

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



TUBERCULOSIS

CLINICAL MANIFESTATIONS

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PROFESSOR OF INFECTIOUS DISEASES

RESPIRATORY TRACT INFECTIONS (RTIs)

**Are among the most
common and important
problems in
clinical medicine.**

TUBERCULOSIS

- WHITE DEATH.
- WHITE PLAGUE.
- CONSUMPTION.
- TUBERCULOSIS.

WHITE PLAUGUE, PHTISIS



ROBERT KOCH
IDENTIFIED
TUBERCLE
BACILLUS IN
1882

TUBERCULOSIS

1. TB IS THE SECOND LEADING INFECTIOUS CAUSE OF DEATH.
2. LEADING KILLER OF PEOPLE WITH HIV

MORTALITY

If untreated, the
disease may be
eventually fatal in
over 70% of people.

TUBERCULOSIS

Tuberculosis is
curable and
preventable.

EARLY DIAGNOSIS

Early and accurate diagnosis of TB with early initiation of treatment is important to minimize the morbidity and mortality and to reduce the likelihood of transmission.

Respiratory TB

TB affecting the lungs,

Pleural cavity.

Mediastinal lymph nodes

Larynx

TUBERCULOSIS

1-LATENT TB=LTBI

2-ACTIVE TB=DISEASE

LTBI TO ACTIVE DISEASE

The risk that LTBI will proceed to active disease is directly related to the patient's degree of immunosuppressio

CLINICAL MANIFESTATIONS

1-PULMONARY

2-EXTRAPULMONARY

3-BOTH

PULMONARY TB

Pulmonary TB is conventionally categorized as primary or postprimary (adult-type, secondary)

PULMONARY TB

1-PRIMARY

2-POST PRIMARY

-ADULT-TYPE

-SECONDARY(REACTIVATION)

-REINFECTION

CLINICAL ILLNESS

Clinical illness directly following infection is classified as *primary TB* and is common among children in the first few years of life and among immunocompromised persons.

Primary Disease

Primary pulmonary TB occurs soon after the initial infection. It may be asymptomatic or may present with fever and occasionally pleuritic chest pain

PRIMARY INFECTION

After primary infection, **90 percent** of individuals with intact immunity control further replication of the bacilli, which **may then be cleared or enter a 'latent' phase**

PRIMARY INFECTION

10 percent of individuals develop progressive primary disease with TB pneumonia and expansion of infiltrates at the site of the initial seeding or near the hilum and may have hilar lymphadenopathy.

PRIMARY TB

Clinical illness directly following infection is classified as primary TB and is common among children in the first few years of life and among immunocompromised persons.

ACTIVE TB IN LIFETIME

Overall, it is estimated that up to **10% of infected persons** will eventually develop active TB in their lifetime—**half of them** during the first 18 months after infection.

Ghon complex



PRIMARY PROGRESSIVE

primary TB may be
severe and disseminated,
it generally is not
associated with high-level
transmissibility

PRIMARY DISEASE

1-PLEURAL EFFUSION=2/3

2-ERYTHEMA NODOSUM

3-PHYLYCTENULAR CONJUNCTIVITIS

4-HILAR LYMPHADENOPATHY

5-COLLAPSE,BRONCHIECTASIS

5-MILIARY TB

6-MENINGITIS

WHO

Children and young adolescents
(aged below 15 years) represent
**about 11% of all people with
tuberculosis (TB) globally.**

CLINICAL PRESENTATIONS

Primary pulmonary TB should be distinguished from postprimary pulmonary TB, which is the most frequent TB manifestation in adults (70%–80% cases).

POST PRIMARY TB

ADULT TYPE

REACTIVATIONS

REINFECTIONS

REACTIVATION

Among infected persons, the incidence of TB is highest during late adolescence and early adulthood; the reasons are unclear

SUSPECTED CASE

Pulmonary TB should be suspected if a patient presents with cough for **more than two weeks** and / or coughing of blood (hemoptysis) and sputum

SYMPTOMS AND SIGNS

Early in the course of disease, symptoms and signs are often **nonspecific** and insidious, consisting mainly of **diurnal fever** and **night sweats** due to defervescence, **weight loss**, **anorexia**, **general malaise**, and **weakness**.

SIGNS AND SYMPTOMS

Signs and symptoms suggestive of TB:

- 1- **Cough** for 2 weeks or more
- 2- Coughing **sputum with or without blood**
- 3- **Fever** (evening rise/low grade) and **night sweats**
- 4- **Loss of appetite** and unintentional **weight loss**

CLINICAL FEATURES

classic clinical features of pulmonary TB include chronic cough, sputum production, appetite loss, weight loss, fever, night sweats, and hemoptysis

COUGH

There may be as
many as 3000 infectious
nuclei per cough.

COUGH

However, in **up to 90% of cases**, cough eventually develops—often initially **nonproductive** and **limited to the morning** and subsequently accompanied by the **production of purulent sputum**, sometimes with **blood streaking**.

HEMOPTYSIS

Hemoptysis develops in 20–30% of cases, and massive hemoptysis may ensue as a consequence of the erosion of a blood vessel in the wall of a cavity.

Hemoptysis, however, may also result from rupture of a dilated vessel in a cavity (Rasmussen's aneurysm) or from aspergilloma formation in an old cavity.

