

INTRODUCTION

Every institution undergoes a process of evolution to achieve the goals for which it has been established. For the sake of posterity, we at the National Tuberculosis Institute (NTI) have attempted to chart out the path of our evolution in these Annals. It is a narrative of the difficulties encountered and a description of the activities devised to overcome these problems. It reflects almost four decades of unstinted dedication against the major killer disease tuberculosis (TB). The annals of NTI attempts to chronicle how this institute undertook research and the manner in which available information was used to evolve a sustainable control strategy in a very short span.

TB is one of the most ancient diseases. It has been referred to in the Vedas and Ayurvedic Samhitas. In Germany, evidence of TB has been found in the bones of pre-historic people. In Egyptian mummies, typical changes have been detected in the spines of skeletons dating back from 2500 to 1000 B.C. It has wrecked more devastation than dreaded diseases like smallpox, cholera and plague. It has been referred to as **“Captain of all men of death”**. TB continues to be one of the main causes of morbidity and mortality. It infects approximately 1-3/1000 of the population residing in developed countries every year. In the developing countries, the infection rate is 20-50 times higher. In India 4/1000 are suffering from the bacteriologically positive active disease. It is estimated that TB decimates nearly 5000 people every day and one person every minute in India.

Robert Koch in 1882, discovered *Mycobacterium tuberculosis* (tubercle bacilli), which causes TB. Radiology and bacteriology helped in expanding the knowledge base of the disease. TB can occur in any part of the body, but most commonly affects the lungs (pulmonary TB). When a patient suffering from pulmonary TB coughs or sneezes tubercle bacilli are thrown into the atmosphere in the form of small droplets. Upon inhaling these, TB germs may get into the lungs of a healthy person and multiply to form a primary complex. In 95% of cases it heals. However, in some cases there may be sequel to the primary infection. Hence, there is always a lurking danger of these bacilli flaring up in the

future to progressive tuberculosis disease. The tubercle bacilli are transported through lymphatics and blood vessels to any part of the body. The disease may not appear immediately but can develop any time in life when immunity systems are low. Pathogenesis of TB is dependent upon the immune response and multiplication of bacilli in the host tissue. In young adults, pleural effusion occurs within 6-12 months. Tuberculous meningitis and miliary TB are common among children. Lesions in the genito-urinary tract, bones and skin may occur 5-15 years after the primary infection. All these extra-pulmonary forms are not infectious. The NTI has concerned itself with pulmonary TB as this is responsible for maintaining the chain of transmission in the community and kills largest number of persons in adult age. If pulmonary TB is taken care of other forms of TB are also taken care of.

The annals are divided into five main chapters. The first chapter deals with the genesis of the Institute. The second focuses on the formative years. It is during this period that the NTI evolved its methodology. The third and fourth chapters deal with the consolidation of work of the Institute. The fifth chapter refers to the current situation being encountered and future prospects. The annals make no claim at being entirely comprehensive. We have found it impossible to narrate all the studies, surveys and investigations carried out during these four decades of NTI's work span. Therefore, these have been appended as list of protocols and as a bibliography of NTI papers and publications, so as to enable the enthused reader to consult them. There are totally six annexures and a reference list.

We have tried to make the narrative of this slim volume easy, often including illuminating quotes, observations and even memorabilia. It is sincerely hoped that it will be appreciated by all the readers whether lay persons, personnel belonging to organisations engaged in research and training, programme officers undertaking TB work and finally NTI itself. The annals is of relevance to all engaged in TB work and will help them to deliberate on all possible options before taking a decision.

Director

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