BRONCHIECTASIS

Dr Yasoma Tilakaratna

DEFINITION

- Abnormal persistent dilatation of bronchial tree

- Basal areas of the lungs commonly affected

  (apical due to tuberculosis)

CAUSES

- Acquired

1. Infections

   Broncho-pneumonia(in childhood following measeles, whooping cough,Staph)

   Tuberculosis

2. Obstruction (tumor, foreign body)

3. Allergic

   broncho-pulmonary- aspergilosis

- Congenital

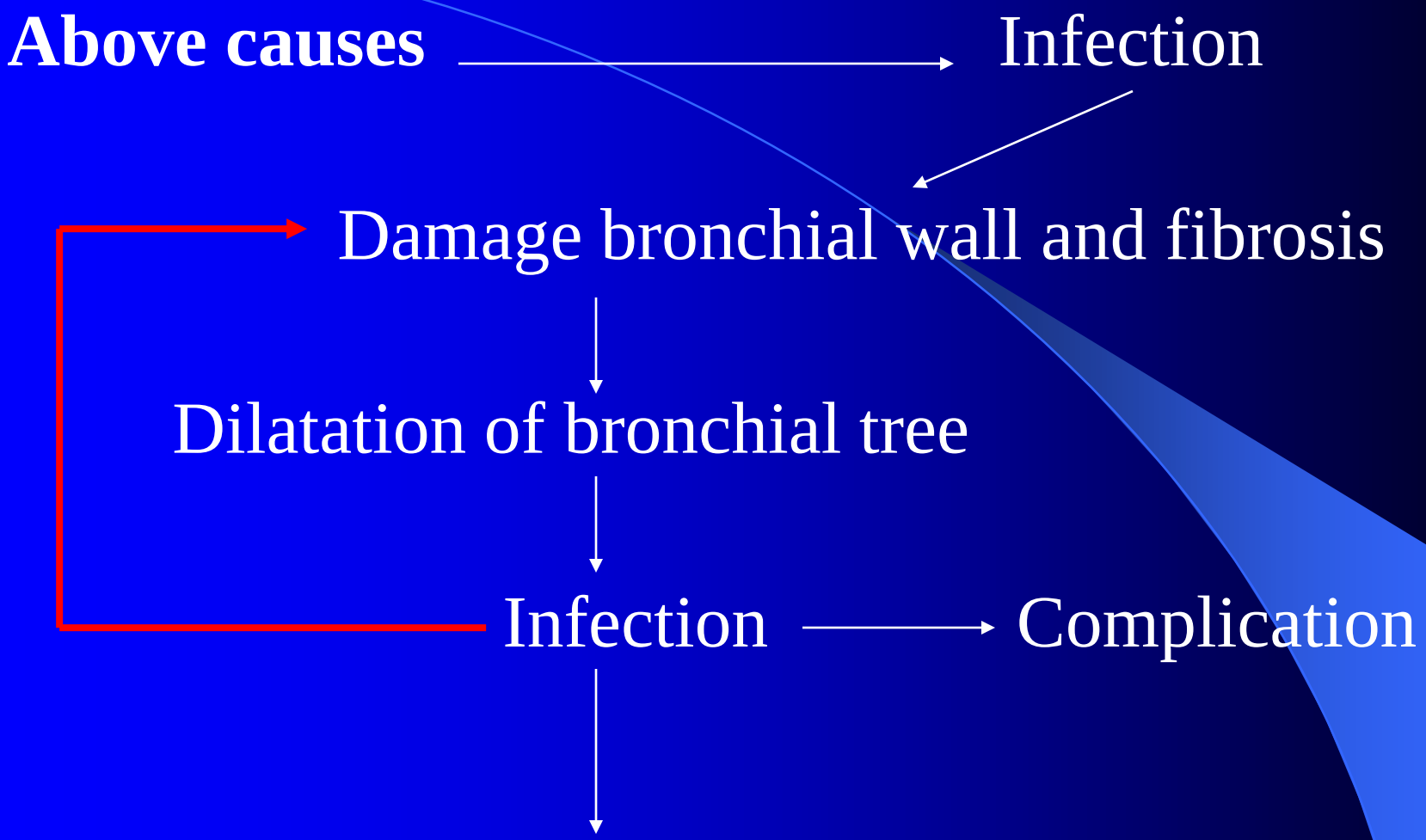
1. Cystic fibrosis(thick mucus, defective mucociliary action)
2. Ciliary dysfunction syndrome
3. Immunodeficiency

↓

Precipitate bacterial infection – recurrent

↓

bronchiectasis


Above causes
Infection
Damage bronchial wall and fibrosis
Dilatation of bronchial tree
Infection
Complication
Symptoms of recurrent/chronic infections or complications

CLINICAL PICTURE (chronic respiratory illness)

Early Stage

- Mild episodic cough with sputum (long standing)
- Get worse with infection
- Systemic symptoms are absent

Clinical picture ctd.

