

(33%) between 5 and 10 years and 8 (11%) more than 10 years. Amongst the clinical features, fever was seen in 100%, rash in 86%, coryza in 71% and conjunctivitis in 67%. Koplik spots, pathognomic of measles were seen only in 29%. Leucopenia (total WBC count < 4000 cells/mm³) was seen in 46% and leucocytosis (total WBC count > 10,000) in 13%. Measles specific IgM antibodies by ELISA was done only in 42 (60%) and positive in 16 (23%) and there was clustering of cases between the months of January-June. It is unfortunate that 77% children had received measles immunization earlier thus stressing the need for revaccination and only 56 (80%) children received oral vitamin A supplementation. The proportion of children attacked by measles even after immunisation went on increasing with the increasing age, suggesting the waning of immunity with increasing age, which is similar to earlier study reported by Sharma, *et al*(3). With regards to measles related complications, one child had mild upper GI bleed and one had photophobia. All cases were brought under measles surveillance system and managed conservatively. There was no mortality. To conclude, measles is re-emerging with lot of children affected despite their previous immunization status though our findings represent only the tip of the

iceberg. Larger studies in future are needed to stress the importance of including second dose of measles in Universal Immunisation Program.

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REFERENCES

1. CDC. Global measles control and regional elimination 1998-1999. MMWR 1999; 48:1124-1130.
2. Measles Surveillance and Outbreak Investigation Field Guide. New Delhi: Government of India, Department of Family Welfare, 2005.
3. Sharma MK, Bhatia V, Swami HM. Outbreak of measles amongst vaccinated children in a slum of Chandigarh. Indian J Med Sci 2004; 58: 47-53.

Why Tuberculosis is a Difficult Disease to Target for Control or Elimination?

The journal needs to be complimented for turning attention toward growing challenge posed by tuberculosis (TB) in India by publishing two articles on the problem(1, 2). While the one provides insight in to clinical spectrum of pediatric TB(1), the accompanying editorial highlights the urgent need to have more research in to various aspects related to pediatric TB(2). I agree with the author's observations that in current tuberculosis control programs, the emphasis is on to prevent spread of TB by targeting sputum positive adult cases and

instituting them under DOTS while a large pool of pediatric and extra-pulmonary TB patients is neglected to a certain extent(2, 3).

As far as principles of disease control or eradication are concerned, there are at least three basic prerequisites to control/eliminate any disease entity- first to have a good, effective preventive tool (vaccine), second, an accurate diagnostic facility for active case detection for proper surveillance, and finally, an effective treatment modality of the target disease. Though there are many other prerequisites and requirements that need to be fulfilled before going for any public health disease control initiative, but these are the bare minimum and at least two of them need to be met before entertaining any hope of disease elimination or containment. For instance, take the cases of Smallpox and Polio eradication

programs. The success of the former and near-success of the latter can be attributed to availability of good effective vaccines and sensitive diagnostic tools (clinical diagnosis in the former and viral isolation of the latter). The success was achieved in controlling and eradicating these diseases even without having any effective treatment modalities available. Hence, the first two prerequisites attain a greater significance as far as public health initiatives of any infectious disease elimination programs are concerned. On the other hand, despite having effective treatment, TB control programs in India failed to achieve set targets mainly because of non-availability of first two prerequisites. There is not an effective vaccine on the horizon and the only available vaccine, the BCG fails to prevent onset of primary infection in the vaccinees. Proper diagnosis of TB, particularly in children is the greatest bottleneck not only in disease surveillance, but in proper case management also. Lack of proper, uniform case definition/criteria and non-availability of any 'gold standard' diagnostic tool make the diagnosis of pediatric tuberculosis a very intimidating task.

In many published series, the cases are over-diagnosed and under-treated with ATT(4). Furthermore, in a survey conducted amongst private practitioners recently in Mumbai, out of 100 clinicians treating adult TB patients as many as 90 different treatment regimens were noticed(4). There are good and effective drugs available, but their effective use in proper protocol-based regimens still eluded in most instances. DOTS therapy may address this flaw especially in adult patients, however, it will be a daunting task to convince practitioners to fall in line and comply with the guidelines mentioned in RNTCP(3,4). Hence, the only available effective tool to control tuberculosis is also in danger of becoming ineffective if not utilized in a proper manner and may add to the growing problem of MDR-TB.

Though extensive efforts are going on globally to develop an improved TB vaccine, but considering the current status of the various trials, it will not be available for public use in near future. Hence, the need of the hour is to set modest targets and adopt a 'step-wise' approach. In the first step, priority should be to stop spread of fresh infection by targeting only smear positive cases, the next step should target reducing the load of entire TB cases including smear negative adult and pediatric cases, and finally, disease elimination should be attempted once an effective vaccine become available.

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REFERENCES

1. Swaminathan S, Datta M, Radhamani MP, Mathew S, Reetha AM, Rajajee S, *et al.* A profile of bacteriologically confirmed pulmonary tuberculosis in children. *Indian Pediatr* 2008; 45: 743-747.
2. Marais BJ. Performing TB research in children – issues to consider. *Indian Pediatr* 2008; 45: 737-739.
3. TB India 2008-RNTCP status report. Central TB Division, Directorate General of Health Services Ministry of Health and Family Welfare, Nirman Bhawan, New Delhi. Available at: <http://www.tbcindia.org/pdfs/TB-India-2008.pdf>. Accessed on September 17, 2008.
4. Agarwal SP, Chauhan LS. Tuberculosis control in India. Directorate General of Health Services, Ministry of Health and Family Welfare, New Delhi, 2005. Available at: <http://www.tbcindia.org/pdfs/Tuberculosis%20Control%20in%20India-Final.pdf>. Accessed on September 17, 2008.