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ACCEPTABILITY OF ORAL REHYDRATION THERAPY BY SUDANESE MOTHERS AND CHILDREN

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Abstract Oral rehydration therapy (ORT) was found to be accepted by sick children and their mothers. Its acceptability was neither related to the family social class nor to the mothers' level of eduction. The majority of children with diarrhoea in this study were managed by a doctor or a medical assistance. Health visitors, who receive formal training in ORT, were found to have little access to these children. It is emphasized that future training of the former two groups in ORT would promote both the acceptability and publicity of this simple an effective remedy for diarrhoea.

Key words Fluid therapy; Diarrhoea; Children; Mothers

INTRODUCTION

Diarrhoea in children under five years of age is a major health problem in developing coutries[1]. WHO recommended immediate short objectives to reduce the mortality and diarrhoea related malnutrition by oral rehydration therapy (ORT) through primary health care activities[2]. The value of oral therapy lies in its potential for wide availability, simplicity of use, safety and low cost[3]. The oral rehydration salt (ORS) promoted by WHO and UNICEF is composed of NaCl, $NaHCO_3$, KCl and glucose (3.5, 2.5, 1.5 and 20 g, respectively) to be dissolved in one litre[4]. Many clinical trials showed the effectiveness of this solution[4-7].

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In 1978, the UNICEF Office (Khartoum) and the Nutrition Division of the Ministry of Health (Sudan) introduced ORT programme. ORS sachets were distributed to health centres in Khartoum metropolitan area (Khartoum, Khartoum North and Omdurman). It is envisaged to expand this programme to include other provinces in the Sudan. Till now no formal evaluation has been carried to know the acceptability of mothers and children to this recent advance in management of dehydration.

METHOD

Eight health centres out of 32 were randomly selected for this study. We spent 8-10 days in each health centre. 298 children under five years of age suffering from diarrhoea reported within the study period. ORS was prescribed with or without other medicines to 91 patients (30.5%).

However, we stimulated the treating health personnel to prescribe ORS during the last 10 days of the study period (intervention phase). Three to four days after prescription of ORS mothers were visited at their homes by social workers. We could allocate the houses of 245 mothers of whom 73 had ORS prescribed for their children. Mothers were interviewed to know their attitudes towards oral rehydration therapy.

RESULTS

During the study period, 198 children, under five years of age, suffering from diarrhoea were seen. Of these, 265 (88.9%) were accompanied by their mothers whereas 20 children (6.7%) were brought by a female relative usually a sister or an aunt. Only 13 children (4.4%) came with their fathers.

We could reach 245 mothers at their homes (82.2%) due to incomplete addresses which had been given to the other houses.

Forty-five mothers (61.6%) said that ORS was a good treatment for diarrhoea of their children. Eighteen mothers (29.7%) agreed but with some hesitancy. Only two

women (2.7%) clearly stated a negative answer whereas another four women (5.5%) were undecided. Four mothers could not give an answer.

Table I. Relationship between acceptability of ORS and socioeconomic status of the family

	Socioeconomic status*							
	Class I		Class II		Class III		Total	
	No	(%)	No	(%)	No	(%)	No	(%)
"Yes", clear cut	16	(52.1)	14	(66.7)	15	(62.5)	45	(61.6)
"Yes", mixed	5	(17.9)	5	(23.8)	8	(33.3)	18	(29.7)
"No", mixed	3	(10.7)	1	(4.8)	0	(0)	4	(5.5)
"No", clear cut	2	(7.1)	0	(0)	0	(0)	2	(2.7)
"Do not know"	2	(7.1)	1	(4.8)	1	(4.2)	4	(5.5)
Total	28	100	21	100	24	100	73	100

*Presence of certain possessions at home were made use of to determine the socioeconomic status of the family using a scoring system[8].

Asked about preferable regimen of treatment for diarrhoea in the future, ORS was mentioned as a single remedy by 8 mothers (10.6%). 142 mothers showed positive attitudes towards ORS but they preferred to have it

Table II. Relationship between ORS acceptability as a preferable regimen of treatment in the future and socioeconomic status

Preferable treatment next time	Socioeconomic status*			
	Class I	Class II	Class III	Total
ORS only	2	5	1	8
ORS + others	17	9	16	42
Others only	5	5	2	12
According to doctor's decision	4	2	5	11
Total	28	21	24	73

together with other medicines (bottles). Only 12 mothers (16.4%) professed that they would prefer any treatment other than ORS. However, 11 mothers (15.1%) said that they would follow the doctor's advice.

