

Tuberculosis in Children

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Introduction

Whenever and wherever we get opportunities, we talk about the welfare of children. The government, the non-governmental organizations and individuals are seriously involved in keeping the children physically and mentally healthy. But I am concerned about the huge number of children who are getting consumed from inside. Their growth is hampered and the rampant lack of energy is pushing them backward in their progress. The process of destruction of their body influences their mental health, and stands as a strong hindrance in their daily activities including studies. Yet they are forced to carry on their expected daily routines. But nobody seems to have much concern about the miserable conditions of the children.

Here I am talking about childhood tuberculosis. Though this is an age-old disease, still in this modern age people believe that the disease is restrictive exclusively to adults and it does not affect children. This dirty disease is a poor-man's disease – a disease of the starving people. It is a disease of slum-dwellers' and it does not have the passport for entering into the body of so-called gentlemen. Now, let us analyse the facts.

In old age tuberculosis used to be called as "consumption" disease which means erosion and destruction from inside leading body-shrinkage. Now of late we call it as "hidden epidemic" meaning undercover and undetected extensive and on-going spread. World Health Organization (WHO) estimates in 2012 revealed that up to 74 000 children die from TB each year and children account for around half a million new cases annually. Many people believe that the massive global incidences are due to prevalence of the disease in African countries. But the so called developed countries are not spared. The people often for that nothing is more international than disease and nobody is fully immune to any disease. In early years of this century stated that about 40% of children suffer from this disease. But it appears to be about 80% in recent years. And if such state of affairs continues, 100% of children are apprehended to suffer someday.

With the advent of newer and effective drugs and scientific approach to management, once it was thought that very soon we will live in a tuberculosis-free world. But the reality is far from that. Instead of declining, the incidence of childhood tuberculosis is ascending. But what are the reasons for such surge of childhood tuberculosis. If we leave aside the relation of HIV/AIDS, The main and the only reason for such huge number of childhood tuberculosis is failure in detecting the cases of tuberculosis in adults and neglect in their treatment. We must remember the fact that children never spread the disease to others. It is the adult who spread tuberculosis to others including the children. So, unless the detection of adult tuberculosis and its treatment are meticulously done, the incidence of childhood tuberculosis can never be brought down. Though the incidence is rapidly increasing, nobody is paying any hid to the problem. There are many reasons and problem for this. Let us try to analyse them.

Let us look at the Key Facts

- Tuberculosis (TB) is second only to HIV/AIDS as the greatest killer worldwide due to a single infectious agent.

- In 2012, 8.6 million people fell ill with TB and 1.3 million died from TB.
- Over 95% of TB deaths occur in low- and middle-income countries, and it is among the top three causes of death for women aged 15 to 44.
- In 2012, an estimated 530 000 children became ill with TB and 74 000 HIV-negative children died of TB.
- TB is a leading killer of people living with HIV causing one fifth of all deaths.
- Multi-drug resistant TB (MDR-TB) is present in virtually all countries surveyed.
- The estimated number of people falling ill with tuberculosis each year is declining, although very slowly, which means that the world is on track to achieve the Millennium Development Goal to reverse the spread of TB by 2015.
- The TB death rate dropped 45% between 1990 and 2012.
- An estimated 22 million lives saved through use of DOTS and the Stop TB Strategy recommended by WHO.

Lack of Awareness and Knowledge

- There are many people who believe that the tuberculosis is a dirty disease restricted to poor. Gentlemen never suffer from this disease. So, when he faces severe infection, he feels that his suffering might be due to anything and everything but never from tuberculosis.
- Many adults suffer from this disease. But they have their own explanation to disprove that. They often deny the reality by saying that, 'I am prone to cough and cold', 'I have smoker's cough', 'I have dust allergy', 'I suffer from bronchitis', 'I am asthmatic', 'I suffer from fever off and on—but get cured by medicines' etc. and etc. and with such self-satisfaction, they try to spend their entire life. This makes them suffer, and they spread the disease to others, particularly to children.
- One of the main sources of the infection is the elderly female members of the family. These women have their own feeling that with age, they are prone to suffer from different kinds of ailments and these ailments should not be given much importance. The other adult members also take little care for

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their physical problem. Thus these women constantly spread the disease to other adult members and children and these adult members relay the disease to people beyond the family circles.

