Pediatric Respiratory Distress

Signs and Symptoms

- Shortness of breath, difficulty breathing
- Increased work of breathing
- Accessory muscle use
- Prolonged exhalation, pursed lip breathing
- Bilateral wheezing, rhonchi, stridor
- Pallor and/or cyanosis
- Cannot speak full sentences
- Intercostal retractions
- Tachycardia
- Bradycardia is an ominous sign

History

- Asthma or reactive airway disease (prior attacks, severity)
- Cardiac problems
- Recent diagnosis of pneumonia, bronchiolitis, RSV
- Medications, bronchodilators, steroids
- Food/medication/venom allergies
- Toxic exposure, smoke inhalation

Differentials

- Asthma
- Croup
- Bronchitis/Bronchiolitis
- Pneumonia
- Anaphylaxis
- Foreign body aspiration
- CHF
- Toxic exposure
- Epiglottitis
- Cystic Fibrosis

WARNINGS

Alubuterol (Proventil®) may be harmful in patients with heart disease or with HR over 200. Consult medical control for these cases.

Care: Pediatric Patients only

B E I P

Follow General Directive #3, Orders for all Patients.
Follow Non-cardiac Protocol # 1 Airway Management.

Wheezing

B

Assist patient with prescribed inhaler or nebulizer.

E I P

Alubuterol (Proventil®) 2.5 mg and **Ipratropium (Atrovent®)** 0.5 mg via nebulizer.

Reassess.
If inadequate response:

E I P

Establish IV access

E I P

Administer **Methylprednisolone (Solu-medrol®)** 2mg/kg up to 125mg IV/IM.

E I P

Alubuterol (Proventil®) 2.5 mg and **Ipratropium (Atrovent®)** 0.5 mg via nebulizer. May repeat once if inadequate response.

If severe distress:

(I) (P)

Epinephrine (1:1000) 0.01mg/kg up to 0.5 mg IM.

(I) (P)

Consider **Magnesium Sulfate** 25mg/kg up to 2 grams IV drip over 20 minutes.

No Wheezing or Stridor

Supportive care and Consult Medical control as needed.

Stridor

E I P

Epinephrine (1:1,000) 2mg plus 1ml saline via nebulizer.

Reassess.
If inadequate response or severe distress consult Medical control as needed to discuss use of steroid or IM epinephrine.

Pearls

- Wheezing is generally noise produced by lower respiratory tract (bronchioles).
- Stridor is generally noise produced in upper airways on inspiration (larynx, epiglottis, trachea). May be best heard with stethoscope on neck.
- If wheezing is a result of an allergic reaction, go to Non-cardiac protocol #2 Allergic Reactions.
- Focal/asymmetric wheezing may be seen in pneumonia or foreign body aspiration.
- A quiet or silent chest is an ominous sign of a critically ill asthmatic and may signal impending arrest.
- Intubated asthmatics require decreased respiratory rates to prevent breath stacking.
- Patients should generally be in a position of comfort with attention to allowing parent/guardian to remain with patient as appropriate. Separation from parent/guardian or an overly aggressive approach may cause anxiety and exacerbate respiratory distress.
- Infants with nasal congestion may benefit from 2 gtts Normal Saline in each nostril with bulb syringe suctioning.
- Magnesium administration requires cardiac monitor.

Performance Indicators

- Proper assessment and treatment is performed and documented.