

Tuberculosis

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Definition

It is a chronic disease with insidious onset and is caused by mycobacterium tuberculi. Once it was considered to be almost under control, has once again become serious problem worldwide. Tuberculosis generally affects the lungs, but can also affect other parts of the body. Most infections do not have symptoms; in which case it is known as latent tuberculosis. About 10% of latent infections progress to active disease which, if left untreated, kills about half of those infected. The classic symptoms of active TB are a chronic cough with blood-containing sputum, fever, night sweats, and weight loss. The historical term "**consumption**" came about due to the weight loss. Infection of other organs can cause a wide range of symptoms.

Pathology

When the tubercular bacilli reaches the alveolar space in the lungs, it can be destroyed in the lymphoid tissue draining this area or can form the tuberculosis lesion. The bacillus can also remain dormant for many years. Various types of lesions can be described-encapsulated caseous, liquefied or calcific nodules, proliferative, exudative type or cavity formation.

Initial 'primary' tuberculosis infection occurs in the lungs and is accompanied by caseous lesions by lymph nodes. Rarely a caseous tuberculosis focus ruptures in vein leading to acute miliary tuberculosis.

Post primary tuberculosis is the term used for the affection of lung with cavity. There may be extension of infection to pleura, bronchi etc. leading to empyema.

Clinical Features

Tuberculosis may infect any part of the body, but most commonly occurs in the lungs (known as pulmonary tuberculosis). Extra pulmonary TB occurs when tuberculosis develops outside of the lungs, although extrapulmonary TB may coexist with pulmonary TB.

General signs and symptoms include fever, chills, night sweats, loss of appetite, weight loss, and fatigue. Significant nail clubbing may also occur.

Evening rise of temperature, fatigue, anorexia and cough are prominent initial symptoms. Later on cough may become productive and there may be haemoptysis.

The infection may spread to larynx, bronchi, pleura, abdomen, kidneys, meninges, musculo-skeletal systems and lymphatic system.

Prevention

Infants are vaccinated with BCG vaccine within 3 days of birth. Prevention of TB involves screening those at high risk, early detection and treatment of cases, and vaccination with the bacillus Calmette-Guérin vaccine. Those at high risk

include household, workplace, and social contacts of people with active TB. Treatment requires the use of multiple antibiotics over a long period of time.

Investigation

For diagnosis, usually tuberculin test is done. Diagnosis of active TB is based on chest X-rays, as well as microscopic examination and culture of body fluids. Diagnosis of latent TB relies on the tuberculin skin test (TST) or blood tests.

Complications

If the disease is not properly treated, the person become weak and succumbs to various types of secondary infections.

Treatment

Proper rest, nutritious diet, anti-tubercular therapy, and isolation in open cases and surgery when indicated. Rifampicin 450 mg per day with isoniazid 300 mg, per day can be given in combination with pyrazinamide and ethambutol or streptomycin sulphate injections. The treatment should be continued for 12 months minimum.

KT-4 kit is an anti-tuberculosis drug containing: 1 (tab) - Ethambutol Hydrochloride 800 mg + isoniazid 300 mg. 2 (tabs) - pyrazinamide 750 mg. 1 (cap) - rifampicin 450 mg.

References

- [1]. <https://en.wikipedia.org/wiki/Tuberculosis>.
- [2]. Jindal, editor-in-chief SK (2011). Textbook of Pulmonary and Critical Care Medicine. New Delhi: Jaypee Brothers Medical Publishers. p. 549. ISBN 978-93-5025-073-0.