Letters to the Editor

Methods for Mass Screening of Vitamin A Deficiency

The recent article on this topic(l) suffers from a few methodological and observational shortcomings. The selection of controls does not provide extra information on identification of the best method for mass screening of vitamin A deficiency in the field. The false positivity rate of Rose Bengal stain test (RBST) as calculated from *Table I* of the article is 74.6%, thereby indicating that few children among the control group would be having RBST positive results. Similarly, the false positivity rate of Conjunctival Impression Cytology (CIC) is 47.9%. Moreover, since CIC can predict preclinical vitamin A deficiency among the apparently normal children it is expected to find abnormal CIC results among control group. Hence the authors contention of 100% negative RBST and normal CIC findings among the control group is not convincing.

It would have been much more informative if the authors had calculated sensitivity and specificity of other methods like dietary assessment and clinical findings also. A previous study reported similar results between clinical findings and RBST(2). Although CIC has been the most acceptable method for field detection of early vitamin A deficiency, its practicability is often limited by its cumbersome and time consuming nature of sample collection, preservation, staining and microscopic examination which needs skilled and trained personnel. Moreover, the cost of performing CIC is more than administration of one dose of vitamin A which raises a doubt about the cost effectiveness of the method. For developing countries with limited resources, clinical signs and symptoms as recommended by the WHO(3) seem to be most appropriate. Since vitamin A prophylaxis is routinely given to children under 3 years of age in India, screening for vitamin A deficiency may not be of much use in this age group.

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3. Vitamin A deficiency and Xerophthalmia. Report of a Joint WHO/USAID Meeting. Geneva, World Health Organization. WHO Tech Rep Ser No. 590,1976.

Reply

We are grateful to Dr. Singh for the interest in our publication. In response, we have the following comments to offer:

The article compares the results obtained by three different methods, namely, RBST, CIC and serum vitamin A used for the assessment of vitamin A deficiency in 196 children *(Table I)* who were randomly selected from 2156 children whose dietary nutrient intake was