

THE CHILD WITH A RESPIRATORY DISORDER

CHAPTER 25

NIOMI QUINTREOS BSN, RN

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HOW CHILDREN DIFFER FROM ADULTS

Infant uses abdominal muscles and diaphragm for breathing

Infants are nose breathers

Trachea is not yet firm

Respiratory rate is higher; breathing pattern is irregular

Airway diameter is smaller

Respiratory illness is always potentially more serious in children than adults.

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NASOPHARYNGITIS

Upper respiratory tract infection

A cold, most common infection of the respiratory tract

SIGNS/SYMPTOMS

- FEVER
- NASAL DISCHARGE
- IRRITABILITY
- COUGH
- SORE THROAT
- VOMITING
- DIARRHEA

TREATMENT

- REST
- CLEAR AIRWAYS
- FLUID INTAKE
- FEVER PREVENTION
- SKIN CARE



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ACUTE PHARYNGITIS

- INFLAMMATION OF THE STRUCTURES OF THE THROAT
- COMMON IN CHILDREN 5 TO 10 YEARS OLD
- VIRUS MOST COMMON CAUSE
- *HAEMOPHILUS INFLUENZAE* MOST COMMON IN CHILDREN YOUNGER THAN 3 YEARS
- SYMPTOMS: FEVER, MALAISE, DYSPHAGIA, AND ANOREXIA, CONJUNCTIVITIS, RHINITIS, COUGH, AND HOARSENESS WITH GRADUAL ONSET; LASTS NO LONGER THAN 5 DAYS
- IN CHILD OLDER THAN 2 YEARS, STREPTOCOCCAL PHARYNGITIS MAY INCLUDE FEVER OF 40°C (104°F).
- MAY REQUIRE ANTIBIOTICS IF CAUSE IS BACTERIAL

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ACUTE PHARYNGITIS

SIGNS/SYMPTOMS

- HIGH FEVER
- MALAISE
- DYSPHAGIA
- ANOREXIA

THROAT CULTURE,
PHYSICAL EXAM

TREATMENT

- REST
- FLUIDS
- TYLENOL
- THROAT GARGLES
- STREP THROAT:
PCN/EES X 10
DAYS

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SINUSITIS - CHILDHOOD

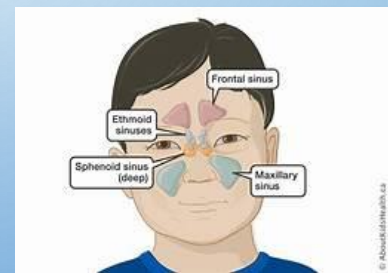
Inflammation of the tissues in the sinuses

SIGN/SYMPTOMS

- URI THAT LASTS MORE THAN 10 DAYS
- COUGH DURING THE DAY
- HALITOSIS
- TOOTH PAIN
- PERIORBITAL SWELLING

TREATMENT

- ANTIBIOTICS FOR 10-14 DAYS



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CROUP SYNDROMES

- SIGNS AND SYMPTOMS
 - BARKING COUGH
 - INSPIRATORY STRIDOR
 - CAN BE BENIGN OR ACUTE

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LARYNGOMALACIA

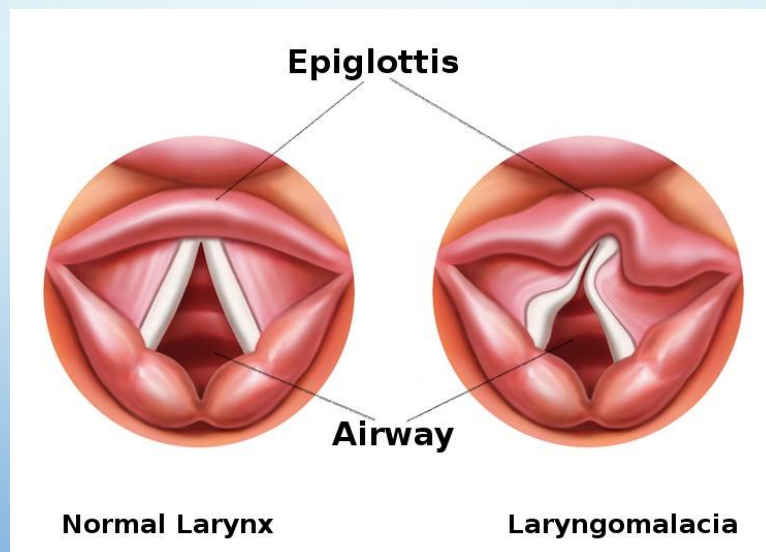
(Congenital Laryngeal Stridor)

