RESPIRATORY DISTRESS

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DATE: February 2013

Information Needed:

- History: fever, sputum production, medications (bronchodilators, diuretics) asthma, COPD, exposures (allergens, toxins, fire/smoke), trauma (blunt/penetrating)
- Recent use of sildenafil (Viagra®) or other erectile dysfunction medications
- Symptoms: chest pain, shortness of breath, cough, itching

Objective Findings:

- Respiratory rate, rhythm, and pattern
- Breath sounds
- Heart rate and rhythm
- Pulse oximetry, initially and after interventions
- End tidal CO_2 if available
- Cough
- Rash, urticaria
- Work or effort of breathing
- Blood pressure
- Skins signs, perfusion
- Fever
- Mental status
- Evidence of trauma

Treatment:

- Assess ABC's, secure a patent airway, measure pulse oximetry, and administer high flow oxygen via non-rebreather mask or BVM, suction as needed

Bronchospasm/ Wheezing/Asthma/COPD

- History of asthma or COPD.
- For mild - moderate distress, inhaled albuterol 2.5 - 5 mg via nebulizer, repeat as necessary until there is improvement.
- For severe distress with any of the following: cyanosis, accessory muscle use, inability to speak >2 words, decreasing level of consciousness and no response to inhaled albuterol, consider epinephrine (1:1,000) 0.3 mg IM in the thigh. Epinephrine should only be given if the patient has no known history of coronary artery disease or stroke. Use with extreme caution in patients over 35 years of age.

- Attempt endotracheal intubation only if the patient exhibits progressive signs and symptoms of respiratory failure.

Congestive Heart Failure (hypertension, tachycardia, JVD, wheezing, edema, rales)

- Nitroglycerin 0.4 mg SL, repeat every 3-5 minutes if SBP remains >90. IV is not required prior to NTG administration. Continue nitroglycerin administration throughout the duration of the call, if SBP >90.
- IV access
- Consider morphine sulfate when nitroglycerine is contraindicated or after 3 nitroglycerin doses if there is discomfort suggestive of cardiac distress.
- Consider morphine sulfate 2 - 5 mg slow IVP for discomfort. May repeat morphine in 2-5 mg increments every 5 minutes or more up to 10 mg.
- If unable to establish an IV up to 5 mg of morphine sulfate may be administered IM. May repeat in up to 5 mg increments every 10 minutes to a max of 10 mg.
- Prior to the administration of morphine sulfate, and prior to each repeat dose, the patient's pain and vital signs should be reassessed. The patient must have a SBP>90 mmHg, respirations>12, and awake to report pain.
- If hypotensive with SBP <90 (cardiogenic shock), administer Dopamine 5 mcg/kg/min IV infusion. If inadequate response, may titrate every 5 minutes in 5 mcg/kg/min increments to maintain SBP > 90mmHg. Maximum dose is 20 mcg/kg/min. Consider base physician contact
- Consider albuterol 2.5 - 5 mg via nebulizer for significant wheezing
- Continuous Positive Airway Pressure (CPAP) may be considered if tolerated and available for patients in moderate or severe respiratory distress (may use albuterol with CPAP)
- Attempt endotracheal intubation if patient exhibits progressive signs and symptoms of respiratory failure

Upper Airway Obstruction

- Relieve obstruction (position, suction, Heimlich maneuver, abdominal thrusts), visualization and removal with Magill Forceps, Endotracheal Tube (ET) as needed

Severe Allergic Reaction/Anaphylaxis (itching, rash, wheezing)
(See Allergic Reaction Protocol)

Precautions and Comments:

- Supplemental oxygen should not be withheld in COPD patients, but it may decrease respiratory rate.
- Do not administer nitroglycerin to patients who have taken sildenafil (Viagra®) or other erectile dysfunction medications within the last 48 hours.
- Unless contraindicated, always administer at least 3 doses of nitroglycerine prior to administration of morphine.

- Morphine is to be used with caution for patients with congestive heart failure in pulmonary edema and the maximum dose is 10 mg. Respiratory effort as well as pulse oximetry should be monitored carefully.
- Epinephrine 1:1000 is administered by the intramuscular route for respiratory distress. To provide a potent dose, it should be administered in the thigh and used in patients 35 and under without history of CAD or stroke.
- The ETs placement and patency must be maintained at all times. Confirm ET position (reassess and document) with any patient transfer
- Rapid deterioration or decreased breath sounds have several causes. These include: tube dislodgement into the esophagus, tube migration into right main stem bronchus, secretions in the tube, pneumothorax. Confirm by direct visualization and CO_2 detector. Consider reintubation.