The Problems of Diagnosis

Today's advanced science yet cannot give the real direction for the diagnosis of tuberculosis. There was much expectation that newer techniques like PCR, and immunologic tests would resolve the problem. But these did not help. So, still we have to rely on the age old methods like x-ray, intradermal tuberculin skin test, and sputum examination. But these tests are very conclusive. Even today, the diagnosis of tuberculosis depends on the experience and knowledge of the treating physicians. Since this depends on the judgement of individual doctors, the problems arise constantly. Failure of diagnosis leads to failure to adult tuberculosis and spread of the disease to others, including children [1].

Special Problems of Childhood Tuberculosis

- Though tuberculosis is caused by the same organism (*Mycobacterium tuberculosis*), there is gross difference in the manifestations between the adult and childhood tuberculosis. Unlike adults, children often do not have fever, anorexia, malaise, loss of weight, failure to thrive, cough, expectoration, hemoptysis etc. most of the children remain asymptomatic. Children less than 10 years bring out sputum by coughing. Paucity of symptoms leads to failure in suspicion of the possibility of the condition in the part of the physicians. And the disease remains undiagnosed and untreated most of the times.
- Like adults, x-ray, intradermal tuberculin skin test and ESR are the main pillars of diagnosis of childhood tuberculosis. But as already mentioned, none of these give conclusive proof in diagnosis. My personal experience shows that different radiologists give different opinions with the same x-ray plate. This happens because x-ray does not clearly reveal anything significant. Intradermal tuberculin skin test (Mantoux test) is also sometime adds confusion. After such long period of use, there is no consensus of the units of PPD to be used and its interpretations. The test often shows negative results in spite of having disease. Inoculation of BCG adds to further confusions. ESR was never considered as a diagnostic tool.
- BCG inoculation: There are still misconceptions about BCG inoculation not amongst the commoners, but also in the minds of doctors. People debate how can my child have tuberculosis when he is inoculated with BCG? Sometimes doctors also involve themselves with the same argument. It must be clarified that BCG does not prevent from acquiring infection. It only prevents extensive spread to other parts of the body, particularly in blood, brain and vital organs.

Arrest of tuberculosis from spreading may cause problems to the clinicians because the full-blown or classical picture is not found; the diagnosis often becomes difficult or impossible. BCG may also confuse the interpretation of tuberculin skin test.

- There is no less confusion amongst the doctors also. It has been observed that the doctor who see the child regularly for different reasons, often do not even imagine that the child might have tuberculosis. There are many disease conditions, which all doctors can diagnosis conclusively and univocally. But two clinicians do not agree to the diagnosis of tuberculosis most of the times. Most of the doctors have tendency of denial. They prefer treating the child for months after months with antibiotics for cough and cold, antibiotics, bronchodilators and even inhaler for bronchospasm (asthma-like symptoms), tonic for failure to thrive, enzymes for anorexia and like that. As a result the poor child continues to suffer.
- The parental attitude is also strong hindrance for treatment of tuberculosis. The doctor, whom the parent used to consider a demigod, becomes a villain, the moment he declares that the child is suffering from tuberculosis they undertake many actions to deny the diagnosis. They not just deny the diagnosis but also the treatment; they debate, shout, try to assault people physically and even threaten to drag the doctor to court of law. I have personally gone through such experiences on several occasions. They lose the simple logical thinking that doctor has not imposed the disease to their child, rather they has aptly diagnose the underlying suffering and with due treatment their child will be completely free from the problem. The occurrence of such incidences has increased mostly because distorted information gathered from different sources, including internet.

The Final Comment

The incidence of childhood tuberculosis is increasing by leaps and bounds. This important piece of information has to be made realized to the doctors and people at large. We must be more meticulous in interpreting the existing methods of diagnosis (clinical profile, x-ray, tuberculin skin test) and carefully detect the cases of tuberculosis. We cannot take the problem of childhood tuberculosis lightly any more. Otherwise, the poor children without any fault will continue to run with the present days' rat race with their wasted body and sick mind.

Reference

1. Editor, T. L. (2014) Incidence of childhood tuberculosis could be 25 percent higher than previous estimates. *The Lancet*.