Assessment of Awareness and Practices in Management of Childhood Diarrhoea among Caregivers of Under Five Children in Urban Field Practice Area of KIMS, Hubballi

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Abstract

Background: Diarrhoea is one of the leading causes of childhood mortality and morbidity. Diarrhoea leads to dehydration and causes significant mortality and morbidity in under five children. Most of the childhood diarrhoea cases can be treated by Oral Rehydration Therapy and Zinc supplementation. Hospitalization for childhood diarrhoea can pose significant burden to health systems and households. Therefore, it is necessary to assess the community-based management followed for the same. The objective of this study was to assess the awareness and practices for management of childhood diarrhoea among the caregivers of under five children.

Method: A Community based Cross sectional study was conducted among 203 caregivers of under five children residing in urban field practice area of KIMS, Hubballi, during June-July 2018. Study participants were selected by convenient sampling. After obtaining informed oral consent, data was collected using self-administered, semi structured questionnaire by house to house visits. Information about the sociodemographic profile, episodes of diarrhoea and management for same was collected.

Results: The prevalence of diarrhoea in under five was 21.8% in preceding two weeks. 78.8% of the caregivers were aware of ORS.73% of caregivers used ORSand 6.41 % used Zinc in the treatment of diarrhoea in their children. Awareness about sanitation and hygiene was not satisfactory in the current study.

Conclusion: Appropriate use of ORS and Zinc therapy can reduce burden of diarrhoea. Awareness regarding safe drinking water, excrete disposal and personal hygiene needs to be improved to reduce diarrhoeal diseases.

***Key words**: Diarrhoea, ORS, Zinc, childhood, KIMS, Mortality, Morbidity*

Introduction

Diarrhoea is one of the most common childhood illness, in both developing and developed countries. It is the second leading cause of childhood mortality in India and is responsible for 9% of all deaths per year among children under 5 years of age [1]. It is estimated that approximately 1.6 million die each year from diarrhoea in the developing world[1].

The standard definition of diarrhoea could be passing of three or more liquid stools in a 24hour period[2] . They are generally characterized as acute watery diarrhoea, persistent diarrhoea and dysentery.

Global incidence of diarrhoea among under five children is 1.731 billion episodes per year[3] . Approximately 480,000 children of age under 5 years die every year due to diarrhoea all over the world[4] .In India incidence of diarrhoea among under 5 children was estimated to be 1.71 and 1.09 episodes per person

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per year in rural and urban areas and total number of diarrhoeal deaths among under five children were estimated to be 158,209 per year as per 2015[5,6].

Interventions to prevent diarrhoea including safe drinking water, use of improved sanitation and hand washing with soap can reduce disease risk. An optimal strategy for the case management of diarrhoea in children includes correct fluid therapy, proper feeding habits, appropriate use of antibiotics, no use of anti-diarrhoeal and effective education of mother or care taker.

Oral rehydration therapy (ORT) is the management of diarrhoeal disease through the administration of plenty of fluids, in an effort to maintain or replenish proper levels of hydration in the body[7] .

In India, incidence and deaths due to diarrhoea has declined over the years due to several programmes inculcated from the grass root level. Some of the programmes include Intensified Diarrhoea Treatment Fortnight (IDCF), National Diarrhoeal Disease Control Programme (NDDCP), Rotavirus vaccination etc.

The main objective of this programme is to improve usage of ORS and Zinc for childhood diarrhoea by pre-positioning ORS at household level. The activities under this programme mainly include intensification of advocacy and awareness generation activities for diarrhoea management, strengthening service provision for diarrhoea case management, establishment of ORS-zinc corners, prepositioning of ORS by ASHA in households with under 5 children and awareness generation activities for hygiene and sanitation[8].

The studies on the diarrhoeal diseases among under five children have been scarce in this region despite high occurrence of diarrhoea among under five children. Therefore, this study on diarrhoea among under five children and initiatives to reduce the burden of diarrhoea is necessary to provide evidence-based platform for intervention.

Objective: Assessment of Awareness and Practices in Management of Childhood Diarrhoea among Caregivers of under five children.

