

Original Research Article

DOI: <http://dx.doi.org/10.18203/2349-3291.ijcp20185194>

Knowledge, attitude and practices of oral rehydration therapy among mothers coming to tertiary care centre

Haricharan K. R.*¹, Punith S.¹, Harsha P. J.¹, Gowtham R.¹

Department of Pediatrics, P. E. S Institute of Medical Sciences and Research Kuppam, Andhra Pradesh, India

Received: 27 September 2018

Accepted: 28 November 2018

***Correspondence:**

Dr. Haricharan K. R.,

E-mail: dr.haricharan@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Diarrhoea is a major cause of morbidity and mortality among under-five children. Correct knowledge regarding oral rehydration therapy (ORT) helps prevent morbidity and mortality due to diarrhoea. The objective of this study is to assess the knowledge, attitude and practice of mothers of under-five children regarding ORT and home management of diarrhoea.

Methods: Study period from December 1st, 2017 to December 31st, 2017, total of 200 mothers were enrolled in this study. The data was entered in Microsoft excel sheet and percentages were calculated.

Results: 95% of mothers were aware about ORS. ORS was given by parents on own in 16%, 55% were advised by doctor. Only 60% knew how to prepare ORS correctly. About 45.7% had used bottle to give ORS and 55.3% used cup and spoon. About 67.9% had knowledge of quantity of ORS to be given during diarrhoea episode. Exclusive breast feeding was practised in 86% of mothers till 6 months of age. Misconceptions about the use of ORS were seen in 60% and more among illiterates. About 21% mothers' felt ORS should be stopped if diarrhoea continues. Only 5% of mothers felt ORS can be given even if child has vomiting. About 9% mothers felt no fluids should be given during diarrhoea.

Conclusions: Mothers' knowledge and attitude on use of ORS in diarrhoea need to be improved.

Keywords: Diarrhoea, Knowledge, Mothers, ORS (Oral Rehydration Solution)

INTRODUCTION

Diarrhoea is one of the major causes of morbidity and mortality among young children. Diarrhoea is the third most common cause of death in under-five children, responsible for 13% deaths in this age-group, killing an estimated 300,000 children in India each year.¹ Globally, an estimated 1.8 billion cases of childhood diarrhoea are reported which is responsible for more than three million under five children deaths annually.²

Most children who die from diarrhoea actually die from severe dehydration and fluid loss. It is estimated that 60-70 per cent of diarrhoea related deaths are caused by

dehydration. In developing countries, children under three years age experience an average three episodes of diarrhoea every year. Each episode deprives the child of the nutrition necessary for growth. Scientific basis of oral rehydration therapy has revolutionized the concept and management of diarrhoea. It is simple, highly effective, inexpensive and technologically appropriate. A number of studies substantiate the contribution of oral rehydration therapy (ORT) and its technical advances in the reduction of dehydration and diarrhoeal mortality.² In accordance with the WHO guidelines, Government of India promotes oral rehydration therapy as one of the top priority activities for ensuring child survival during diarrhoea. This programme is aimed at educating mothers and

communities about causes, symptoms and treatment of diarrhoea.³ Despite the fact that availability of ORS can substantially reduce the mortality and morbidity resulting from diarrhoea, poor knowledge pertaining to diarrhoea and its management has posed the third world countries with diarrhoea associated deaths and ill health among children.⁴ However, lack of knowledge of mothers about diarrhoeal diseases is a common problem in many developing countries. Use of oral rehydration solution largely depends, on the level of mother's knowledge and her attitude towards its use. A study by Ibrahim MM et al, it was suggested that ORS was mainly used by the mothers who were capable of allocating their time to health care.⁵ Despite many awareness programs given to the mothers, we still observe many misconception-based practices regarding ORS therapy and hence there is an increased need to identify the factors. With this in mind, the present study was undertaken with the objective to assess the knowledge, attitude of mothers about Oral Rehydration Solution at PES Institute Of Medical Sciences And Research, Kuppam.

METHODS

This cross-sectional survey was conducted at the Paediatrics Out Patient Department (OPD) P.E.S Hospital, Kuppam, during the period from December 1st, 2017 to December 31st, 2017. Total of 200 mothers of children attending OPD were enrolled in the study. They were interviewed, and information collected. A detailed history highlighting their demographic data, presenting complaints, use of ORS, treatment that can be given at home, mothers knowledge about ORS, drugs used for diarrhoea, maternal education, water sources, feeding, misconceptions and socioeconomic status in a prepared proforma was entered. Awareness about ORS, its use, equipment used for giving ORS, preparation of ORS, and assessing the adequacy of ORS used was also noted.

For statistical analysis data was entered in Microsoft Excel 2007 and percentages were calculated.

