Profile of Preschool Diarrhoea in a Rural Community

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Introduction :

A significant new knowledge acquired in the last decade on the aetiology, epidemiology, pathogenesis, immunology and treatment of acute diarrhoea provided a solid basis for the immediate attack on the problem. Although acute diarrhoeal disease is one of the major causes of morbidity and mortality among children yet only few studies on diarrhoea related morbidity and mortality are available. An attempt was made in the present study to determine the magnitude of the problem of diarrhoea among preschool children and prevailing health practices so as to plan the action for the control of diarrhoeal diseases among preschool children in rural community.

Material and Methods :

The present study was undertaken among 2105 preschool children belonging to villages of randomly selected five subcentres (clusters) of Primary Health Centre, Rohta of Meerut. The sample was selected as per the W.H.O. specifications and included all the underfive children presently alive in the families at the time of study and all those underfive children who died during last one year as shown in Table—1.

Diarrhoeal morbidity was considered to be present if the child had diarrhoea within fifteen days prior to study and the diarrhoea was considered as the cause of death if the child had diarrhoea within one week prior to death. Diarrhoea was defined as passing of 3 or more loose or watery stools in a day (I.C.M.R). The study was conducted by five teams each consisting of one intern and one health worker female and male each and each team was alloted one clnster to complete the survey work. The survey was conducted by house to house visit, leaving no house, on a predesigned and pretested schedule. Before commencing the study all the team members were appraised of the contents and during study continuously supervised by the senior teachers of the Department of S.P.M. in the field. The study was simultaneously commenced in all the five clusters and was completed in seven days during September 24 to 30, 1985. The data so obtained was analysed and statistically evaluated.

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Observations :

In all 205 children amongst 2052 living children had diarrhoea during last fifteen days accounting for fortnightly incidence rate of 99.9 per 1000 children. The incidence of diarrhoea varied significantly in different clusters ($P<0.05$) and it was observed that incidence was higher in far remote-areas as compared to areas nearer to Meerut city.

Table 1 : Clusterwise distribution of childern and diarrhoea.

Cluster	Subcentre	Children			Diarrhoea cases	
		Alive	Died	Total	No.	Incidence (1000)
1	Kalyanpur	411	11	422	48	115.8
2	Rohta	413	7	420	50	121.1
3	Badam	401	19	420	39	97.3
4	Bhola	409	14	423	42	102.7
5	Kankar Kheda	418	2	420	26	62.2
Total		2052	53	2105	205	99.9

$X^2=9.981$ d. f.$=4$ $P<0.05$

A majority (60.0%) of the diarrhoea cases occured below two years of age and were almost equally distributed during first year (29.8%) and second year (30.2%) of life. The percentage of diarrhoeal cases progressively declined with the advancement of age. The diarrhoeal morbidity was almost equal among males (51.2%) and females (48.8%).

Table 2 : Agewise distribution of diarrhoea cases.

Age (Years)	Diarrhoea cases	
	Number	Percent
Below 1	61	29.8
—2	62	30.2
—3	55	26.8
—4	16	7.8
—5	11	5.4
Total	205	100.0

All the cases of diarrhoea were classified for severity on the basis of frequency of motions per day. Only 22 (10.7%) cases had severe degree of diarrhoea with $\geqslant 11$ motions per day while 98 (47.8%) cases had moderate diarrhoea with 5 to 10 motions per day and and rest 85 (41.5%) cases had mild diarrhoea passing 3 to 4 motions per day.

Type of therapy as classified in Table–3 depicts that about one fourth (26.8%) of the diarrhoeal cases had no treatment for their illness and nearly half (48.8%) of the cases were treated only with oral fluids and interestingly only one (0.5%) case required intravenous fluid therapy,

Table—3. Type of therapy in diarrhoea cases.

Therapy	Treated cases	
	Number	Percent
Home remedies	72	35.1
Salt sugar solution	11	5.4
O.R.S. packets	17	8.3
Intravenous fluids	1	0.5
Other treatments	49	23.9
No Treatment	55	26.8
All cases	205	100.0

In all 53 deaths were recorded among the underfive childern during the last one year prior to study accounting for a preschool child death rate of 25.2 per 1000 children. Diarrhoea accounted for 28.3% (15 deaths) of total deaths resulting in diarrhoeal disease death rate of 7.1 per 1000 children.

Discussion :

The fortnightly incidence of diarrhoea in the present study was found to be 99.9/1000 children which is quite comparable to 91.98/1000 at Nilgiri in Tamilnadu (N.I.C.D., 1984). The overall fortnightly incidence in U.P. was recorded as 132/1000 children during the corresponding period (Verma, 1986). However the incidence in Varanasi was much higher (218.36/1000) in Sept. 1984 (N.I.C.D., 1984).

Diarrhoea was found to be uniformly higher below two years of age and minimum in the age group 4–5 years in the present study and almost equal in both sexes. Similar were the findings in Varanasi excepting the incidence being maximum below one year of age (N.I.C.D., 1984). Only 10.7% of the cases in the present study had severe diarehoea and rest of the cases had

mild to moderate degree of diarrhoea which clearly depicts that the cases which required specialised medical attention are very few and most of the cases can be tackled by simple measures of preventing dehydration. Recent studies have also indicated that most of the diarrhoea cases in the community are mild and about 10% of them may have dehydration and only 1 in 100 may require to be treated in health centre and hospitals (I.C.M.R.).

The diarrhoeal diseases accounted for 28.3% of total underfive deaths in the present study. The corresponding figure for U.P. worked out to be was 20.0% (Verma, 1986). However in Varanasi and Nilgiri the corresponding figures were 47% and 44% respectively (N.I.C.D., 1984). The overall preschool mortality in U.P. was 20/1000 with a diarrhoeal disease death rate of 4/1000 (Verma, 1986) as against 25.2/1000 and 7.1/1000 respectively in the present study.

References :

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