****Weakness of airway walls****

Signs: crowlike stridor on inspiration, inspiratory retractions

Treatment: Slow, small feedings, prone or side-lying position, reassurance to family.

This will clear spontaneously as the child grows and muscles strengthen.



SPASMODIC LARYNGITIS

(Spasmodic Croup)

****Caused by virus, allergy, GER & psychological trigger****

Usually in children between 1-3 yrs

Signs: Sudden onset of barking @ night, brassy cough, child may appear anxious

Treatment: Increase humidity (take the child into the bathroom with a hot shower running), give fluids

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ACUTE CROUP

****Laryngotracheobronchitis****

Signs: Barking, brassy cough, stridor, crying worsens symptoms, dec. breath sounds, tachycardia

Treatment: Home – increase humidity, increase fluids

Hospital: Mist tent, IV fluids, nebulized epinephrine, steroids, rest, oxygen

EPIGLOTTITIS

Swelling of tissues above vocal cords

Usually caused by H. Influenzae type B

Signs: [abrupt onset] sit up straight, drooling, restless, croaking sound, no cough, appears anxious

LIFE-THREATENING MED. EMERGENCY

NO TONGUE BLADES

Treatment: Immediate tracheotomy or ET placement, oxygen, antibiotics



BRONCHITIS

****Infection in the bronchioles****

Usually secondary to cold or communicable disease , age under 4.

Signs: "hacking" cough; preceded by URI or "cold"

Treatment: Cough suppressants at bedtime, fluids

Antihistamines and antibiotics are usually not helpful

BRONCHIOLITIS

****Viral infection of the bronchioles****

In infants 50% caused by RSV

Signs: URI with mild fever and nasal discharge, wheezy cough, increased RR, irritability, age 6 months to 2 year

Treatment: Position to help with respirations, IV fluids, bronchodilator therapy, strict I & O.

Antibiotics and steroids are NOT indicated

RSV RESPIRATORY SYNCYTIAL VIRUS

Spread by direct contact and infected fomites; incubation period approximately 4 days

Diagnosed by NP wash for RSV

Signs: Tachypnea, Tachycardia, copious nasal secretions, decreased intake, fussy, wheezing on auscultation

Treatment: Contact Isolation, oxygen, IV fluids, daily weights, suctioning – NO antibiotics

Synagis IM given to high-risk infants.

PNEUMONIA

Inflammation of the lungs, specifically the alveoli – bacteria or virus

Diagnosed by X-ray.

Signs: Cough(dry then productive), high fever, tachypnea, chest pains, retractions

Treatment: Oxygen, antipyretics prn, antibiotics, rest, fluids, perform chest physiotherapy, encourage cough and deep breathing, postural drainage, cool mist humidifier

Caused by: Group B strep (newborns), Chlamydia (3 wks to 3 mos), H. Influenzae type.

SMOKE INHALATION

- CAUSED BY CARBON MONOXIDE POISONING
- 3 STAGES OF INHALATION INJURY
 - PULMONARY INSUFFICIENCY IN THE FIRST 6 HOURS
 - PULMONARY EDEMA FROM 6 TO 72 HOURS
 - BRONCHOPNEUMONIA AFTER 72 HOURS, WHICH MAY CAUSE ATELECTASIS
- TREATMENT
 - OXYGEN SUPPLEMENTATION, I&O, ABG'S, HYPERBARIC OXYGENATION

TONSILLITIS AND ADENOIDITIS

Symptoms: Mouth breathing, difficulty swallowing, pain

Treatment: Vaporizer, gargles, lozenges, Tylenol, Surgery

Surgery: Not indicated during an acute illness; can be done as an outpatient.

