REPLY

In response to letter from Sahu, we wish to inform that: (*a*) the group extensively deliberated about appropriate doses for anti-TB drugs to be recommended for our country based on available evidence and concluded that the earlier recommended dosages needed revision. The current dosages were arrived after looking into various available pharmacokinetic data and evidence within and outside the country (published and unpublished data from studies at AIIMS and NIRT). The group arrived at these recommendations as a consensus, while keeping in mind the absolute need for adequate serum levels and also the possible risk of cumulative hepatotoxicity; (*b*) the group recommends the total duration of ATT in intracranial TB including TB Meningitis should be 9-12 months depending upon the clinical progress on treatment. This is in consonance with available evidence and experience; and (*c*) among retreatment cases, the INH resistance is significant but not absolute, hence a third drug ethambutol, is added to in the continuation phase (RHE). There is no scientific basis or evidence for including pyrazinamide instead of ethambutol in the continuation phase. Pyrazinamide works best when there is active inflammation and in acidic pH, hence its benefit may not be seen during the continuation phase [1]. Furthermore, addition of Ethambutol not only helps in preventing emergence of drug resistance [2] but also would minimize the potential risk of hepato-toxicity with prolonged use of the suggested three hepatotoxic drugs (RHZ).

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Updated National Guidelines for Pediatric Tuberculosis in India, 2012: Some Unresolved Issues

With respect to the recently published updated national guidelines for pediatric tuberculosis in India [1], we feel that the following issues need to be clarified for the benefit of practicing pediatricians.

1. Management algorithm (***Fig*.1a**) describes that sputum positive cases need not undergo a chest *X*-ray. While *X*-ray chest may not be necessary for diagnosis and initiation of treatment, it is vital for follow up and determination of duration of intensive phase treatment.
2. The guideline says that "There is no role for inaccurate/inconsistent diagnostics like serology (IgM, IgG, IgA antibodies against MTB antigens), various in-house or non-validated commercial PCR tests and BCG test." PCR is a very useful and promising diagnostic test for tuberculosis [2-4], though the existing commercial PCRs are non-validated. Since the PCRs for TB are likely to be validated in near future, it should have been mentioned separately rather than clubbing it with serological and BCG tests.
3. Management of childhood tuberculosis through DOTS centre is programmatically logical, but if a child has to attend DOTS centre three days a week, then his/her academic performance, self-esteem and mainstreaming is likely to be compromised. Therefore we need to find a practical solution to address this very important issue. DOTS providers are not highly skilled workers, hence one of the viable solutions could be to train school teachers assigned to 'medical room' in most of the schools and give them the responsibility of DOTS providers after initial registration at DOTS center. This could significantly minimize visits to DOTS centre.
4. The guidelines recommend INH prophylaxis to "All asymptomatic contacts (under 6 years of age) of a smear positive case, after ruling out active disease and irrespective of their BCG, TST or nutritional status." This appears to be an overstatement which arbitrarily puts the whole family under a cloud with consequent social stigma and even partial failure in compliance by those who really need to take it. Secondly, are we justified to give single drug chemoprophylaxis with INH which has a resistance rate of >5% in our community? What would be the overall impact on INH resistance?
5. INH chemoprophylaxis in all TST positive cases has been recommended for 6 months. What is the evidence to support this conclusion? Duration of

immunosuppressant drugs is variable ranging from weeks to months. So, how can 6 months chemoprophylaxis be universal?

6. The statement "a child born to mother who was diagnosed to have TB in pregnancy should receive prophylaxis for 6 months, provided congenital TB has been ruled out" has not been supported by clinical and investigatory approach for of ruling out congenital tuberculosis. It is of paramount importance to diagnose a case of congenital TB and treat as a new case as early as possible as untreated disease is invariably fatal [5]. Therefore, diagnostic algorithm of congenital TB must be included in the guidelines both for exclusion as well as for treatment.

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REPLY

In reference to letter received from Kumar and Patwari, we would like to add that:

1. The current recommendations [1] highlight that the diagnosis of TB is most reliable with microbiological methods and in such cases the findings on chest skiagrams usually do not help any further in diagnosis. Chest skiagram, however, may be done, for detailing the pulmonary disease, depending upon the feasibility.

2. They themselves have pointed out, the existing PCR-based tests available in most commercial laboratories are not reliable therefore these were clubbed with all other inaccurate diagnostic tests. With the advancement in technologies, the guidance may be revised in future as and when new tools or evidence emerges. Cartridge-based nucleic amplification test is one such test currently being evaluated.

3. DOTS for new cases does not need a skilled person as there are only oral drugs to be administered. School based DOTS may be an option but the limited capacities and lack of time or motivation with in the school staff as well as the potential risk of stigmatisation are the likely hurdles Also, partnerships for provision of directly supervised treatment must have a continued link with health providers to monitor the child for response to therapy, adverse events and management of other co-morbidities, including malnutrition. There is certainly a need to make DOTS more user-friendly for children and there is a need to pilot test to achieve innovative out of the box alternatives (school based, home based or neighbourhood DOTS).

4. INH prophylaxis is the only proven and established chemoprophylactic drug for tuberculosis [2-4]. The committee after reviewing the scientific literature and deliberating on programmatic implementation the committee opined that INH therapy should continue to be the mainstay of chemoprophylaxis in our country; albeit at a higher dosage of 10 mg/kg body weight per day.

5. The prophylaxis is recommended for all asymptomatic contacts (children under the age of six years) of smear positive tuberculosis because (*a*) the exposure to an infectious case (which is usually a smear positive TB case) is one of the strongest determinant for the risk of infection, (*b*) and at a younger age the risk of developing disease after infection is very high. Though tuberculin skin test (TST) is performed to establish infection, it may not be required when there is a definite exposure. The current recommendations merely simplifies the mechanism to clinically identify children, in the family/household, who are likely to be recently infected.

   The current evidence is for the post exposure prophylaxis and is recommended for six months. The benefit of a prolonged or continuous use of INH prophylaxis for TB, in a continued state of immunosuppression is not known. We, therefore, found it appropriate to recommend six months prophylaxis only for those cases who are found to be infected at the first point when the immunosuppressive therapy is started.

6. The recommendations clearly state the need to rule out active disease before initiating any child on preventive therapy including suspected perinatal