

guidelines can make all GM activities futile. The inservice training of functionaries is, therefore, essential to update their knowledge.

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Rota Virus Diarrhea Among Infants and Children at Tirupati

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Acute diarrheal diseases are the major cause of childhood morbidity and mortality all over the world, more so in developing countries(1). Rota virus is an important etiological agent of serious diarrheal illness in infants and young children below the age of 2 years and this virus is well known to

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have a worldwide distribution(2). Rota viruses cause an estimated 140 million cases of gastroenteritis in infants and children and one million deaths worldwide each year(3). According to various studies from India(4), and abroad(5) the prevalence of Rota virus infection varies from 15-70%. Patients with rota virus diarrhea shed the virus in high concentration during the initial period of illness and the viruses can be identified in fecal samples by standard diagnostic techniques^).

In the light of the above, the present study was undertaken to know the prevalence of rota virus infection among infants and children suffering from diarrhea at this place.

Materials and Methods

A total of 170 children in the age group of 0-24 months who attended the Pediatric Department of SVRR Hospital, Tirupati, during the period from June to September, 1991 with acute diarrhea constituted the study

group. Among them 78 children were from Tirupati town and 92 were from surrounding villages. Twelve healthy children of same age group not having any disease, but attending the well baby clinic for immunization purposes were included in the study as control group.

Fecal samples were collected prior to administration of antibiotics and stored in frozen conditions until tested, after diluting the samples 1 to 10 with sample diluent supplied with the test kit. Rotazyme ELISA test kit of Wellcome Laboratories, U.K. was used and the test was carried out as per kit manufacturers directions. The test kit has a

test sensitivity of 96.9% and specificity of 99.8% and thus a retest with blocking procedure is not necessary, hence it is not done. The samples when afresh were subjected for bacteriological cultures in particular for the detection of enteropathogenic *Escherichia Coli* (EPEC) as per standard techniques(7). Results

Among 170 children of the study group tested (Table I) rota virus infection was detected among 40 (23.5%). The highest incidence of infection was noticed among children in the age group of 7-12 months, among male children (26%) and children

TABLE I—Particulars of Children Investigated

Age (mo)	Number investigated			Number positive for rota virus			Per cent positive
	Male	Female	Total	Male	Female	Total	
0 - 6	29	21	50	3	1	4	8
7 - 12	50	32	82	18	10	28	34
13 - 18	12	5	17	3	1	4	24
19 - 24	13	8	21	3	1	4	19
Total	104	66	170	27	13	40	24

from rural areas (25%), although the results obtained are not statistically significant.

Discussion

The incidence of rota virus diarrhea is highly variable in India being 22% in Vellore(8), 33.3% in Delhi(9) and 66% in Calicut(4). Incidence reported in the present study is in line with the above reports. High levels of rota virus antibodies were detected in newborns by earlier workers(2,10). This passive immunity probably wanes out by 4-6 weeks age and thus infants after this age will be more susceptible for rota virus

infection. Corroborating with this, highest incidence of rota virus infection was noticed among children in the age group of 7-12 months. Rota virus diarrhea is known to occur predominantly among male children. Whether this could be due to more exposure, more care for the male child or lack of immunity is not clearly understood(4). Similarly diarrheal diseases among children are related to low socio-economic status, illiteracy, over crowding, lack of health consciousness and poor sanitary conditions. Such factors are common in rural areas in India. This might be the reason for rota

virus diarrhea noticed among 23 children out of 92 (25 %) from rural area in the present study.

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Niemann-Pick Disease Type IS in Sibs with 20 Years Follow Up

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In 1983, we had reported two sibs with Niemann-Pick Disease (NPD) type B(1). Type B is now reclassified as type IS(2). Now we are reporting further follow up of these sibs. No such follow up has been reported so far in the Indian literature.

Case Reports

Case 1: The subject, born of non consanguinous marriage from Indian Christian family was admitted in KEM Hospital,

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