

LEC 9

()Prognosis:

- 1-age
- 2-post-bronchodilator FEV1
- 3- wt loss: <21 BMI
- 4- pulmonary hpt
- 5- degree of airway obstruction: FEV1 <35
- 6- Excercise capacity: poor if < 150 m
- 7- measurment of dyspnea: if MRC > G4

()Acute exacerbation of COPD:

- *characterised by an increase in synptoms & deterioation in lung function.
- *caused by bacteria, viral & change in air quality
- *many pt can be managed at home with the use of increased dose of bronchodilators, steroid & AB.

So admission to hospital indicated in:

- 1- presence of cynosis
- 2- peripheral odema
- 3 presence of comorbidity
- 4- altered level of conc
- 5-Inadequate response of symptoms to outpatient management
- 6- Marked increase in dyspnea
- 7- Inability to eat or sleep due to symptoms
- 8- Worsening hypoxemia Worsening hypercapnia
- 9- Changes in mental status Inability to care for oneself (ie, lack of home support)
- 10- Uncertain diagnosis

in hospital do the followings:

()check PaO₂, PaCO₂, PH, CXR, ECG, CBC, BU, electrolytes, PFT & sputum for culture & sensetivity.

()O₂ therapy:

()bronchodilators:

()oral CS: 30 mg for 10 days indicated in:

1- if pt already on oral CS

2- if prevoiuos response of CS

3- failure to response to bronchodilators

4- 1st presentaion of disease

()AB:

()diuretics

()heparin

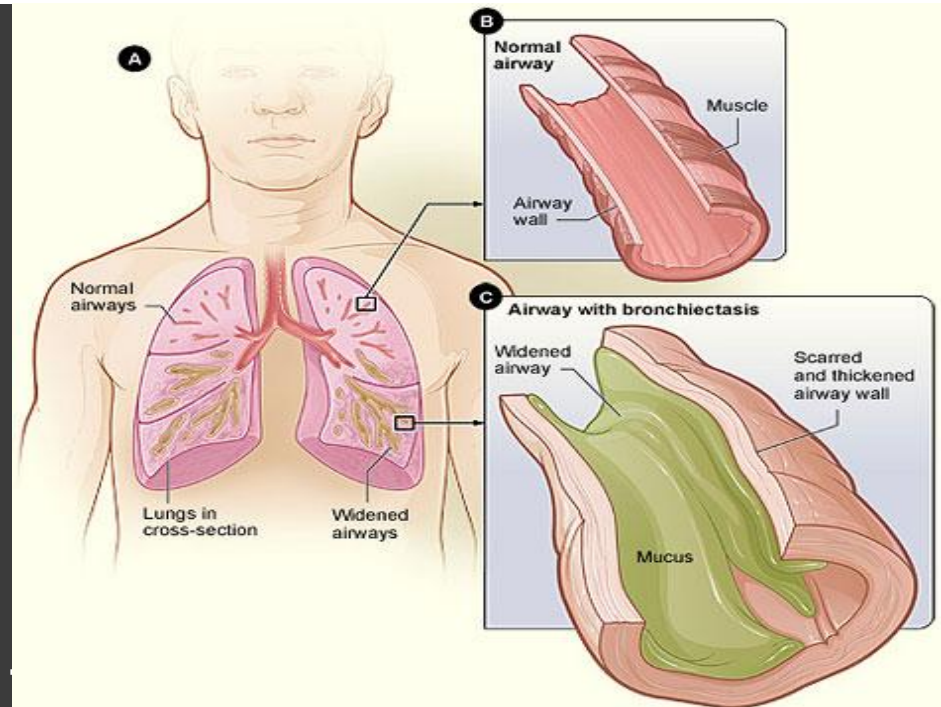
()NIV

()Complications:
*resp failure
*core-pulmonale
*rupture of bullae
lead to pneumothorax
*amyloidosis

Bronchiectasis: ž

()definition: abnormal dilatation of bronchi. Dilation of the bronchial walls results in airflow ž obstruction and impaired clearance of secretions because the dilated areas disrupt normal air pressure in the bronchial tubes, causing sputum to pool inside the dilated areas instead of being pushed upward. The pooled sputum provides an environment conducive to the growth of infectious pathogens, and these areas of the lungs are thus very vulnerable to infection.

When this happens, the bronchial tubes become more inelastic ž and compressed, creating a self-perpetuating cycle of further damage to the lungs.



() types: ž

There are three types of bronchiectasis, varying by level of severity. ž

1- Fusiform (**cylindrical**) bronchiectasis (the most common type) refers to mildly inflamed bronchi that fail to taper **distally**. ž

2- In varicose bronchiectasis, the bronchial walls appear beaded, because areas of **dilation** are mixed with areas of **constriction**. ž

3- Saccular (**cystic**) bronchiectasis is characterized by severe and irreversible ballooning of the bronchi peripherally, with or without air-fluid levels. ž

() aetiology:

1- congenital: *cystic fibrosis

*ciliary dysfunction syndromes include primary ciliary dyskinesia & kartagener's ž

*primary hypogammaglobulinemia ž

2- acquired-children: *pneumonia ž

* primary TB ž

*inhaled foreign body ž

3- acquired-adults: *suppurative pn
*pul TB
*Allergic broncopulmonary aspergillosis
*bronchial tumor

Clinical features: ž

A- symptoms: ž

*cough: ž

*pleurisy: ž

*hemoptysis: (dry bronchiectasis) ž

*wt loss, anorxia, lassitude & digital clubbing. ž

B- signs: ž

*may be asymptomatic, either unilateral or bilateral. ž

*crackles, wheezing. ž

*later on bronchial breathing due to pul fibrosis. ž

()Investigations:

- 1- sputum: ž
- 2- CXR: cystic bronchiectatic changes ž
- 3- CT scan: ž
- 4- assesement of ciliary dysfunction ž



()Management:

()physiotherapy:

()AB: Oral ciprofloxacin 250-750 mg 12 h or ceftazidime 1-2 g

()surgery: young pt, unilateral , small area.

() Complications:

- *resp failure
- *core-pulmonale
- *brain abscess
- *amyloidosis.



Comparison of bronchiectasis and chronic obstructive pulmonary disease (COPD)

Bronchiectasis

COPD

Etiology Infection or genetic or immune defect

Cigarette smoking

Role of infection Primary

Secondary

Predominant organism in sputum

Haemophilus influenzae,
Pseudomonas aeruginosa

Streptococcus pneumoniae,
H. influenzae

Airflow obstruction and hyperresponsiveness Present

Present

Findings on chest imaging Airway dilation and thickening, mucous plugs

Hyperlucency,
hyperinflation, airway dilation

Quality of sputum Purulent, three-layered

Mucoid, clear