

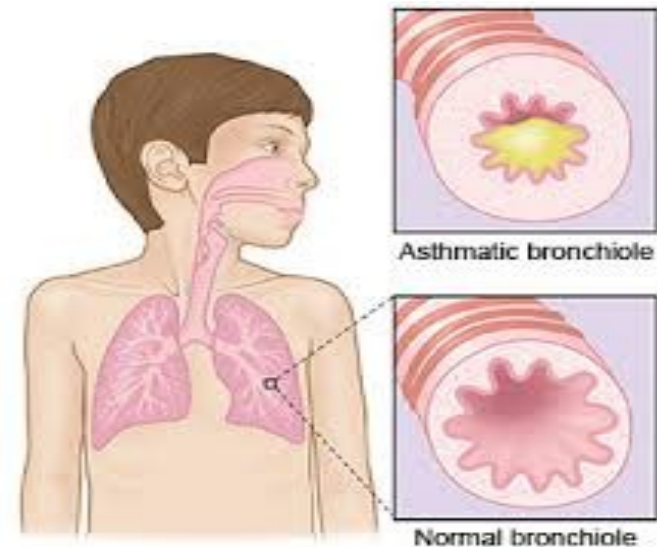
Bronchial asthma




Paediatric
Asthma


Definition

- Asthma =struggling for breath
- It is a chronic inflammatorydisorderof the lower airway due to temporary narrowing of the bronchi by bronchospasm,manifested as dyspnea,wheezing and excessive cough .





The lining of the bronchial tubes swells during an asthma attack, which causes the airways to narrow and reduces the flow of air into and out of the lungs.



– World Health Organization

Incidence

- Children between 5-10 years
- Boys are more effected than girls
- Allergic asthma is more common in children



Etiological factor

Factors Influencing the Development and Expression of Asthma

Host factors –

- Genetic
 1. Genes predisposing to atopy
 2. Genes predisposing to airway hyper responsiveness
 3. Obesity
 4. Sex

Environmental factors –

- Allergens –

1. Indoor – Domestic mites, furred animals (dogs, cats, mice), cockroach allergens, fungi, molds, yeasts.

2. Outdoor – Pollens, fungi, molds, yeasts.

- Infections (predominantly viral)

