TUBERCULOSIS IN CHILDREN AND DOTS

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Tuberculosis (TB) kills 2 million people each year in the world, of which 250,000 are children. The basic process of infection and disease caused by Mycobacterium tuberculosis and the concept of diagnosis and management of TB are the same for children and adults. Accurate diagnosis and effective treatment of TB disease are as important for children as for adults. There are several differences in the epidemiology and clinical manifestations of TB in children. Although children and adults are at equal risk to develop TB infection when exposed to a person with a infectious TB, but children are substantially at greater risk of developing TB disease, especially miliary (disseminated) TB and meningitis (involvement of brain coverings). Factors that determine the risk of TB infection are more or less the same for children and adults. The more prolonged and close the exposure to the infectious cases, the greater the risk of infection. Youngest children are much more likely to remain in close and prolonged contact with parents. If the parent/s is/are suffering from active (infectious) pulmonary tuberculosis, there are likely more chances for younger children to get infected with TB germs. Children who develop pulmonary tuberculosis are least likely to have cavitory lesions, thus very unlikely to be sputum smear positive. Most frequently Tuberculosis presents itself as pleurisy among children of 5 years of age or older whereas the youngest children are much more likely to have disseminated disease with meningitis. TB meningitis has a high fatality rate. With BCG vaccination in neonatal period (even in infancy) can undoubtedly reduce this serious form of tuberculosis.

Childhood tuberculosis remains a disease of great concern because its occurrence always indicates recent transmission and is a pivotal indicator of effectiveness of TB control efforts. Presently, there is no vaccine available to prevent infection with Mycobacterium tuberculosis. So the protection against infection has to be achieved by other means. Thus, early case detection and successful treatment of the most infectious cases of tuberculosis has become the focus of efforts. This is the most effective way to protect children from infection with M. tuberculosis at present. While tuberculosis also occurs in children, scores of peoples have raised the issue that children are comparatively neglected by the DOTS strategy. This may be logical to some extent. With the main objective of the DOTS strategy to cut the chain of transmission of the disease, this logic seems to be untrue. As this chain begins with children, it is at this level that the long-term effects of the DOTS strategy are to be perceived. The aspiration is to make a generation of children free of TB infection. Scientific communities at global level have been trying hard to develop an effective vaccine capable of preventing TB infection in children, a definite tool to eradicate TB. By the time this will be made available, DOTS is an alternative.

It is the ability of the DOTS strategy to prevent tuberculosis infection in children, thereby reduces the burden of tuberculosis in the long-term and hopefully in due course of time TB will be eliminated from our society.

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References