Materials and Method

This was a community based Cross sectional study, conducted by Department of Community Medicine, Karnataka Institute of Medical Sciences (KIMS) Hubballi after taking Ethical clearance. Based on the previous study, the prevalence of diarrhoea in under 5 children was 14.8% and taking absolute precision as 0.05, sample size was calculated using the formula: $N = 4PQ/d^2$. The final sample size was taken as 203. 203 caregivers, selected by convenience sampling. The study was conducted for 1 month (8th June to 5th July 2018) in urban field practice area Karnataka Institute of Medical SciencesHospital (KIMS), Hubballi of Dharwad District, Karnataka, India. Caregivers of under five children residing in study area, who gave consent participated in the study. Caregivers of children with congenital anomalies and children with special needs were excluded from the study. Semi-structured, pretested questionnaire. Ethical clearance was obtained from institutional ethical committee of Karnataka Institute ofMedical Sciences(KIMS), Hubballi.

Method of data Collection

Caregivers of under 5 were identified by house to house visit in the area. The questionnaire was pretested in 10% of the sample size in one randomly selected urban area. The primary respondents were mothers of the under 5-year children and in cases where a mother was not a caregiver,another primary caregiver was interviewed. After taking the oral consent, the participants were interviewed using the questionnaire. Information about sociodemographic details, past episodes of diarrheal, awareness and practices about its prevention, control and management was collected.

Data Analysis

Data was entered and edited in Microsoft Excel and analysed usingStatistical Package for Social Sciences (SPSS) Version 21.Continuous data was expressed as the mean and standard deviation.Categorical data was expressed as proportions. Appropriate tests of significance were used.

Results

A total of 203 caregivers were interviewed. Majority of the study participants belonged to Muslim religion. Most of the participants were from lower middle class of socio-economic status according to modified B G Prasad's classification. 1.29% of the care givers reported at least one episode of diarrhoea in their child in the past one year and 7.9% of the caregivers reported at least one episode of diarrhoea in the preceding fortnight (figure 1).

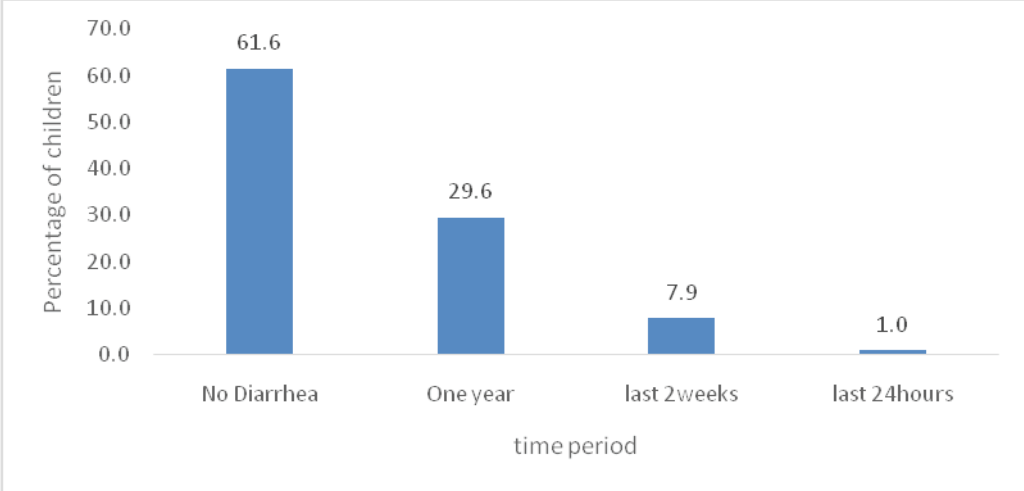

Figure 1: Distribution of number of children with episodes of diarrhoea in the past.

Table 1: Treatment approaches employed by the caregivers for management of diarrhoea in children.

Treatment approach	**N**	**%**
Managed with ORS at home	12	15.4
Managed with Home available fluids(other than ORS)	3	3.8
Went to hospital	63	80.8
Total	78	100

Table 2: Knowledge about the use of Oral Rehydration Therapy and Zinc in treatment of diarrhoea in children among the caregivers.

Variables	**Categories**	**N**	**%**
Knowledge about use of ORS	Yes	160	78.8
	No	43	21.2
Knowledge about use of Zinc	Yes	14	6.9
	No	189	93.1

The most common treatment approach for treatment of childhood diarrhea among caregivers was visiting hospital. The most common health facility approached and preferred by the caregivers was private clinic. Only 15% of the caregivers used ORS at home for diarrhoea in the children (Figure 1).

All the caregivers were aware of ORS and 78.8% were having knowledge about the correct method of use of ORS for diarrhea in their children. Only 6.9% of the caregivers were aware about zinc and its usage in episode of childhood diarrhoea. (Table 2).

