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- **CROUP.**

This is an acute inflammation of the upper airway, i.e. the larynx or "wind pipe", the vocal cords may become swollen and an acute attack is clinically known as laryngospasm. It is the child version of an adult acute laryngitis.

It is most common in children aged 6 months - 4 years. On occasion, younger babies or older children may have a croup episode, but this is very unusual, and another cause must be suspected.

- **Risk Factors associated with croup:**

- 1) Viral infection: 85% present as a viral upper respiratory infection, "cold".
- 2) Allergies: 10% present as an acute allergic reaction to an environmental antigen or food, it happens mainly at night and without fever or cold symptoms, it is also known as Spasmodic Croup.
- 3) Other causes: 1-5% may present as any of the following,
  - a) Epiglottitis, this is a feared bacterial infection of the epiglottis, a real pediatric emergency that without prompt intervention is 100% lethal.
  - b) Gastroesophageal Reflux (GE-Reflux), croup - like cough is common at any age.
  - c) Other extremely rare anomalies: vascular ring, TE fistula, etc...

- Clinical symptoms and signs of croup:

- 1) Hoarseness is common and stridor is present, a whistle - like sound when the child inspires.
- 2) **Barking cough**, a high pitched metallic cough, like a "barking seal".
- 3) Shortness of breath, the child has very labored and difficult breathing also known as "air hunger".
- 4) **Fever**, this is not a pleasant sign because croup usually courses without fever or low grade temperature, but if high fever is present then urgent consultation with the pediatrician is necessary to rule out epiglottitis.
- 5) Drooling, another sign of serious illness, immediate consultation is necessary to rule out epiglottitis.
- 6) Cyanosis, i.e. bluish discoloration of face, lips, ears or skin, this means poor oxygenation from difficulty breathing, again immediate consultation is warranted.

- Treatment:

- a) Mild croup generally requires administration of steroids, either IM or inhaled by a nebulizer breathing treatment.
- b) Severe croup always requires hospital admission for oxygen administration, IV fluids, inhaled medications and steroids or antibiotics when necessary.

- Home recommendations:

- Use a cool mist humidifier, this helps decrease the swelling of the larynx.
- Break the laryngospasm by having the child breathe cold air for 10-15 minutes, for example from an air conditioner or freezer.
- Hydrate your child with abundant clear liquids such as Pedialyte or juices diluted  $\frac{1}{2}$  strength with water, jello water, iced tea and Gatorade ®.
- Nebulized breathing treatments according to the pediatrician's instructions.