Pediatric Respiratory Emergencies

In EMS, we deal with patients that can't breathe. It can be intense, but we handle it. We deal with pediatric patients. It can be intimidating, but we handle it. How about pediatric patients who can't breathe? That can be downright scary! We will review a few of the pediatric respiratory problems that you may encounter.

Asthma

A condition where airways narrow, swell, and produce extra mucous.

- Signs and symptoms can include: shortness of breath, chest tightness/pain, coughing, and wheezing.
- Causes can include: airborne allergens (dust, pollen, mold, etc.), respiratory infections, physical activity, cold air, smoke, and some medications (beta-blockers, aspirin, ibuprofen, naproxen).
- Treatment:
    - Administer 100 percent oxygen via mask (or highest concentration of oxygen patient will tolerate).
    - Let the child assume a position of comfort and disturb him or her as little as possible.
    - Consider IV/IO access with a maintenance rate or a normal saline bolus of 20 ml/kg if dehydration is present.
    - Administer an albuterol aerosol treatment or assist patient with personal medication administration.
    - Consider solu-medrol.
    - If severe distress is noted, consider racemic epinephrine via nebulizer, SQ or IM epinephrine (1:1000), or magnesium sulfate IV/IO.
    - Intubation may be considered for impending respiratory failure.

Epiglottitis

A potential life-threatening condition when the epiglottis swells, blocking airflow into the lungs.

- Signs and symptoms include: fever, severe sore throat, high-pitched sound when breathing (stridor), difficult or painful swallowing, drooling, anxious/restless behavior, and the tri-pod position or leaning forward.
- Causes can include: severe bacterial infections or physical injury (direct burn or swallowing a foreign object).

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Epiglottitis (continued)

- Treatment
  - AVOID ANY AGITATION! Allow patient to remain in a position of comfort and disturb as little as possible. Minimize any invasive procedures.
  - DO NOT examine the child's throat or place anything in the mouth.
  - RAPID TRANSPORT TO DEFINITIVE CARE.
  - Humidified oxygen via blow-by or as tolerated by child
  - Consider a DuoNeb if there are no signs of an impending airway obstruction.
  - In respiratory arrest, assist ventilations with a BVM and higher pressures until patient can be safely intubated.

THE GOAL IS TO KEEP THE PATIENT CALM AND TO PROVIDE RAPID TRANSPORT.

Croup-A viral infection of the upper airway which obstructs breathing, usually between ages of six months to three years.

- Signs and symptoms usually start as a "common cold" with fever, then progress to a loud, barking cough that is usually worse at night.
- Treatment:
  - Allow for a position of comfort and take measures to soothe the patient.
  - Minimize invasive procedures.
  - 100 percent humidified oxygen, if possible.
  - Most cases are mild and can be treated at home.
  - For more severe cases, consider:
    - IV/IO access.
    - Racemic epinephrine via nebulizer.
    - Epinephrine (1:1000) SQ or IM.
    - Decadron PO, IM, IV, or IO.
  - If impending respiratory failure, intubation may be needed:
    - Consider ETT 0.5 mm smaller than expected for age.
    - May be able to maintain ventilation on a BVM until patient can be safely intubated.

These are guidelines only. Always remember to follow local policies, procedures, and medical control.

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