POST-OP TONSILLECTOMY ADENOIDECTOMY

Position partly on side/partly on abdomen w/ uppermost knee flexed (Sims' position)

Hemorrhage most common post-op complication

Watch for signs of bleeding (increased HR, increased RR, restlessness, frequent swallowing.

No milk products

Avoid coughing, clearing throat or blowing nose

Tylenol for pain

ALLERGIC RHINITIS (HAY FEVER)

****Inflammation of nasal mucosa due to allergic response****

Signs: congestion, clear nasal discharge, sneezing, itchy eyes, “allergic salute”

Treatment: Antihistamines, decongestant, allergy shots

Dust control, HEPA filters

ASTHMA

Syndrome caused by exposure to various stimuli that results in constriction of the airway

Diagnosis is made by history, PE, response to bronchodilator therapy

Signs: Cough, **expiratory wheeze**, flaring, retractions, restlessness

Treatment: Bronchodilators (albuterol): **dilate the bronchioles**, anti-inflammatory meds, antibiotics prn

NEBULIZED AEROSOL THERAPY

- BREAKS UP MEDICATIONS INTO MINUTE PARTICLES THAT ARE DISPERSED THROUGHOUT THE RESPIRATORY TRACT
- DROPLETS MUCH FINER THAN THOSE CREATED BY INHALERS
- TREATMENT CAN TAKE 10-15 MINUTES
- ENCOURAGE CHILD TO TAKE SLOW, DEEP BREATHS BY MOUTH
- ASSESS VS, OXYGEN SATURATION, AND LUNGS WHEN THE TREATMENT IS COMPLETED
- MONITOR FOR ADVERSE REACTIONS

[Nebulizer](#)

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METERED-DOSE INHALER

- HANDHELD DEVICES THAT ALLOW SELF-ADMINISTER MEDICATIONS ON AN INTERMITTENT BASIS



[Inhaler Use](#)

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STATUS ASTHMATICUS

This is a medical emergency

- Continued severe respiratory distress that is not responsive to drugs
- ICU admission, O₂, IV medications, and frequent VS including pulse oximetry readings

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CYSTIC FIBROSIS

Defect on Chromosome #7 – inherited from both parents

Effects

- Thick mucous gland secretions
- Loss of electrolytes in sweat

Multisystem

- Respiratory
- Digestive system
- Skin
- Reproductive system

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CYSTIC FIBROSIS

Signs: Bulky, foul-smelling stools, difficulty breathing, barrel chest, poor growth

Treatment: Aerosol therapy, postural drainage, expectorants, Pancreaze

Diagnosis is made by sweat test.

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CYSTIC FIBROSIS DIET

High calories

High protein

Moderate
fat

Extra salt

Supplements
of Vitamins
A, D, E & K

Increased
fluids

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CHEST PHYSIOTHERAPY

- SET OF TECHNIQUES THAT INCLUDE MANUAL OR MECHANICAL PERCUSSION, VIBRATION, COUGH, FORCEFUL EXPIRATION, AND BREATHING EXERCISES
- USUALLY PERFORMED BY RT

CHEST PHYSIOTHERAPY

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BRONCHOPULMONARY DYSPLASIA

Caused by high concentrations of oxygen over prolonged pd. of time

Signs: Wheezing, retractions, FTT, irritability, clubbing of fingers

Treatment: Fluid restriction, diuretics, bronchodilators, ?trach placement

Dx is made by history, Chest X-Ray and clinical manifestations

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SUDDEN INFANT DEATH SYNDROME SIDS

Happens between the ages 2 wks
and 1 yr with no known cause

During sleep, no cry

Prevention

- Back to Sleep
- Apnea Monitors