

Epidemiology of Tuberculosis: An In-Depth Review

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Keywords: tuberculosis, epidemiology, risk factors, diagnosis, treatment, drug resistance, multidrug-resistant tuberculosis (MDR-TB), extensively drug-resistant tuberculosis (XDR-TB), human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), BCG, rifampin, isoniazid, pyrazinamide, ethambutol, fluoroquinolones, second-line drugs, latent tuberculosis infection (LTBI), active tuberculosis (AT), pulmonary tuberculosis (PTB), extrapulmonary tuberculosis (EPTB), tuberculosis relapse, tuberculosis reinfection, tuberculosis co-infection, tuberculosis mortality, tuberculosis burden, tuberculosis control, tuberculosis elimination, tuberculosis eradication, tuberculosis surveillance, tuberculosis diagnosis, tuberculosis treatment, tuberculosis prevention, tuberculosis vaccination, tuberculosis drug resistance, tuberculosis drug resistance monitoring, tuberculosis drug resistance surveillance, tuberculosis drug resistance management, tuberculosis drug resistance control, tuberculosis drug resistance elimination, tuberculosis drug resistance eradication, tuberculosis drug resistance surveillance, tuberculosis drug resistance diagnosis, tuberculosis drug resistance treatment, tuberculosis drug resistance prevention, tuberculosis drug resistance vaccination, tuberculosis drug resistance management, tuberculosis drug resistance control, tuberculosis drug resistance elimination, tuberculosis drug resistance eradication.

Introduction

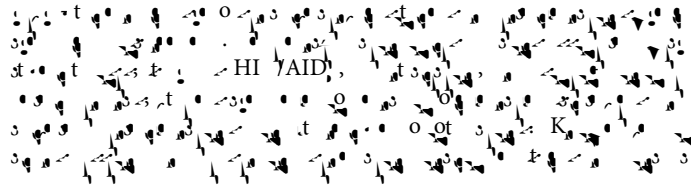
Tuberculosis (Tb) remains a leading cause of death and disability worldwide, with an estimated 10 million new cases each year. The disease is caused by the bacterium *Mycobacterium tuberculosis* complex, which is highly contagious and can affect any part of the body, but most commonly the lungs. The epidemiology of tuberculosis is complex and multifactorial, involving a combination of host, pathogen, and environmental factors. The disease is most prevalent in low- and middle-income countries, where it is often associated with poverty, malnutrition, and overcrowding. In high-income countries, tuberculosis has become a re-emerging disease, with a resurgence in cases since the late 1980s. This resurgence is largely due to the increasing prevalence of multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB), which are difficult to treat and often associated with higher mortality rates. The World Health Organization (WHO) has set a goal of ending tuberculosis as a public health problem by 2035, which will require a combination of strategies, including improved diagnosis, treatment, and prevention. This review aims to provide a comprehensive overview of the epidemiology of tuberculosis, covering its global distribution, risk factors, and the impact of drug resistance on the disease's burden and control.

The burden of tuberculosis is highest in low- and middle-income countries, where it is often associated with poverty, malnutrition, and overcrowding. In high-income countries, tuberculosis has become a re-emerging disease, with a resurgence in cases since the late 1980s. This resurgence is largely due to the increasing prevalence of multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB), which are difficult to treat and often associated with higher mortality rates. The World Health Organization (WHO) has set a goal of ending tuberculosis as a public health problem by 2035, which will require a combination of strategies, including improved diagnosis, treatment, and prevention. This review aims to provide a comprehensive overview of the epidemiology of tuberculosis, covering its global distribution, risk factors, and the impact of drug resistance on the disease's burden and control.

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