All the caregivers practiced handwashing with soap and water before cooking food, before feeding the child

and after using toilet, but most of them were not aware about the proper handwashing technique and steps in hand washing. The awareness about sanitation and hygiene practices were found to be poor in most of the caregivers.

Table 3: Factors affecting the use of ORS and Zinc in the treatment of diarrhoea in children.

Variables	**Categories**	**Use of ORS n(%)**		**Chi square**	**p value**
		Used ORS	**Did not Use ORS**		
Socioeconomic status	>/=class 3	23(13.1)	152(86.9)	6.562	<0.05
	<class 3	9(32.1)	19(67.9))		
Education of the mother	>/=High school	32(27.8)	83(72.2)	29.069	<0.001
	<High school	1(1.13)	87(98.87)		
Awareness about the use of ORS	yes	31(19.4)	129(80.6)	7.419	<0.05
	No	1(2.3)	42(97.7)		
Hospital care seeking for diarrhoea	Present	27(84.3)	5(15.7)	50.5	<0.001
	Absent	135(78.9)	36(21.1)		
Variables	Categories	Use of Zinc n(%)		Chi square	p value
		Used Zinc	Did not Use Zinc		
Socioeconomic status	>/=class 3	13(7.4)	162(92.6)	0.559	>0.05
	<class 3	1(3.5)	27(96.5)		
Education of the mother	>/=High school	12(10.4)	103(89.6)	5.172	<0.05
	<High school	2(2.3)	86(97.7)		
Awareness about the use of Zinc	yes	12(7.8)	141(92.2)	0.528	>0.05
	No	2(4)	48(96)		
Hospital care seeking for diarrhoea	Present	5((3.6)	135(96.4)	7.768	<0.01
	Absent	9(14.3)	54(85.7)		

The factors found to be significantly associated with the use of ORS for childhood diarrhoea were lower socioeconomic status, education of the mother, awareness about the use of ORS in childhood diarrhoea and hospital care seeking for treatment of diarrhoea. The factors found to be significantly associated with the use of zinc were higher socioeconomic status, education of the mother, awareness about use of zinc and hospital care seeking for treatment of diarrhoea (Table 3).

Discussion

Diarrhoea is one of the major problems faced by children under five of developing countries like India. Recurrent infections in childhood significantly hamper the growth and development of preschool children[9].

The proportion of children with at least one episode of diarrhoea in our study was 38.4%, with almost equal distribution of cases among the age groups 1- 3 years and 3- 5 years. In another study done by Negi in rural

community of Varanasi, diarrhoea prevalence was 60.24% amongthe children of age group 10-25 months[10] . This difference in the most affected age group could be explained on the basis of a difference in study areas, feeding practices and sanitary conditions.

Of the total diarrhoeal episodes, 60.2 % of the cases occurred in the families of lower socio-economic status (class 4 and class 5) and this finding was significant. A similar study conducted by Walia et al in-pre-school children reported that poor socioeconomic statusand poorsanitation were important factors responsiblefor high diarrhoeamorbidity due to ease of transmission of infection[11] .

Only 6.9% of the caregivers were aware about the use of zinc in the treatment of diarrhoea and its additional benefits, while about 78% of the caregivers had knowledge about the use of ORS. A similar study conducted in urban slums of Delhi reported 71% awareness about ORS among care givers[12] .

The main finding is that about 81.8% of under 5 children with acute non bloody diarrhoea sought care from health facilities. This might be due to more severity of the episode or reduced awareness about the management of diarrhoea by home available fluids (HAFs). Out of those who sought care, utilisation of private facilities was preferred by the majority of care givers.

In a UNICEF 10 district survey in New Delhi, 79 % of mothers sought treatment from private medical sector for management of diarrhoea in their children[13]. From this it is quite evident that there is an over dependence on private sector. As medical expenses are more and more expensive in this sector the financial burden on families will be tremendous during course of treatment. In spite of the same facilities being offered free of cost in the government sector and offered at the door steps by health workers, they are not being utilized well by people.

Conclusion:

There was high prevalence of diarrhoea and most of them sought care from private health facilities. Cost of treatment can be significantly reduced by continuous health education in the community about the usage of zinc and ORS for treatment of diarrhoea. Health providers should spend more time to emphasize on use of ORS, Zinc and HAFs in prevention and treatment of dehydration. Awareness regarding safe drinking water, excrete disposal and personal hygiene whichcan reduce burden of diarrhoeal diseases is recommended.

Conflict of Interest –None Declared

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