nowledge of Diarrheal Management in various levels of Public health system in Aligarh

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Abstract

To determine the knowledge about management of acute diarrhea in the various levels of public health care system in Aligarh. Methods: This study was conducted in 4 randomly selected blocks of rural areas of Aligarh district and JNMC. Two different questionnaires were answered by the medical (medical officers and interns) and the para-medical group respectively followed by a sensitization program.

Majority could define diarrhea and identify signs of dehydration. Dysentery was defined as presence of either mucous or blood in the stool by 64% of paramedical and 41% of medical group. The overuse of antibiotics and IVF was common in both the groups. Low energy diets were preferred. Awareness about low osmolarity Oral Rehydration Solution was poor in the medical group.

There is a need for rigorous training and regular refresher educational programs for both the groups.

Introduction

In an earlier work1 done among rural practitioners of Aligarh it was revealed that only 9.8% were advising oral rehydration solution (ORS) and feeding as standard management of diarrhea and half of them were unaware of the right method of preparation. It was concluded that hands on training for the practitioners and education of the masses regarding proper management of diarrhea is essential and thus an educational program followed for the district in stages. Now half a decade later this study was conducted in the same blocks of Aligarh districts with the aim to determine the knowledge among various levels of government health system.

Material and Methods

On the occasion of ORS week in August 2005, this study was planned through the collaboration of Aligarh IAP, De partment of Pediatrics and Department of Community Medicine, JNMC, AMU, Aligarh. It was conducted in 4 randomly selected blocks of rural Aligarh district and Jawaharlal Nehru Medical College. There were 72 medical officers and interns in the medical group (MG) and 290 paramedics in the paramedical group (PMG). The PMGincluded Auxillary nurse midwives (ANM), Anganwadis (AGW), Health Assistants (HA) and Nursing students (NS).

Two different questionnaires were framed for the MG and PMG in English and Hindi respectively keeping in mind the basic qualification of the group. Each one enrolled in the study was asked to complete the questionnaire. Questionnaires included queries about diarrhea definition, signs of dehydration, dysentery, management of diarrhea and dehydration, role of antibiotics, about low osmolarity ORS and its advantages, need of intravenous fluid and types of feeds to be given during diarrheal episodes. An audiovisual sensitization program on diarrhea and its management followed.

Results

Majority (93%) of the MG and more than one third (37%) of the PMG knew that diarrhea was ≥ 3 loose stools per day. More than half (56%) of the PMGsaid diarrhea was 5-10 loose stools/day. Majority of PMG could identify the signs of dehydration correctly except for the NS of whom only 64.3% did so. Very small number (5%) of the medical officers, 46% of the interns identified the key signs of dehydration correctly.

Dysentery was either blood or mucus in stool was felt by 64 % and 41% of the PMG and MG respectively. Half the medical officers and 30% interns gave the same definition of dysentery. ORS, feeding and zinc were the standard management of diarrhea as per 31 % of PMG and 38.8 % of MG. Rest all were advising drugs in various combinations. Twenty one percent of medical officers and 41.5% of interns advised antibiotics to half the diarrhea patients they treated. Majority (62.1%) gave oral antibiotics like fluroquinol (53%) and metrogyl (32%). The antimotility drug loperamide was also prescribed by 25% of the medical group. Half of the MG felt that stool microscopy and culture is required in all cases of diarrheal management. More than three-fourths PMG except AGW (60%) felt that ORS should be given in no dehydration. Whereas 11.3% interns Vs 31.6% medical officers didn't prescribe ORS to patients with no dehydration (OR = 2.31, 95%CI = 1.1 – 4.85). Overall 16.6% of MG didn't prescribe ORS for diarrheal patients with no dehydration. Two third of the PMG, 39% of interns and 32% of medical officers thought that >10% of diarrheal patients require IVF.

Almost all in both the groups, felt that the mothers be told about breastfeeding, feeding and ORS formulation when treating diarrhea. In PMG, more than 3/4th of all except AGW preferred rice and pulse water over energy dense feeds. The AGW seemed most well versed with almost 55% giving energy dense feeds. The overall impression was that 43% MG and 65.9% PMG preferred rice and pulse water over energy dense food.

When asked about the low osmolarity ORS, 14 of 19 medical officers who responded, answered correctly. Of 53, 44 interns were aware of its composition. Thirty one percent of the medical officers and 54% of interns knew that it decreases frequency of stools. About 10% of medical officers and 6% of interns thought that it actually stops stools. One fifth (20%) of the medical officers and 40% interns thought that it gives more nutrition to the dehydrated patient. More than eighty percent knew it as a universal ORS.

Table 1: Knowledge of the Medical and Paramedical group about diarrhea & it's management

	Medical Group (%)				Paramedical Group (%)			
	Medical officers	**Interns**	**Total**	**ANM**	**AGW**	**HA**	**NS**	**Total**
Correctly define - diarrhea	84.2	96	90	34.6	34	43.4	42.85	35
-dysentery	53	40	47	85	45	98	96	81
Knew signs of dehydration	5	45	25	84.6	90	95	64.3	83.7
Treatment of diarrhea -ORS+feeds	47.3	35.8	38.8	20	47	20	33	31

-ORS+feeds+Antibiotics	26	15	21	31	17	31	26	25.5
-ORS+feed+LB*	42.1	35.8	37.5	-	-	-	-	-
-ORS+feed+LB+Antibiotics (other drugs in case of PMG)	10	9.4	9.7	19	19	29	2	18.2
IVF prescribed to >10% diarrhea patients	32	39	35	75	64.1	70	73.8	70.34
Advice for breastfeeding to child's mother	100	100	100	98	91	100	100	97
Treat NO dehydration with ORS	31.6	11.3	21.5	75	66	75	75	73
Correct ORS preparation	58	77	100	55	15	36	72	44.5
Types of feeds -low energy feeds	36	50	43	77.1	56.3	78	21.4	65.9
-Energy dense foods	58	47	52.5	22.9	43.7	22	78.6	34.1
Low osmolarity ORS* -Knew composition	73	81	77	-	-	-	-	-
-Knew advantages	31	54	42	-	-	-	-	-

LB= lactobacilli, * query not made to the Paramedical group.

Discussion

A similar study[2] reported poor awareness among residents about management of diarrhea as is also seen in the present study albeit in a small group. Very small proportion of medical officers correctly identified the key signs of dehydration. This indicates that there is lack of training and expertise in management of diarrhea at the primary health level. Refresher workshops (as carried out all over the country in the last decade) with diarrhea training and treatment units could be very useful in educating the medical officers. The frequent overuse of antibiotics and misuse of antimotility drugs was common among majority of PMG. Majority mothers do not feed their children during a diarrheal episode [3-5]. There is evidence [3,6] to show that feeding during diarrhea improves on maternal education. This study shows that stress on feeding is present but for low energy diets. We need to educate the health givers regarding kind of food to be given during diarrhea. Stress on feeding is present but for low energy diets. As also shown in an earlier study [7], the antibiotics use is high among all health workers more so in medical group. In the same area we have an earlier experience of rampant use of antibiotics and IVF [1]. Awareness in the medical officers and interns about low osmolarity ORS shows that guidelines [8] of the task force do percolate down but additional hands on training would clear concepts. Non-compliance to guidelines can be responsible for wrong assessment and treatment [9].

It is important that misconceptions about dysentery are removed to control overuse of antibiotics. Whether under Integrated Management of Childhood Illnesses or otherwise, there is a need for training of health workers regarding standard treatment of diarrhea emphasizing on energy dense feeds and on the new low osmolarity ORS. Integrating these messages in the mass education programs will help in regular reinforcement.

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