Severe

- Symptomatic - chronically

- Cough – chronic production of purulent, copious and foul smelling sputum (long standing)
- Chest pain – persistent
- Haemoptysis – on and off
- Shortness of breath- later due to chronic airflow obstruction.

Clinical picture ctd

Systemic symptoms- Prominent

- Fever
- Anorexia
- Loss of weight

SIGNS

- Emaciated
- Febrile
- Halitosis
- Clubbing

- Lungs - bilateral basal coarse crackles/crepitations

  Inspiration and Expiration

Complications

PULMONARY

1. Lung abcess
   -pneumonia
   -empyema
2. Massive haemoptysis
3. Chronic air flow obstruction
4. Pulmonary hypertension, cor-pulmonale
5. Respiratory failure

EXTRAPULMONARY

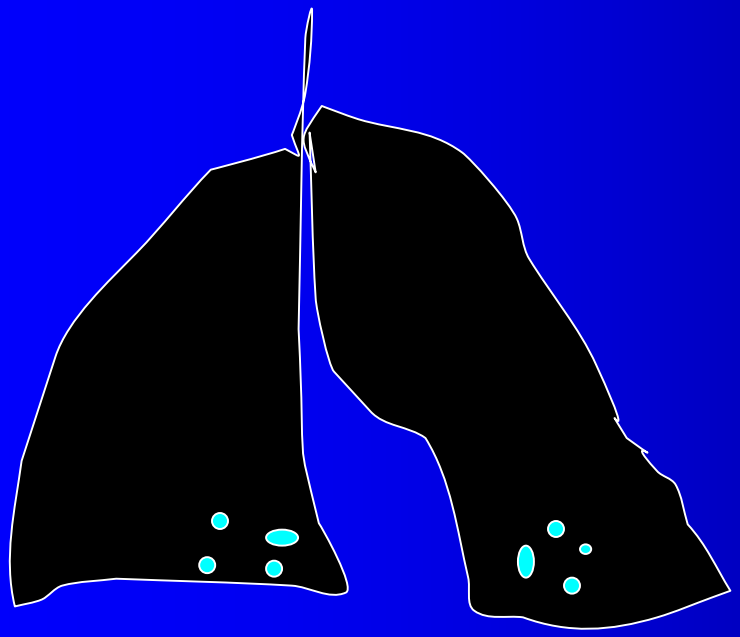
1. Septicemia
2. Amyloidosis
3. Cerebral abscess

Differential diagnosis

- Tuberculosis
- Fibrosing alveolitis
- Bronchial carcinoma
- COPD

Investigations
(Radiological)

Chest X-Ray - cystic changes



Cystic changes

Bilateral basal

Evidence of infection

-lobar

-patchy

Hyperinflated lungs

CT Chest – confirm the diagnosis

Other Investigations

Sputum culture (bacterial & fungal)

FBC / ESR (neutrophil leucocytosis)

ECG (features of pulmonary hypertension)

Investigations to look for the causes

(Sweat Sodium, Serum Immunoglobulin, X ray sinuses)


L
25

Less common Ix

- CT – high resolution —> confirms the diagnosis
- Lung function tests – severity of disease
- ABG – whether respiratory failure present or not
- Ix to look for the causes

  -Sweat sodium

  -Serum immunoglobulin levels

  -X ray sinuses etc.

Management

A).Drugs:

Antibiotics

oral /IV -may need prolonged treatment

gram (+) mainly

later gram(+) and gram (-)

1.Start with:

Cefuroxime / Cefotaxime/Ceftazidime IV

or

quinolones IV (Levofloxacin)

or

co-amoxyclav IV

2.Change to oral antibiotics

Other drugs

- Bronchodilators - salbutamol
  - theophyllin
- Mucolytics - expectorants
- Analgesics - NSAID for pleurisy
- Diuretics - for oedema –cor pul.
- O_2 inhalation - respiratory failure

B)PHYSIOTHERAPY

deep cough

postural drainage. +/- percussion

C)SURGERY young patients with bronchiectasis localized to one lobe or segment.

THANK YOU