- Occupational sensitizers

- Tobacco smoke

1. Passive smoking

2. Active smoking

- Indoor/Outdoor air pollution

- Diet

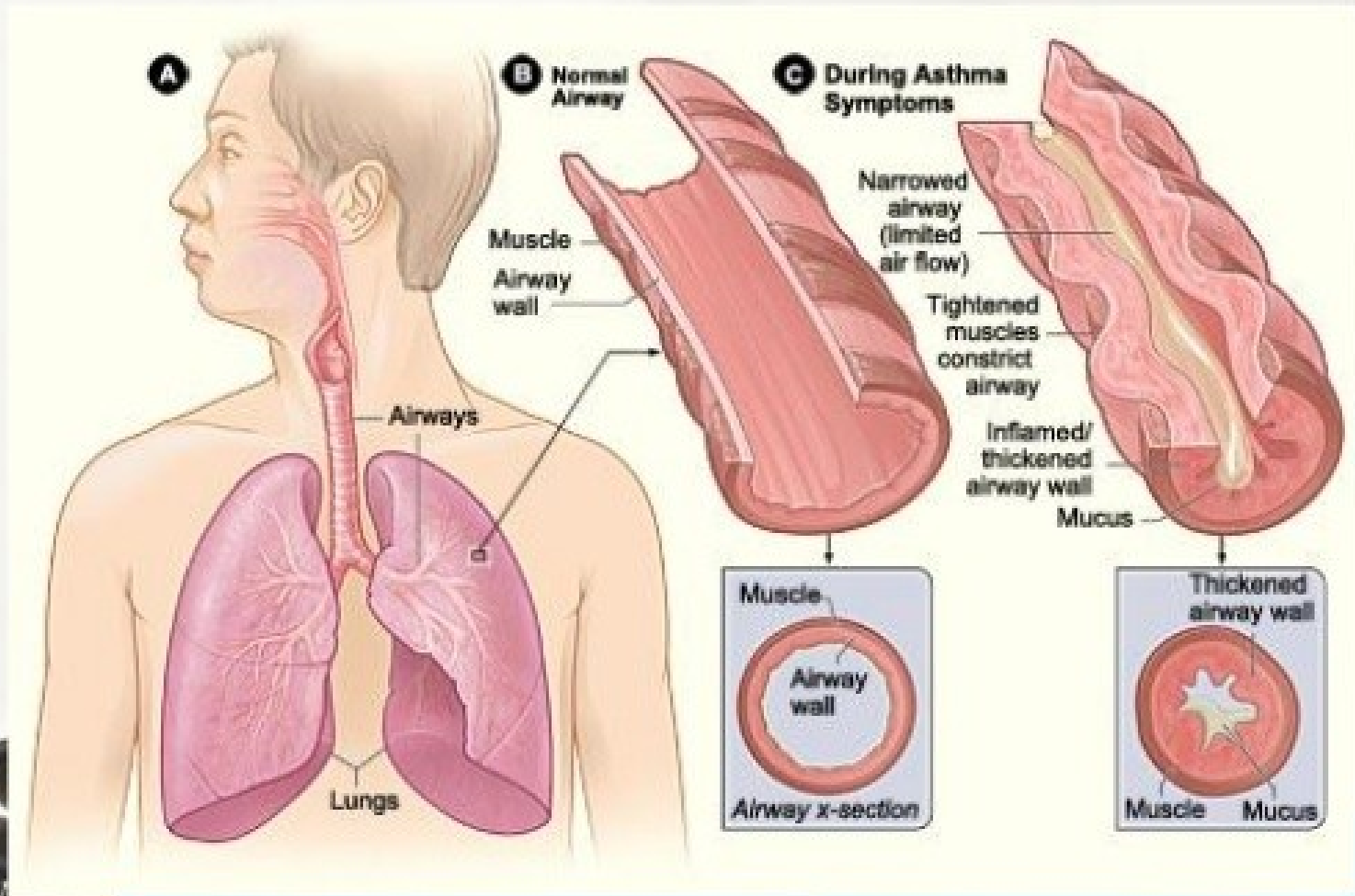
Risk factors of Asthma in younger children

- Sensitization to allergen.
- Maternal diet during pregnancy and/ or lactation.
- Pollutants (particularly environmental tobacco smoke).
- Microbes and their products.
- Respiratory (viral) infections.
- Psychosocial factors

Pathophysiology

- Inflammation and edema of the mucus membrane ,lining of the airway
- Increased secretions and accumulation of thick tenacious mucus,inflammatory cells and cellular debris within the bronchi and bronchioles,
- Spasm of smooth muscle of the bronchi .

Pathophysiology



Clinical manifestation

- Asthmatic paroxysmal Attacks mostly get in the night
- Nasal congestion
- Rhinitis
- Sneezing
- Coughing
- Urti
- Asthmatic aura-lightness of chest ,restlessness,itching ,polyuria,and mental excitement

- Typical attacks
- Dysnea
- Bouts of cough
- Expiratory wheezing
- Nasal flaring
- Sweating
- Exhaustion
- Tachycardia
- Cyanosis
- Pallor
- Abdominal pain and vomiting –severe cough

Status asthmaticus

- Wheezing continues to hours to days in spite of bronchodilator administration
- It is a severe form of asthma in which the airway obstruction is unresponsive to usual drug therapy
- Signs and symptoms – tachypnea, laboured respiration, use of respiratory accessory muscles, anxiety, unable to talk, anxiety, headache, diaphoresis, irritability, muscle twitching, tachycardia, increased BP,

Complications

- Emphysema
- Atelectasis
- Pneumothorax
- Bronchiectasis
- Respiratory failure
- CCF
- Steroid therapy may lead –growth failure, TB, poor academic achievement ,disturbed family function

Diagnosis

- History
- PE-hyperresonant sound
- Decreased air flow
- Prolonged whistling sound
- Presenting cough increase after exercise
- PFT
- Blood count
- Xray
- Allergy test –skin test ,IgE

Management

- Brochodilators –theophylline
- Steroidal therapy to support –corticosteroid-
beclomathazone, prednisolone ,sadrrenaline
- Beta 2 adrenergic agonist –
salbutamol,terbutaline
- Anticholinergic-ipratropium bromide
- Iv infusion –magnesium
sulphate ,ketamine,frusemide

- Expectorants
- Antibiotics
- Oxygen therapy
- Iv fluid maintenance dose
- Prop up position
- Calm and quiet environment

Thank you