SUSPICION OF DISEASE

Cough is common, although the **chest radiograph** often raises suspicion of disease.

Postprimary (Adult-Type) Disease

It is usually **localized to the apical and posterior segments of the upper lobes**, where the substantially higher mean oxygen tension (compared with that in the lower zones) favors mycobacterial growth. The **superior segments of the lower lobes are also more frequently involved.**

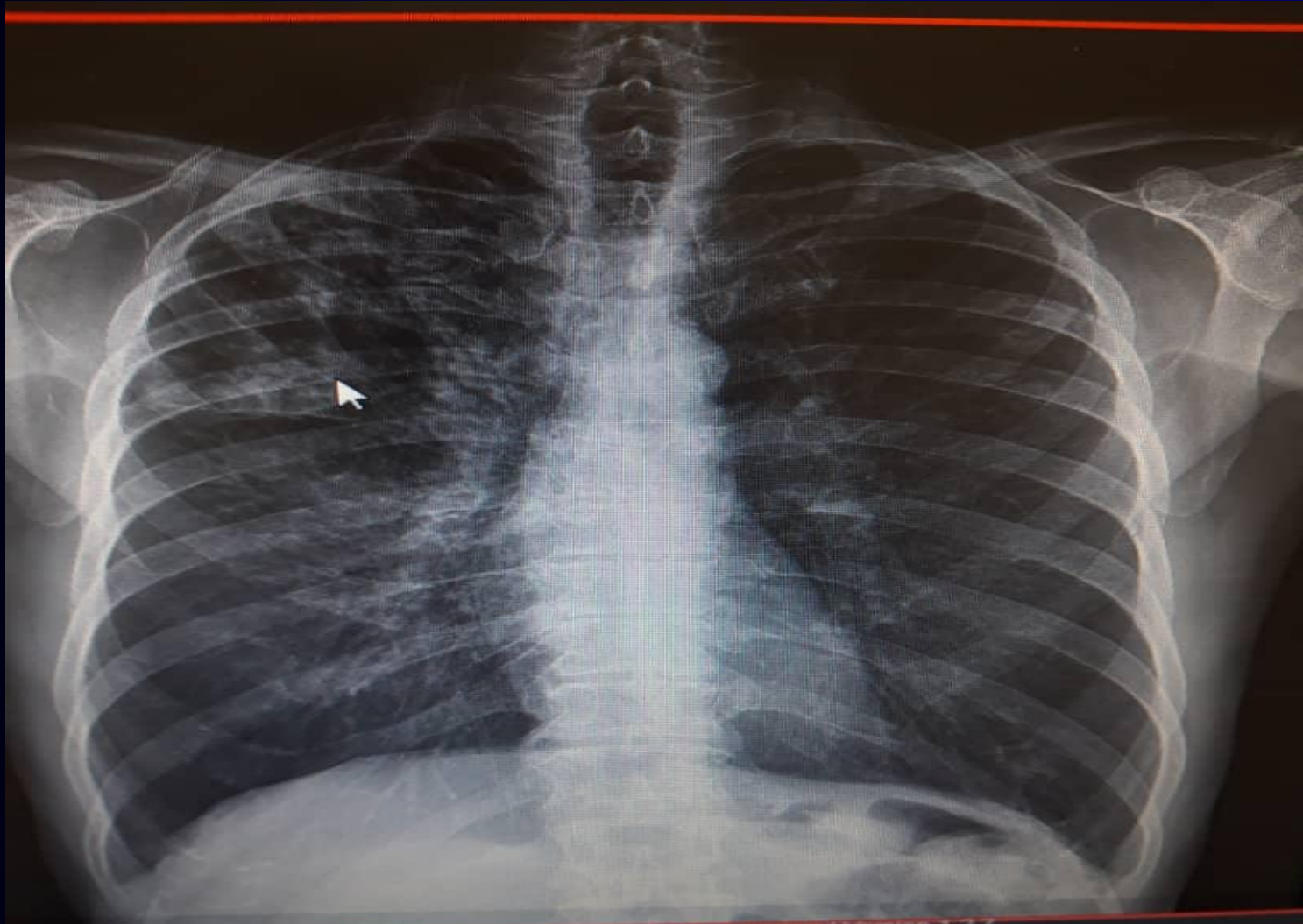
Cavitating tuberculosis



POSTPRIMARY TB

With **cavity formation**, liquefied necrotic contents are ultimately discharged into the airways and may undergo **bronchogenic spread**, resulting in **satellite lesions** within the lungs that may in turn undergo **cavitation**.

MALE 55Y AERS OLD



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POST PRIMARY OR REACTIVE

The incidence among women peaks at 25–34 years of age. In this age group, rates among women may be higher than those among men, whereas at older ages the opposite is true. The risk increases in the elderly, possibly because of waning immunity and comorbidity

Miliary TB on chest radiograph and CT



TERMINOLOGY

1- NEW CASES

2-CURED

3-RELAPSE

4-TREATMENT FAILURE

**5-TREATMENT AFTER
INTERRUPTION (DEFAULT)**

6- TREATMENT COMPLETED

اللهم اجعل عواقب امورنا خيرا

