The nutritional status of a community is the sum of the nutritional status of the individuals who form that community. Clinical examination is one of the most essential procedures to assess the nutritional status and it is also the simplest, the most practical and without doubt the soundest means of ascertaining the nutritional status of a group of individuals. As malnutrition still remains the topmost cause of morbidity and mortality in children of tropical countries, it is all the more necessary to stress the importance of the clinical study of malnutrition.

Material and Methods

1235 children of 1-5 years of age living in and around Bikaner city (Western Rajasthan) were examined. All the children were examined at their home in the presence of their parents. The socio-economic status was assessed according to Prasad’s classification (1970), on per capita income of the family. The age of the child was noted as given by the mother and confirmed to be as accurate as possible by asking the parents to associate the birth of the child with either a particular season or relating it to some important local festival.

The immunization status of the children included in the current study was assessed by noting the scars of small pox and B.C.G. as far as possible and also by asking the history of immunization against D.P.T. and polio.

The child was subjected to a thorough clinical examination in good light. A special clinical examination was carried out to determine any nutritional and vitamin deficiency. To detect protein calorie malnutrition the child was examined for the presence of any skin changes, hepatomegaly, for the condition of hair, colour of hair, flag sign, C.N.S. changes in the form of irritability, apathy and drowsiness, gross muscle wasting oedema of the feet, presence of moon face, etc. Regarding vitamin A deficiency, the parents were asked about night blindness (ratindha in the local language). Corneal xerosis, conjunctival xerosis, Bitot’s spots, keratomalacia and follicular dermatitis, if present, were noted. To determine vitamin D deficiency, the condition of the fontanelle (open or closed), bossing of the frontal or parietal bones, widening of the wrist, Harrison’s sulcus, ricketic rosary, bow legs, double malleolus,
pot belly, hepatomegaly etc. were noted. Vitamin B complex deficiency was diagnosed by the presence of cheilosis, angular stomatitis, signs of riboflavin deficiency etc. Vitamin C deficiency was detected by the presence of spongy gums, petechial hemorrhages etc.

All these were recorded on a plan and proforma.

**Observations**

These are shown in Tables 1 to 8.

**Discussion**

Clinical examination for signs of nutritional deficiency offers a practical method of evaluating the nutritional status of a child which forms the basis of this study. Nearly 66.8% of the children studied belonged to the income group with less than thirty rupees per capita per month; 28% had an income of Rs. 155/- and above per capita per month (Table 3). Thus a large number of children came from the underprivileged rural and urban communities. Numerous surveys conducted all over India relating to nutritional deficiency disorders have emphasized the role of poverty.

The incidence of marasmus and kwashiorkor was 4.5% and 3.2% respectively. The total number of cases of protein calorie malnutrition (P.C.M.) was 143 (11.57%). In the entire sample 3.2% cases showed hair changes in the form of discoloration (Table 4).

Studies from Delhi by Gupta *et al.* (1972) reported P.C.M. in 13.9% of urban and in 23.0% of rural children. The incidence is low in our study but is higher than that reported by Ghai *et al.* (1970) from Haryana (kwashiorkor 0.9% and marasmus 1.7%) and Rao *et al.* (1969) from Hyderabad (0.6% kwashiorkor and 1% marasmus). Chaudhary and Ramakrishnan (1973) reported that the most frequent signs of P.C.M. were hair changes (18.1%), hepatomegaly (9.3%) and muscular wasting (5.8%). Hair changes were the most frequent sign of P.C.M. in the present study also (3.7%) as also in the study of Gupta *et al.* (1972).

Gupta and Bhandari (1973) from Rajasthan (Jodhpur) reported the incidence of hair changes to be 13.0% and 11.2% in tribal and nontribal preschool children. The incidence of frank kwashiorkor was less in this part of the country as compared to marasmus.

The common age group in which marasmus was encountered was 12 to 36

<table>
<thead>
<tr>
<th>Area</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>418</td>
<td>33.90</td>
</tr>
<tr>
<td>Rural</td>
<td>817</td>
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<tr>
<td>Total</td>
<td>1235</td>
<td>100</td>
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