

Management of Diarrhea in Under-fives at Home and Health Facilities in Kashmir

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Abstract:

Background: Diarrheal disease forms one of the two major killer diseases in children under five years of age in the developing world. There are inherent cultural practices for management of diarrhea at the domestic level. Also, the treatment practices at health centers vary, with inappropriate use of antibiotics, and iv fluids observed commonly, while ORS is less frequently used.

Methodology: Cross sectional study was carried out using pretested interview schedule between January and December 2006, in villages of Kashmir Valley.

Results: The ORS use rate is low (24.4% and 8.4%) respectively in past and current episode. Cultural practices include harmful ones like starving to overcome the episode. The rate of Antibiotic use is higher with 77.9%.

Conclusion: Kashmir valley faces the same problems in effective diarrhea management as in other developing regions of India and the world, viz. less ORS use, high antibiotic use and harmful cultural practices like giving bowel rest.

Keywords: Diarrhea, Cultural practices, ORS, Inappropriate antibiotic use

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Introduction

Children 0-5 years form a vital group in the community and constitute about 13% of the population. Due to the still developing immunological system and poor sense of hygiene among the parents, these children are prone to many infections, the commonest among them being Diarrhoea and ARI. Diarrhoeal diseases in children under five years of age are perhaps the most common human ailment that is the source of discomfort, misery and loss of time to their parents and burden to health system as compared to their older siblings in which the course of disease is mild. The importance of first five years of life of a child for its growth and development is well known. Any adverse influences operating on children during this period e.g., malnutrition and infection may result in severe limitations in their growth and development, some of which may be irreversible^(1,2).

According to the UNICEF study, each child, on an average, in the developing world suffers from diarrheal diseases for more than three times a year⁽³⁾. This study also supports the fact that diarrheal disease is the foremost leading cause of under five deaths among the major childhood diseases in the developing world contributing to 35% of mortality in children under five⁽⁴⁾.

In the developing countries of the world an estimated 13,000 million episodes of Diarrhea with 3.2 million deaths occur among children annually (WHO, Geneva). 80% of these deaths occur in children under two years of age 9.5% of all deaths (200,000) in infants and 23-30 percent in under five age group children are due to Diarrhea with a heavy economic burden and account for 15% of all Pediatric beds⁽⁵⁾.

Since diarrhea is a common disease in childhood and the etiology of this disease has been mostly implicated with feeding habits and pattern in these children. There are inherent cultural practices for management of diarrhea at the domestic level mostly the practices which have been inherited from earlier times. Some of these practices may be beneficial some harmful and some will have no management value⁽⁶⁾. The objective is to study such practices in Kashmir valley for management of diarrhea. Also the treatment practices

adopted at health facilities were studied, especially with the view to detect the overuse of antibiotics and iv fluids.

Objectives

To study the cultural practices adopted for management of Diarrhea at home and to study the treatment practices vis-à-vis clinical signs and symptoms at health facilities.

Methods

Cross Sectional was carried out between January and December 2006 in villages of Kashmir valley, India. Ethical approval for the same was received from the SKIMS Ethical Committee.

Sample size required was carried out using lowest prevalence of diarrhoeal diseases available in literature (13%)⁽⁷⁾. Keeping in view, the prevalence of 13%, a sample size of 10708 was estimated in all 4 seasons, considering 95% confidence level with 5% relative error. Based on the calculated sample size, a village was taken as a cluster with size of each cluster being 1000-1500. Therefore a total of 96 clusters were to be studied (24 clusters in 4 seasons). The clusters were selected using the following sampling procedure.

The study was carried out using Multi Stage Sampling Procedure in four stages

Stage – I: Kashmir division was divided into six districts administratively at the time of this study. Study was conducted in all districts. Stage – II: List of sub-centers in each district was procured from state health department. Two sub-centers from each district were selected using random tables. Thus, there were a total of twelve sub-centers. Stage – III: List of villages (clusters) falling within the operational areas of these specific sub centers were procured. Two villages (clusters) were randomly selected from each sub center and these formed the study clusters. Thus, there were a total of twenty four clusters. Stage – IV: List of households from the selected villages was procured and all the households were surveyed. These households with children under five years of age from these selected villages (clusters) constituted our study sampling unit.

A house to house survey was conducted to determine the prevalence, epidemiological risk factors, seasonal patterns and type of diarrhoea among different sets of children less than five years of age in different seasons.

The selected child population of less than five years was obtained and enrolled for the study. Accompanied by a nurse from the Department of Community Medicine SKIMS, Srinagar, house hold visits were conducted at the end of each season and the details regarding any current episode of diarrhoea (Previous 24 hours) and any past episodes of diarrhoea (last 15 days) were recorded from the mother. The data thus collected was subjected to statistical analysis using SPSS Software package. Data was expressed as percentages.

