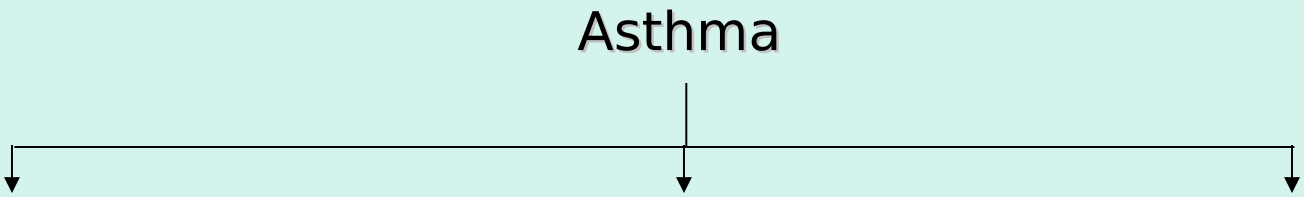
Respiratory System

- The asthma is considered to be extrinsic where the family history of allergies is episodic form
- The intrinsic asthma there is no family history of allergy and asthma
- The bronchial asthma leads to hypoxea

Clinically



Episodic form

- Attacks are relieved rapidly and completely By bronchodelator drug

Status Asthamaticus

- Attack is severe and persistent
- Does not respond to adrenaline and aminophylline
- Associated with respiratory insufficiency or failure

Chronic form

- Acute attacks from time to time
- Persistent dyspnoea and wheeze with varying severity

- Elimination of trigger factors
- e.g.:- Allergens
- Avoiding respiratory irritants
- e.g.:- Tobacco smoke & chemicals
- Psychological treatment
- **Drug therapy**
- E.g:-Bronchodilators, Antibiotics, Corticosteroids.
- Supportive measures

Drug Therapy in Acute Attack (Episode form)

- Adrenaline
- Isoprenaline
- Orciprenaline
- Salbutamol
- Aminophylline

Adrenaline Hydrochloride

Adrenaline hydrochloride

- Relieves bronchiospasm by action on beta receptors
- It is potent bronchodilator
- It relieves an acute attack
- It relieves pulmonary Congestion by constricting pulmonary arteries
- Prolonged use produces resistance

Adrenaline

- Administered subcutaneously
- Dose of 0.2 to 0.5 ml of 1 in 1000 aqueous solution

Caution

- Administration of Adrenaline immediate after **Isoprenaline inhalation cause sudden death**

Side Effects

- Palpitation
- Tachycardia.
- Tremor
- Headache.

Isoprenaline

- Acts on beta receptors of bronchi
- Administered sublingually
- Dose 10 to 20 mg.
- Used as inhalation

Side Effect :

- Cardiac stimulation

Orciprenaline

- Derivative of isoprenaline
- Acts by stimulation of beta receptors.
- Long duration of action and produces less cardiac stimulation.
- Effective orally , parenterally and by inhalation

Atropine and Hyoscine

- Anticholinergic drugs
- Useful in Chronic stage
- Produces drying of secretions
- Used in combinaion with other drugs

Salbutamol

- Act by stimulating selectively beta2 receptors
- Potent bronchodilator with less cardiac stimulant effect
- Resistant to inactivation by COMT
- Duration of action is long
- Can be given by oral and inhalation route

Aminophylline

- Useful in adrenaline resistant patients
- Acts directly on bronchial smooth muscle
- 0.25 mg in 20 ml of 10% glucose by slow intravenous injection

Ephedrine

- Sympathomimetic drug
- Acts on alpha and beta adrenergic receptors
- 30 mg at bed time in nocturnal asthmatic attack
- 60 mg to patients who get attack at day time
- Produces sleepless , prevented by combining with phenobarbitone

Status Asthamaticus

- Severe prolonged paroxysm of bronchial asthma
- Symptoms
    - Dyspnoea
    - Exhausted
    - Dehydrated.

Treatment of Status Asthamaticus

- Hydrocortisone hemisuccinate injection

  - 100-200 mg i/v as initial dose
  - Repeated every 1-2 hours
  - **Diazepam** 10 mg i/m if the patient is restless
  - Corticosteroids are given orally in tapering doses and withdrawn within 12 to 15 days.

Treatment of Status Asthamaticus

- Administration of oxygen
- Use of Antibiotics
- Artificial respiration
- Rehydration therapy either orally or by i.v infusion