Infecting generations

TB detection among children is a major problem confronting public health managers — with numerous cases where infants have been over or under diagnosed

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By Nadeem Iqbal

Six year old Sadiqa Tasleem of Dhok Illahi Bux in Rawalpindi is the fourth victim of the 12-member family to have lung tuberculosis (TB). Her, father, Safdar Ali, a hawker wife, then his 17 year old son and a third time with his 15 year old daughter.

The tragedy repeats itself in a most alarming manner in Dhaka, Bangladesh, where three year old Jharna Akhtar is suffering from severe brain TB. She too is the fourth victim of the family after her father, mother and her 13 youngest member of the family despite the fact that they had taken preventive measures like getting their children immunised with BCG.

A similar scene is in Nepal's Dhankuta district, where Dhan Lama, 15, has contracted extra-pulmonary TB from his mother who died of TB three years ago at the

lucky to have been diagnosed with TB — at their age they could produce the sputum which would help the doctors do microscopic testing. But what about infants like Jharna who cannot produce sputum?

This has made TB detection among children a major problem confronting public health managers. Diagnosis

deceptive. Little wonder then that there are numerous cases of infants being over or under diagnosed for TB.

The cost of treatment for a child TB patient is also higher compared to an adult. Mainly because, in majority of cases, they suffer most acute forms of TB — like meningitis, brain, bone etc. An additional complication for children is that there are no child friendly medicines available like syrups etc. — the big tablets that are available are difficult to swallow even for adults.

It is estimated that children constitute around 25% of the total TB cases. The incidence in children of South Asia is quite higher as it is home to three most populous countries — Bangladesh, India and Pakistan — with percentage of population under 18 almost half of the total. They are actually on top of the list of 22 high TB-burdened countries.

WHO's prescribed treatment for the prevention of TB is DOTS (Directly Observed Treatment), that originated in India. Under DOTS, any person having the symptoms is to undergo a simple microscopic test and if it's positive, he has to get a treatment for 6-8 months. The patient is definitely cured if he/she completes the treatment. In case of lapse he or she could develop resistance against one or all the medicines called Multi Drug Resistance (MDR-TB). The cost of the normal treatment is quite negligible but in case of MDR it is as high as Rs. 2,50,000 — simply unaffordable for the patients, majority of whom are poor.

Under DOTS, it is ensured by a local person that the patients take the medicine every day till full recovery. As per WHO, DOTS strategy is to have universal coverage by 2005 — the target being that 70% new severe positive cases are detected, 85% of them be cured and that the TB mortality be reduced by 50%.

However, DOTS only targets the adult population. It does not cover the children particularly infants who become susceptible to the infection the moment TB enters their home. There is no special programme designed by WHO or any national TB control programmes for children. The result is that the infants are at the receiving end — given the fact that the region has higher incidence of poverty which is ultimately translated into TB cases among malnourished children.

SAARC guidelines for treating children specifically say: "If you find the diagnosis of TB among children difficult you are not alone. It is easy to over-diagnose TB in children.

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Dr. Karam Shah, NTP Coordinator, admits that there are reports of over diagnosis of child patients in the Northern Areas where prolonged fever is considered a potent symptom for TB. Many doctors admit that the over diagnosis could later develop into MDR-TB.

Even BCG (Bacille Calmette-Guerin), given at the time of birth, does not provide 100% immunity against the disease. It might help lessen the severity of the disease, though.

Calling for developing better vaccine than the now 80 years old BCG, WHO says: "BCG addresses the TB problem in children partially but not adequately. It limits the severe — like milliary TB and meningitis — disseminated forms of TB which are unique to young children with TB but does not prevent them all."

BCG also prevents the accurate diagnosis of TB in some cases. Dr. Arif Noor of NTP told TNS: "When a child gets vaccinated with BCG, he is exposed to a live attenuated form of an organism. So the Mantoux (skin test) then

What's wrong with NTP?

According to WHO and SAARC TB center data, the estimated incidence of TB in Pakistan per 100,000 population is 175, in India it is 184, in Bangladesh it is 242 and in Nepal it is 208. The percentage of population under DOTS coverage in Pakistan is very low i.e., 25%. In comparison in India it is 45%, in Bangladesh it is 95% and in Nepal 89%. The reason for Pakistan lagging behind here is that it failed to be part of any regional TB control strategy, and at the same time could not develop its own national mechanism.

