

Review on Tuberculosis and its Treatment

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Abstract: Tuberculosis (TB) is a life-threatening infectious disease caused by *Mycobacterium tuberculosis*, primarily affecting the lungs and manifesting through symptoms such as severe coughing, fever, and chest pain. Recent research efforts have yielded significant insights into the transmission, detection, and treatment of tuberculosis. The disease poses a considerable challenge to public health, ranking second in mortality rates following HIV/AIDS. The World Health Organization (WHO) collaborates with nations, partners, and civil society organizations to enhance the global response to TB. This review article aims to examine the epidemiology, diagnosis, symptoms, and treatment of TB, while also providing an overview of its current epidemiological trends, pathogenesis, immune response, and effective management strategies. Interferon-gamma release assays serve as whole blood tests for TB diagnosis; however, they do not differentiate between latent TB infection and active TB disease. Consequently, the Tuberculin skin test remains widely utilized for diagnosing tuberculosis worldwide. To combat this pervasive and deadly disease, it is essential to thoroughly understand the mechanisms of TB and to disseminate comprehensive information regarding its treatment.

Keywords: Epidemiology, *Mycobacterium tuberculosis*, Tuberculin Skin Test, WHO