

Tuberculosis in Children with Reference to their Immunization Status: A Hospital Based Study

With reference to this manuscript(1) we would like to offer the following comments. Of the 530 cases of tuberculosis included in the study, only 86 children were immunized with BCG. However, it needs to be clarified what was the nature of selection of these cases, *i.e.*, the total number of children immunized with BCG during the period under study and the resultant percentage of failure of vaccination. There is no doubt that BCG gives only partial protection and is particularly recommended for protection against severer forms of tubercular infection. Among the complications associated with BCG vaccination, clinical manifestations of dissemination are uncommon and those recorded have nearly followed vaccination soon after birth, during incubation period of another infection particularly measles, in children later shown to have or suspected of having immunodeficiency states(2).

The mortality in tuberculosis is determined by several factors, like extent of disease, early initiation of therapy, associated complications, and immunologic status of the child. Without clearly delineating the factors which lead to higher percentage of mortality in immunized cases, it will not be scientific to conclude that BCG vaccine is responsible.

Therapeutic failure in tuberculosis is independent of immunization status. To

infer that less number of immunized children were relieved of their disease is statistical rather than based on hard scientific evidence.

It is our submission that unless more evidence is accumulated based on large, multicentric trials on the efficacy and complications of BCG, it is rather premature to attribute these statistical data to the vaccine.

REFERENCES

1. Mathur GP, Mathur S, Gupta V, *et al.* Tuberculosis in children with reference to their immunization status: A hospital based study. *Indian Pediatr* 1991, 28: 569-570.
2. Miller FJW. BCG Vaccination. *In: Tuberculosis in children.* New York Churchill Livingstone, 1982, pp 55-72.

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Reply

Of the 530 cases suffering from tuberculosis admitted during 1986-1987, BCG mark was noted only in 86 children. Factors responsible for morbidity and mortality in immunized versus unimmunized children were almost the same. BCG was not effective in preventing even one of the severe forms of tuberculosis, *i.e.*, tuberculous meningitis(1). Tidjani *et al.*, have

TABLE I—*Relationship of Disease with Immunization Status*

Study	Total cases	BCG immunized	Unimmunized
Mathur <i>et al.</i>	530	86 (16.2%)	444 (63.8%)
Tidjani <i>et al.</i>	175	62 (35.4%)	113 (64.6%)

reported development of tuberculosis in 7.1% of BCG vaccinated children(2). The relationship of disease with immunization status revealed that in both the studies(1,2) tuberculosis occurred after BCG immunization, more so in Tidjani *et al.* study(2) (Table).

The recovery and mortality rates were 44.2 and 27.0%, respectively in BCG immunized patients as compared to unimmunized patients which were 51.0 and 24.1% indicating that efficacy of BCG vaccination in children was doubtful.

Therefore, it will be justified to say that BCG vaccination was the only factor causing increased mortality in immunized cases as compared to unimmunized cases. This is due to the fact that after BCG the suspicion and diagnosis of tuberculosis is difficult.

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REFERENCES

1. Mathur GP, Mathur S, Gupta, *et al.* Tuberculosis in children with reference to their immunization status: A hospital based study. *Indian Pediatr* 1991, 28: 569-570.

2. Tidjani O, Amedome A, Ten Dam HG. The protective effect of BCG vaccination of the newborn against childhood tuberculosis in an African community. *Tubercle* 1986, 67: 269-281.

Use of Medicines in Pediatric Practice: Tablets vs Liquids

Liquid medicines have been widely used in pediatric practice because of some industrial promotion of subtle advantages like being tasty, ready to use. But there are many disadvantages which each one of us should keep in mind before a prescription is written. Rightly, some authors have questioned the use of liquid medicines(1).

Disadvantages of Liquids

1. *High Cost:* Cost of liquid medicines is 20 to 800% higher than the tablets (Table I). For example if a one-year-old child suffering from acute invasive diarrhea is to be treated with nalidixic acid, cost difference is Rs 10. Similarly, if a 12 kg child of 2 years with acute pharyngitis to be treated for 10 days with penicillin and paracetamol cost difference would be about Rs 20. In case cotrimoxazole and paracetamol is used for 5 days, cost difference would be about Rs. 12.

The average cost difference per prescription is Rs 10. If 5500 members of IAP change their mind in one patient per day; patients money saved would be about Rs 2 crores per annum which is equivalent to 25 times of annual subscription of all IAP members.

2. *Less Stability:* Chemical instability of a drug is invariably magnified in solution