Results

The cultural feeding practices adopted by the families in the management of diarrhoea at home were studied and it was observed that 48% of parents showed no special preference for any food during current and 66.6% during past episodes of diarrhoea. 4.0 % of parents were seen to withhold foods during current and 6.9% during past episodes of diarrhoea. Curd and salt tea was preferred by 23.6% of parents in past episode and 18.0% of parents of children during current episodes. However, 24.4% parents preferred to use ORS packets in past episodes whereas only 8.4% parents preferred ORS in current episodes of diarrhoea.

Table (1). Feeding practices adopted for management of Diarrhoea at home.

Feeding practices		Last 15 days	24 hours
No special preference adopted	N	1360	703
	%	48.0	66.6
Feeding restricted	N	113	73
	%	4.0	6.9
Curd & Tea (Salt)	N	670	190
	%	23.6	18.0
ORS use rate	N	693	89
	%	24.4	8.4
Total	N	2836	1055

Table (2). Associated signs, illnesses and treatment practices.

Current (24 hr)		n	%
Signs of Dehydration	Yes	205	19.5
	No	847	80.5
Degree of Dehydration	No Dehydration	847	80.5
	Some Dehydration	150	14.3
	Severe Dehydration	55	5.2
Treatment at health facilities	Nil	91	8.7
	ORS only	91	8.7
	Antibiotics	819	77.9
	Referred /IV Fluids	51	4.8

The analysis of associated signs, illnesses and treatment practices among diarrheal children during last 24 hours showed that among 1052 children having history of diarrhea in the past 24 hours majority (80.5%) of children did not show signs of dehydration, only (19.5%) children showed signs of dehydration. Severe dehydration was present in only 5.2% of children. Fever (6.7%) was the most common associated illness with diarrhoea followed by ARI (5.9%) and measles in (3.7%). The associated illnesses were commonly seen in 6 – 11 months age group. 77% of children with diarrhoea received antibiotics, whereas 8.7% children had received ORS only. 4.8% were referred and had received I/v fluids.

Discussion

For proper, adequate and frequent use of “oral re-hydration therapy” mother is the key person. Her knowledge, practices and attitude is of great importance. In spite of advocating of this solution by WHO and easy availability in the remotest corners of our country, mother’s knowledge and practices in its use are not convincing. Many studies including the present one have proved this fact.

It was observed in the present study that 48% of parents showed no special preference for food for their children who were suffering from current and 66.6% in the past episodes of diarrhea. Four percent of parents were seen to withhold foods during current and 6.9% in the past episodes, as they believed that by giving rest to the bowel, the diarrhea would subside on its own. Curd and salt tea was preferred by (23.6%) of parents in past episodes and (18.0%) parents of children during current episodes. 24.4% parents had used ORS in past (15 days) episodes of diarrhea while as only 8.4% of parents had used ORS in current episode of diarrhea (24 hrs). The reason being that the parents had not taken their children yet to any health facility in current episodes whereas they had used this facility in the previous episodes. This was because culturally, the parents wait one or two days before visiting the health facility, using their own remedies in the meanwhile. 77% of children with diarrhoea had received antibiotics, although this is not advised under DDCP (Diarrhoeal Disease Control Programme) but local medical practitioners

give these, which reflects on their scanty knowledge of DDCP and (4.8%) were referred and had received I/V fluids.

These results are more or less comparable with the study conducted by Gilany AH *et al* (2005)⁸, in Egypt (a developing country) which showed that in the past (2 wks) of diarrheal episodes, one quarter i.e., (25%) had received ORS and (75%) had received antibiotics.

Sood A.K. *et al*; studied 108 rural mothers of children suffering from diarrhea. 88.33% of mothers believed that ORS alone cannot treat diarrhea⁹.

Zodpey S.P. *et al*; (1998) conducted a case control study on risk factors for dehydration in Nagpur. By multivariate analysis, they identified twelve significant risk factors; which also included not giving ORS during diarrhea¹⁰

Deb. B.C *et al*; (1985) conducted a study in West Bengal rural areas interviewing 159 mothers regarding ORI. In their study reasons of non – utilization of ORS was lack of information (15.4%), lack of faith (23.1%)¹¹.

As per the survey conducted by Uribe F. *et al* (1991) in Mexico among 75 mothers, it was seen that around 50% mothers utilized ORS during episodes of diarrhea. These ORS user mothers were well educated belonging to high socio-economic level and had water connection in their homes¹²

Conclusion

Treatment practices are still improper because of lack of knowledge of practitioners of National Programmes and there is room for improvements, the prescriptions of antibiotics was still too frequent and anti diarrheal drugs of no therapeutic value were still widely used. The message of ORS use should be universalized with the general population by educating the public and to train health workers.

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