SwedishAmerican EMS
STANDING MEDICAL ORDERS
EMT – Basic

SMO: Continuous Positive Airway Pressure Ventilation (CPAP)

Overview: CPAP is the application of positive end expiratory pressure by facemask for relief of hypoxemia that does not respond to conventional therapy. Patient must be able to adequately ventilate spontaneously. The increase in airway pressure allows for better diffusion of gases and reexpansion of collapsed alveoli, resulting in improved gas exchange and reduction in the work of breathing.

The objective for the use of CPAP is

- To relieve hypoxemia that does not respond to conventional therapy
- To reduce the need for endotracheal intubation and shorten hospital stay

*****CPAP is to be used only by Providers that have been approved by their EMSMD*****

INFORMATION NEEDED

__ Patient History
__ Respiratory rate and use of accessory muscle
__ Pulse oximeter

OBJECTIVE FINDINGS

Hypoxemia secondary to Congestive Heart Failure / Pulmonary Edema/COPD
Respiratory Distress – two or more of the following

- Retraction or use of accessory muscles
- Respiratory rate greater than 25
- Pulse oximeter less than 92%

GENERAL TREATMENT

__ Routine Medical Care – with continuous pulse ox monitor
__ Refer to Pumonary Edema and Wheezing protocols as necessary
__ 100% O2 by non-rebreather mask – while preparing for CPAP
__ Apply CPAP Generator and connect tubing and mask
__ Coach patient to place mask over their mouth and nose, then firmly attach mask
__ If wheezing, perform in-line Albuterol Nebulizer treatment
__ If patient deteriorates, remove CPAP, ventilate with BVM and consider airway insertion

PROCEDURE

__ BSI
__ Oxygenate patient with 15 lpm via non-rebreather while setting up CPAP
__ Connect CPAP generator to portable oxygen regulator
__ Open CPAP disposable package and attach patient corrugated tubing to the bottom of generator and add filter to side of generator
__ Attach other end of tubing to the bottom of the mask
__ Attach PEEP valve to the front of the mask
__ Connect head strap to top and one side of mask
__ Turn on oxygen supply
__ Coach patient to place mask over their mouth and nose. Then firmly attach mask using final connection on the side of mask
__ When patient is in the ambulance "quick connect" generator to on board oxygen. Upon arrival at hospital "quick connect" back to the portable oxygen
__ Monitor patient
__ If at any time you note any of the contraindications listed stop CPAP, ventilate with BVM and consider airway insertion

Note: If albuterol is indicated cut patient corrugated tubing at first smooth part (closest to the patients face) and place "t" connector between tubing and administer albuterol

Documentation of adherence to protocol:

__ Document indication for CPAP
__ Vital Sign and pulse oximeter before and during CPAP
__ Document assessment of respiratory distress before CPAP
__ Time CPAP started
__ Patient tolerance
__ Effects / adverse reaction

Medical Control Contact Criteria

__ *Contact Medical Control if any questions arise regarding the best treatment options for the patient.

PRECAUTIONS AND COMMENTS

Contraindications

- Systolic blood pressure less than 90 mmHg
- Respiratory or Cardiac Arrest
- Inability to maintain patent airway
- Major trauma
- Vomiting or active GI bleeding
- Pneumothorax

Complications

- Barotrauma (very rare)
- Claustrophobia