, and CPAP levels.
2. Response to treatments.
- 3.

References:

1. Emergency Medicine, A Comprehensive Study Guide. Sixth Edition. American College of Physicians. Tintinalli et. al. 2010
2. James F Goss, MHA, MICP/ From the February 2008 Issue Journal of Emergency Medicine
3. Murray and Nadal's Textbook of Respiratory Medicine. 5th edition. Philadelphia PA: Saunder Elsevier; 2010: chapter 39

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