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The Child With Breathing Difficulties

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The Child with Breathing Difficulties:

Objectives

- To understand the structured approach to the child with breathing difficulties
- To describe the assessment and resuscitation of the child with life-threatening breathing difficulties
- To describe Key Features of the child with breathing difficulties
- To describe the emergency treatment of children with severe breathing difficulties

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Why Are Children So Vulnerable?

- Immunologically immature
- Airway size
- Chest wall compliance
- Respiratory muscles
- Control of breathing

Where the problem

- Respiratory
- Cardiac
- Metabolic

Breathing difficulties

Primary assessment

- Airway
- Breathing
- Circulation

  look for heart failure
- Disability
- Exposure

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How to assess

- Effort of breathing
- Efficacy of breathing
- Effects of inadequate breathing

Primary Assessment
Effort of breathing

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- Tachypnoea
- Recession
  - intercostal
  - sternal
  - subcostal
- Accessory muscle use
- Alar nasae flare
- Stridor and wheeze
  - inspiratory
  - expiratory
- Expiratory grunting

Primary Assessment

Efficacy and Effect of breathing

- Chest expansion
- Air entry
- Pulse oximetry
- Colour
- Pulse rate
- Mental status

Primary Assessment

Look for signs of heart failure

- Lung crepitations
- Tachycardia
- Raised jugular venous pressure
- Gallop rhythm
- Heart murmur
- Enlarged liver

Signs of Deterioration

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- Increasing recession
- Increasing respiratory rate
- Increasing pulse rate
- Fatigue
- Altered mental status
- Cyanosis

Initial Resuscitation

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- Open airway
- High flow oxygen
- Ventilatory support

Key Features

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- Stridor ⇒ upper airway obstruction
- Wheeze ⇒ lower airway obstruction
- Fever ⇒ pneumonia
- Heart failure ⇒ heart disease
- Ingestion ⇒ poisoning
- Urticaria/allergen ingestion ⇒ anaphylaxis

Stridor

Reassess airway

- Secretions – poor cough reflex
- Snoring – poor conscious level
- Loud stridor/cough – croup or FB
- Sudden onset/history – FB
- Soft stridor/septic – tracheitis, epiglottitis

Eppiglotitis

- Paediatric emergancy
- Short history
- Very ill scared child
- Drooling of saliva
- Sits with head extended
- Muffled stridor
- High fevr
- H ifluenzae. Now staph and strep. pyogenase

Managemnet

- Minimal disturbance
- High flow Oxygen
- Secure airway
- Start 3rd generation Cephalosporins
- Rifampicin for close contacts

Stridor

Epiglottitis emergency treatment

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- Oxygen
- Seek expert help to

  intubate and ventilate
- IV antibiotics

AVOID UNNECESSARY UPSET FOR CHILD

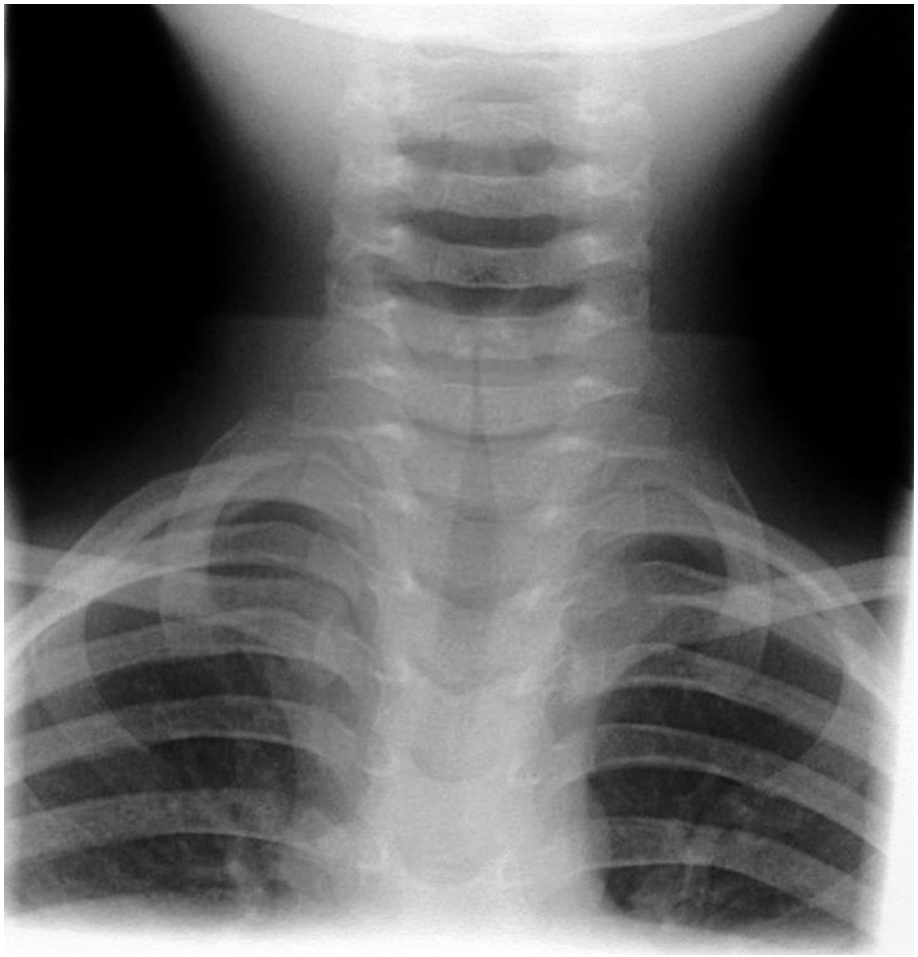
Bacterial tracheitis

- Important because epilotitis is rare now
- Caused by Staphylococcus aureus
- Ill septic child
- Barking cough and stridor
- In antibiotics
- High mortality

Acute laryngo-tracheo-bronchitis

- Commonly known as croup
- Mainly caused by Parainfluenzae virus
- Child has upper respiratory symptoms for few days
- Barking cough with loud stridor
- Less ill than epiglottitis
- Severity of airway obstruction vary
- Severe forms may need ventilation
- Adrenalin mobilization may help to buy time
- Nebulize budesonide of oral steroids

steeple or pencil sign



Foreign body removal manure

management

- If child can cough, it indicates that child has a patent airway. Encourage coughing.
- If child is unconscious start CPR
- If child is conscious but unable to cough perform the foreign body removal manure

FB inhalation

- Result in about 200 deaths annually in Sri Lanka
- Common among later part of infancy
- Should be suspected in a child who suddenly develop respiratory distress or collapse
- Management depend on condition of the child

Anaphylaxis

- Results in laryngeal oedema and respiratory failure
- Adrenalin 0.01 ml/kg (10 µg/kg) intramuscularly is life saving
- Nebulisation with adrenalin will also help

Needle cricothyotomy

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The Child with Breathing Difficulties:

Summary

- Primary assessment and resuscitation
- Key Features
  - Stridor
  - Wheeze
  - Fever
  - Heart failure
  - Ingestion / allergen
- Appropriate emergency treatment