Under WHO, Pakistan is part of East Mediterranean Region linking it with countries like Afghanistan and Iran while all other SAARC countries are a part of the other WHO region, which is South East Asia Region. Therefore, Pakistan could not benefit from the plans programmed by SAARC-TB Centre in Nepal. SAARC itself prepares these programmes in collaboration with WHO.

At the national level, there was this conflict as to who would prepare the plan, federal or the provincial government. When it was decided that the PC-1 would be prepared by the respective provinces the devolution plan came and now over a hundred districts are supposed to develop their own strategies.

Another related problem is that the national plan lacks leadership. As the national TB control manager is a makeshift administrator, he is not only the administrator of the Rawalpindi TB hospital but also does private practice in the evening. No wonder that despite the official claims that 35 districts have been covered by DOTS, a study by The Network for Consumer Protection found that majority of the doctors cannot accurately diagnose TB among adults as per national TB treatment guidelines.

The study was carried out in Rawalpindi where the offices of National TB Programme (NTP) are located. A fake patient with a chest x-ray and two consequent Acid Fast Bacilli positive reports was sent to around 53 doctors doing private practice. Of them only 3.8% doctors could meet up to the standard laid down by the NTP.

Compare this with the situation that in the country, over 80% of the patients get treatment from the private sector. If the situation is so alarming for diagnosing adults then one can gauge the state of disease among children.

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The missing data

Another missing area with reference to child TB is that not much consideration is given to collecting data about them. However, scattered data shows that the problem among them is much severe. In Rawalpindi TB center during the first six months of 2001 out of a total 570 patients, 61 (37 girls) were under 14 years of age. While during the same period, in Pakistan Institute of Medical Sciences, a total of 165 child TB cases were reported registering an increase of 36% from the previous year. Of the total, 75 were girls and 40 were less than one year of age. 63 of them had meningitis. Of the 18 who died, 5 were under one year and 8 were girls. About half died of meningitis.

Islamabad and Sialkot — carried out by Dr. Ahmed Sohail found that during the first six month of 2001, 50 (19 female) were diagnosed as TB patients. 78% were suffering from pulmonary TB, 8% abdominal, 4% meningitis, 6% lymph modes and 4% bone TB. 12 were less than a year old, 14 of them were between the age of one and two, 4 of them between two and six and 20 between 7 and 12 years of age.

According to Dr. Sohail, almost 90% of the cases were from families with a monthly income of less than Rs. 6000. And a huge 52% of the cases were of children who were less than two years of age showing that their weak immune systems made them more vulnera-

Rawalpindi is the fourth victim of the 12-member family to have lung tuberculosis (TB). Her, father, Safdar Ali, a hawker earning Rs. 3,000 a month, has been regularly visiting the hospital for the last three years. First, to accompany his three year old Jharna Akhtar is suffering from severe brain TB. She too is the fourth victim of the family after her father, mother and her 13 year old sister Laiju Akhtar.

Narrating the ordeal to *TNS*, mother Kulsum moans that the disease hit the

A similar scene is in Nepal's Dhankuta district, where Dhan Lama, 15, has contracted extra-pulmonary TB from his mother who died of TB three years ago at the age of 49. The reason of her death was that she stopped her treatment half way through. Sadiqa and Dhan are

what about infants like Jharna who cannot produce sputum?

This has made TB detection among children a major problem confronting public health managers. Diagnosis among infants could be made on the basis of family history, skin testing, or x-ray test. But even all these tests could be

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Another study — of children visiting two private clinics in

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ished children.

SAARC guidelines for treating children specifically say: "If you find the diagnosis of TB among children difficult you are not alone. It is easy to over-diagnose TB in children. It is also easy to miss TB in children. Carefully assess all the evidence before making

accurate diagnosis of TB in some cases. Dr. Arif Noor of NTP told TNS: "When a child gets vaccinated with BCG, he is exposed to a live attenuated form of an organism. So the Mantoux (skin test) then is not a reliable test as it tells about exposure than the disease."