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The Role of the Preventorium in the Tuberculosis Program

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Extent and Importance of Early Infection

IF TUBERCULOSIS, as we find it among children, were given the attention that it deserves in this generation, the amount of clinical tuberculosis among the adult population of the next generation would be greatly reduced. In other words, the solution of the tuberculosis problem is largely a childhood problem.

Modern studies show that infection with the tubercle bacillus starts soon after birth and continues on down through childhood, so that 80 per cent of children who attain the age of fourteen years harbor the cause of the disease.

Tuberculosis varies in seriousness with different individuals. In some the bacilli form tubercles which soon heal. In others the

disease does not spread, but remains in a condition of limited activity for a greater or shorter term. In still others healing does not occur, but the disease spreads to tissues adjoining the primary focus and causes the disease to become active.

If infection occurs during the first and second years of life, the disease usually becomes immediately active and results in death of the child. Such infection is the more dangerous the younger the child, the lower its state of resistance and the greater the number of bacilli which cause the infection.

If infection occurs after the second year, it is less dangerous as far as immediately active tuberculosis is concerned, and this danger decreases as the age of the child increases. So while infection of the first and second years usually proves fatal, infection in late childhood is rarely immediately followed by active tuberculosis.

The importance of these early infections is two-fold (1), because of their relationship to death from tuberculosis during the childhood period and (2), because of their effect in creating a specific resistance against tuberculosis which modifies

the nature of future infections and makes them chronic, thus displacing the acute type of tuberculosis of early child life by a less serious, more chronic type in late childhood, adolescence and adult life.

It is now generally recognized that most instances of active tuberculosis in adult life are due to infections which take place during childhood, the bacilli remaining in the tissues viable, but not producing active disease during the intervening years. Finally, through the stresses of life, resistance is lowered, microbes, which had been harbored within the body and held in a state of inactivity, multiply and spread and produce symptoms of active clinical disease.

An intelligent attempt at the solution of the tuberculosis problem must comprise a program which will: (1) reduce the incidence of infection; (2) prevent massive infection; (3) raise the resistance of children; and (4) give special care and treatment to those who are infected to the end that such infection be healed.

SOURCES OF INFECTION

WE CAN only reduce the number of infections and prevent massive infections if we know the sources of infection and the manner

in which the bacilli gain entrance to the child's body. There are two chief sources of infection: (1) another human being who has the disease, and (2) milk from cows suffering from tuberculosis, particularly if the udder is infected.

PREVENTION OF INFECTION

NO CHILD should be permitted to live in intimate contact with an individual who is suffering from open tuberculosis. Children should not be fondled by nor should they live in the same room occupied by patients who have the germs in their sputum. Neither should they be permitted to use milk from tuberculous cattle. These rules should be rigidly enforced during the early years of life. If these two precautions were taken, it is known that much of the dangerous infection, at least much of the massive infection which comes from intimate and prolonged contact, and which is accepted as being most dangerous for the future well-being of the child, would be eliminated.

All attention, however, must not be directed toward sources of microbic invasion. There is an equal duty toward the child. Some children are born with con-

stitutions which offer low resistance to infection; others develop a low resistance after birth. Both groups should receive special attention.

The program for developing strong children from those who are constitutionally or developmentally below par is a comprehensive one and calls into action all the agencies which have to do with child life; the physician, the home, the school, the municipality or state, and private philanthropy. This program guarantees to the child suitable living quarters, an adequate supply of pure air, playgrounds and parks, an abundant supply of pure wholesome food, properly equipped and ventilated school buildings, supervised play and sports, and the supplementing of public and private aid by private philanthropy when the economic condition of the parents is such as to make this necessary.

For those children who show signs of an unhealed tuberculous infection still greater aid must be furnished. They must be more carefully guided. Restoration to health is within their grasp if they can but have the proper aid.

EXPERIENCE has shown that such children, when cared for in special institutions where they re-

ceive unusual care and attention to health and where their entire activities are supervised, will respond with an increase in vigor and resistance and, in many instances, go on to a complete regaining of health. Such institutions are called preventoria, indicative of the fact that many of the children who are privileged to be treated in them are prevented from becoming ill of and dying of tuberculosis.

The preventorium has now assumed a very important part in the program for making better and more healthful citizens.

Every community with a school population of several hundred has some children who could profit by a residence in a preventorium. Every community with several thousand children of school age can not do its duty to its pupils without such an institution, for scores of children will be found who deserve the same advantages of schooling that the stronger children obtain, but can not get it without simultaneously increasing their bodily vigor. Unable to compete under ordinary school conditions they fall by the wayside, are unable to complete their schooling and often lapse into a stage of invalidism, which is frequently followed by death.

Many of these children are victims of a tuberculous infection, which causes their loss of bodily vigor; others, while not suffering from an active infection, harbor bacilli in their bodies which will become active and cause tuberculous disease unless the child is given help. Economy as well as humanity demands that these children be cared for, and no agency has proved so valuable in caring for them as the preventorium.

COST OF PREVENTORIUM

THE cost of the preventorium can be small or great according to whether the institution be simple or elaborate in its design, equipment and administration. When once established and equipped, the main items of cost beyond that assumed by the municipality in the public schools is for food and the extra medical care required.

It is difficult to estimate the benefits accruing to a community from the preventorium. In the first place, it cares for a group of individuals in a humane way, giving them what the State or community owes them, and at a time when the aid given will return profit to the giver.

Many of these children must either have the help of such an institution and be given health, or face

ill health and poverty and untimely death. As they become ill and dependent, they become a charge upon the community in some other way and ultimately cost far more than would be required to restore them to health and usefulness when their physical deficiencies first manifest themselves in childhood.

Every child who is dependent upon the community for aid that can be prevented from falling ill from a chronic disease like tuberculosis, by a limited stay in a preventorium will save the State many dollars in actual expenditure. It is from this unfortunate class of low physical vigor that many of our later demands for charity come. From loss of strength they are unable to consistently follow gainful occupations, so they sink into poverty, become victims of disease and, through discouragement, lose interest in life and often develop a disregard for law. So any such institution as a preventorium which takes over the child while young and gives it a better bodily vigor and aids it to secure a schooling, and at the same time has such complete control of the child as to enable it to inculcate moral principles and healthy ideals of citizenship will repay the pittance required to maintain it many-fold.