

India, with high prevalence of tuberculosis, 1 TU is the recommended dose as per the WHO guidelines(2). But we have observed that pediatricians are still using 10 TU for MT and anti-tuberculous therapy are being started on the basis of positive MT. Span diagnostic, Surat one of the largest manufacturers in India is also producing 10 TU much more as compared to other strength (1 TU, 2 TU and 5 TU) as the demand of 10 TU is high (Personal communication with production manager). We have already undertaken a study to identify cutoff value for diagnosis of tubercular infection with different strength and formulation of tuberculin. Preliminary results of our study suggest false positive diagnosis of tubercular infection when MT strength is increased from 1 TU to 5 TU.

We urge the Academy to come forward and write letters to all leading manufacturers of tuberculin in India not to produce MT more than 5 TU strength. Last but not least, diagnosis of tuberculosis is not a problem in India; it is overdiagnosis and empirical use of anti-tuberculous therapy which is being the major problem.

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REPLY

We appreciate the concern of Dr Goyal, *et al.* about strength of tuberculin used in the diagnosis of childhood tuberculosis. Our group debated over this issue and arrived at consensus to suggest not more than 5 TU strength of tuberculin to be used for diagnosis of childhood tuberculosis. We also discussed whether cut-off for natural infection should be more than 10 mm. Though many of us thought that cut-off may have to be higher than 10 mm, lack of evidence made us continue with 10 mm as cut-off for the present. Further, we have already emphasised that diagnosis should not be considered on the basis of any single test. I am sure you are aware that 1TU and 2TU tuberculin is now available and it is time our members start using 1 or 2 TU tuberculin. If we stop using 10 TU, manufacturers will automatically stop producing it.

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Iatrogenic Kwashiorkor

We report four cases of kwashiorkor in infants, who had a pre existing skin disorder and who were on dietary restrictions as part of their treatment in Alternative medicine.

Complementary and alternative medicine are increasingly being used to diagnose or treat allergic diseases, and numerous studies have reported benefits of this type of medicine. However, severe nutritional deficiencies can occur in infants and small children given strict alternative diets, leading

to 'kwashiorkor'(1). These four cases, three of whom had atopic dermatitis and one had epidermolysis bullosa, presented with generalized edema, skin peeling, hair changes, apathy, and not gaining weight. On examination, three of these cases had kwashiorkor and one had marasmic kwashiorkor. Investigations supported the diagnosis. In all these cases, the nutritional deficiencies were caused by severe dietary restriction placed by the treating alternative medicine. The ratio of protein to energy in this diet is very low as most forms of protein are taboo in this diet(1). For example, cow's milk and milk products except ghee, pulses and oils as they are "gas forming", Ragi and most fruits as they are "cold food", were restricted. It is this

imbalance in the dietary ratio of protein to energy that has been implicated in the pathogenesis of kwashiorkor(2). The families involved do not fit the stereotypic profile in which malnutrition would be anticipated. The parents were well-educated, seemed knowledgeable and responsible, and had at least average family income. Diagnoses were delayed by a low index of suspicion as the skin changes of kwashiorkar were thought to be an exacerbation of the primary skin problem. In addition, kwashiorkar is uncommon in Kerala, and as a result, physicians may be unfamiliar with their clinical features. With resumption of a proper diet, the edema subsided in two weeks and skin changes were reversed, though the primary skin lesions persisted.

We were unable to find previous reports of kwashiorkor caused by dietary restriction as a part of treatment in alternative medicine, but cases may have occurred and may have not been reported. A heightened level of vigilance is required so that

nutritional deficiency, which may result in severe life-threatening complications, is not overlooked.

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Homicide by Neglect? Uncontrolled Pediatric Infectious Diseases

Aiding or abetting someone's death is criminal act in jurisprudence. If diagnosis or treatment is faulty for a child with serious illness, the medical attendant is guilty of negligence – attracting punitive consequences and payment of compensation to the afflicted. Is not the agency supplying water contaminated with *Vibrio cholerae* or *Salmonella typhi* guilty of criminal negligence?

The choice of the named pathogens is with reason. Both are notoriously water-borne. The April issue of *Indian Pediatrics* has two papers on therapy of cholera and diagnosis of typhoid fever, both bacteriologically proven(1,2). One counted 180 children with cholera in one hospital in Delhi, during March 2006 to February 2007(1). The other counted 41 children with typhoid fever in one hospital in

Mysore(2). The nation-wide magnitude of cholera and typhoid fever are unimaginably enormous. Yet India has no systematic control plan against water-borne infectious diseases (IDs).

Another paper reported overall prevalence of 3.5% clinical tuberculosis (TB) among children attending one hospital in Agra(3). The reason for continued high burden of pediatric TB in spite of routine BCG vaccination remains uninvestigated by the National TB Control Programme. Falciparum malaria is widely prevalent in most States, malaria control programme notwithstanding. I recently found that 2-5% of pediatric admissions are for bacterial meningitis (unpublished), the common causes of which are *Haemophilus influenzae* type b (Hib) and *Streptococcus pneumoniae*. For bacterial meningitis, there is no control program.

The national average coverage of children with the cheapest of vaccines (against diphtheria, whooping cough, tetanus, measles and polio) is <50%(4). Since in some States it is >80%, in others it must be dismally low - and vaccine-preventable