

COPD

Bronchial

Extrinsic (immune)

Intrinsic (non-immune)

Dyspnea
Wheezing
Cough

Pathological changes

Smooth muscle hypertrophy
hyperplasia of goblet
thickening and hyalinization.
of basement
membranes cells
epithelial cells →
(Curschmann spirals)
eosinophil-derived proteins →
(Charcot-Leyden crystals).

Complications

superimposed infection,
chronic bronchitis, and
pulmonary emphysema
status asthmaticus

Pulmonary emphysema

Cigarette smoking → dilation of
air spaces

Barrell chest
Increased total vital capacity
Hypoxia
Cyanosis
Respiratory acidosis

Complication

Chronic bronchitis → emphysema
Interstitial emphysema
pneumothorax

Chronic bronchitis

Productive cough at
least 3 consecutive
months over at least 2
consecutive years.
Cigarette smoking

Pathologic changes

Hyperplasia of mucus-
secreting submucosal
glands

Complication

Cor pulmonale

Bronchiectasis

Permanent and abnormal
bronchial dilatation

Pathological features

Lower lobes
copious purulent sputum
hemoptysis
Recurrent pulmonary infection
→ lung abscesses

Predisposing factors

Bronchial obstruction (tumor)
chronic sinusitis
Kartagener syndrome (rarely)
caused by primary ciliary
Dyskinesia → Male infertility

(1) Centrilobular emphysema

Respiratory bronchioles
upper part

(2) Panacinar emphysema (severe)

entire respiratory
acinus
sometimes deficiency
of alpha 1-antitrypsin

(3) Paraseptal emphysema

distal part of the acinus
→ large subpleural
bullae or blebs

(4) Irregular emphysema

complication of
various inflammatory
processes (T.B)