accompanied by greatly diminished virulence of *M. tuberculosis(8).*

Paradoxically, fully drug-sensitive *M. tuberculosis* bacilli have the ability to survive in the cells and tissues of patients despite the adequate and regular administration of such drugs and indeed, most bacteriological relapses after adequately supervised modern short-course chemotherapy are due to drug-sensitive organisms(2).

These observations, though contradictory to each other, clearly point towards the importance of adopting clinically tested and proven recommendations rather than observations based on theoretical or hypothetical considerations. Therefore, the desirability of adopting a 4-drug regimen as recommended by ATS is totally unwarranted in Indian circumstances as of now. Besides, the bacillary load in tuberculous disease and infection is far less in children than adult patients and type of disease in children (primary, progressive or disseminated) is very different from that in the adults (the secondary or 'adult-type'-cavitary or massive infiltrative pulmonary disease). The need to provide uniform guidelines in this direction for Indian population is indeed timely, and in my opinion, the Indian Academy of Pediatrics should be the torch-bearer in this context.

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## Reply

Dr. Seth has raised relevant issues which required a detailed discussion and were beyond the purview of a comment on a 'Selected Summary'. The impact of the prevalence of primary drug resistance in the community on the efficacy of initial drug regimes has been studied largely in adults(l). Childhood tuberculosis, which reflects the persistence of infection among the adult cases, is also likely to be affected by the resistance pattern in the adult contacts. The country has recently witnessed an increase in the number of drug resistant cases due to a variety of rea-

sons including use of less potent initial treatment regimes. The effect of this upsurge on the outcome of Childhood tuberculosis remains to be seen. However, a tip of the iceberg is already visible with an increase in the number of drug resistance or failure, pediatric cases in many tertiary level centers. This may indicate a need for a review and strengthening of our initial treatment strategies.

Several studies are available in childhood tuberculosis using 2 RHZ/4RH with more than 90% cure rates(2). However, in most of these reports, cases have been followed for a period of about two years only and long term outcome and relapses are unknown.

The 3 drug regime surely is a better alternative to 9 RH because of its likelihood to be effective in case of primary INH resistance and the shorter duration of therapy. However, the treatment of tuberculosis is also dependent on the bacillary load and pediatric cases with extensive disease or cavitation or severe disseminated extrapulmonary disease may be better covered by a 4 drug regimen instead. There is a strong need to use a potent combination of drugs that would not only cure rapidly even in presence of initial single drug resistance but also prevent emergence of further resistance to drugs like rifampicin. This is particularly important because the treatment of rifampicin resistant strains is difficult, expensive and often unfruitful.

Regarding the comment about low virulence of INH resistant organisms, this issue has not been fully resolved as yet. The latest data from Brazil shows that the rate of infection amongst HIV negative contacts of multidrug resistant cases was many times higher than expected(3).

I am in total agreement regarding the need to provide uniform treatment guidelines for pediatric cases of tuberculosis in the country on the basis of relevant scientific data.

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