The relationship between acceptability of ORS, socioeconomic status and education are shown in Tables I-III.

Table III. Relationship between mothers' years of schooling and their preference of treatment of diarrhoea

Preferable treatment	Years at school 0 - 2 No	(%)	3 - 5 No	(%)	6 + No	(%)
ORS only	3	(7.7)	3	(16.7)	2	(12.5)
ORS + others	22	(56.4)	10	(55.6)	10	(62.5)
Other treatment only	5	(15.4)	3	(16.7)	3	(18.8)
According to doctor's decision	8	(20.5)	2	(11.1)	1	(6.3)
Total	28	100	18	100	16	100

Table IV shows the health personnel who treated the diarrhoea cases during the study.

Table IV. Health personnel who treated cases of diarrhoea in children under 5 years of age at Khartoum health centres

Health personnel	No of patients	(%)
Doctors	116	(38.9)
Medical assistants	174	(58.4)
Health visitors	8	(2.7)
Total	298	100

Table V shows the educators of mothers on proper use of ORS.

Table V. Educators of mothers on proper use of oral rehydration salt (ORS)

Educator	Before intervention No	(%)	After intervention No	(%)
Doctor or medical assistant	7	(46.7)	66	(86.8)
Pharmacy personnel	3	(20.0)	3	(3.9)
Health visitor (mother taught alone)	5	(33.3)	7	(9.2)
Health visitor (mother taught with a group)	0	(0)	0	(0)
Unicef booklets	0	(0)	0	(0)
Total	15	100	76	100

DISCUSSION

Acceptability of oral rehydration salt (ORS) by mothers and children provides a step forward for successful ORT programmes; especially so if we considered that ORS needs to be dissolved in a large quantity of water (1 litre). Published reports showed favourable attitudes in USA[9], Laos[6], Turkey[10] and the Phillipines[11]. However, variations in local conditions e.g. the standard education of the population need to be considered[12].

In this study although mothers were not familiar with ORS packets, 85% of them expressed positive attitudes towards ORT. Only 27% had firm negative attitudes. 24.7% of them preferred to have ORS together with other medicine (i.e. they think that ORS alone is not enough for treatment of diarrhoea). This could be due to the fact that they were unfamiliar with such treatment. 68.4% of mothers were ready to use ORS next time if needed. Though being a subjective question, it reflected their acceptability. Sudanese people, especially women, dislike intravenous therapy. This would potentially increase the acceptability rate.

The acceptability is expected to increase remarkably if mothers hear paediatricians, who lead the teams of health personnel in their field, recommending the use of ORS in cases of diarrhoeas. Radio, television, daily newspapers, etc would be excellent media for this purpose. These media proved to be effective in the publicity of ORS in India[13].

The data in this study showed that oral rehydration therapy was easily accepted by the sick children. 83.6% drank the solution without coercion. Also ORT was accepted by their mothers (85%). It has been reported that children who drank the fluid felt better, ate better and stopped crying[14].

The Nutrition Division of the Ministry of Health (Sudan) trained health visitors in Khartoum metropolitan area in ORT. During this study it was felt that these health visitors were well-trained but unfortunately they had little access to patients (Table IV). Children with diarrhoea are brought by their mothers not to the health visitors but to the doctor or the medical assistant in charge at the outpatient department. It was quite evident that the wrong person had been trained. The doctors and medical assistants should, therefore, be the focus in future training.

Although the number of doctors and medical assistants is less compared to other auxilliary health workers, yet their training will promote the use of ORS. They will be good educators for its use within health establishments. They will be good supervisors and pursuants for its use as well. They have better facilities and authorities to do so. They are equiped to be coordinators between health units and the source of ORS supplies. Moreover, auxilliary health personnel and mothers would take their advice more seriously especially so if they were paediatricians. The feedback resulting from their involvement would be valuable and would impose further success.

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