Inclusion criteria

- Mother bringing children to Paediatric Out Patient Department (OPD).

Exclusion criteria

- Mothers' who were not willing to participate.

RESULTS

Authors enrolled a total of 200 mothers in our survey. 168 children-were below five years of age. Majority of them 128 (64%) were from low socioeconomic group. Of 200 mothers interviewed, 118 (59%) had come with male kids and 82 (41%) with females. Of these 36 (18%) were under the age of 6 months, 84 (42%) were between 6-12 months, 64 (32%) were between 1-5 years and 16 (8%)

were between 6-15 years. Past history of diarrhoea in child was seen in 42 (21%). About 94% (188/200) mothers responded that they had heard of oral rehydration solution (Table 1).

Table 1: Knowledge and practice about ORS among mothers (n=200).

	No.	Percentage
Heard of ORS		
Yes	188	94
No	10	6
Use of ORS		
Yes	154	77
No	46	23
WHO advised		
Self	32	16
Family Physician	110	55
Family Member	6	3
Health Worker	5	2.5
Mass Media	1	0.5
Preparation of ORS		
Correctly	114	60
Incorrectly	76	40
How ORS given		
By Cup and spoon	105	55.3
By Bottle	85	45.7
Amount of ORS given		
Adequate	129	67.9
Inadequate	61	32.1
Exclusive breast feeding		
Until 6months given	172	86
Not given	28	14

When asked about who advised oral rehydration solution, in 32 (16%) patients oral rehydration solution was given by parents themselves, 110 (55%) by family physician, 6 (3%) on advice of family member, 5 (2.5%) patients had used ORS after getting advice from health worker and 1 (0.5%) through media information (Table 1). In regard to preparation of oral rehydration solution, among the 190 mothers it was judged that 114 (60%) mothers had correctly prepared and 76 (40%) prepared incorrectly. In regard to the way of giving oral rehydration solution in the 190 mothers, 85 (45.7%) of cases oral rehydration solution was given by bottle and in 105 (55.3%) cup and spoon was used (Table 1). In 129 (67.9%) cases quantity of oral rehydration solution given was adequate and in 61 (32.1%) cases it was inadequate. Of the 200 mothers, 172 (86%) mothers practiced exclusive breast feeding till 6 months of life and 28 (14%) of them had started complimentary feeds earlier.

The study revealed that 60% of mothers had misconceptions about the use of ORS and it was very high among the ORS non-users and illiterate mothers. Common misconceptions observed among the mothers were, to stop ORS if diarrhoea continues (21%) and the need for prescription of a doctor to procure it (25%).

Other misconceptions were, no fluid is to be given during diarrhoea (9%); giving ORS causes vomiting (4%) and others. One fourth of the mothers (25%) informed its use only after due recommendation by a doctor. 30% of mothers expressed that ORS need to be given when the child looks weak and 5% viewed that ORS should be given to the child in case of vomiting (Table 2).

Table 2: Misconceptions regarding ORS.

Misconceptions	Number	%
Stop ORS, if diarrhoea continues	42	21
Need a prescription of a doctor to procure it	50	25
No fluid is to be given during diarrhoea	18	9
Giving ORS causes vomiting	8	4
ORS should be given to the child in case of vomiting	10	5
ORS need to be given when the child looks weak	60	30

DISCUSSION

Diarrhoea is the second leading cause of under-five child mortality worldwide. Acute watery diarrhoea is a self-limiting disease lasting for 3-7 days and over 90% of cases can be successfully treated with oral rehydration therapy and continued feeding without using anti diarrhoeal drugs.⁶ Among children, mortality and morbidity in acute infectious diarrhoea have dramatically reduced due to oral rehydration therapy and early re-alimentation.⁶ Numerous studies in the recent past have documented that knowledge about oral rehydration solution has increased.⁶

In present study 95% mothers had heard of oral rehydration solution, while in another study by Abida Sultana 80% of the mother had information about ORS and also its usefulness in the management of dehydration due to diarrhoea.² In a similar study by Jamil Aziz, at Sulaimani, 99.5% mothers were aware of oral rehydration solution.⁷ The difference in percentage is due to impact on maternal knowledge and practices about oral rehydration solution, which is being educated through mass media and health professionals. In this study, in 32 (16%) children ORS was given by parents themselves, 110 (55%) were given oral rehydration solution on advice of family physician, 6 (3%) on advice of family member, 5 (2.5%) on advice of health worker and 1 (0.5%) through media information. In a similar study by Kadam DM, 56.44% mother heard of oral rehydration solution from doctors, 25.77% from Health workers, 3.68% from family members, 1.23% from chemists, 6.75% from television and other mass media and 6.13% from other sources.⁸ As for preparation of oral rehydration solution is concerned, in present study 114 (57%) of mothers correctly recalled the preparation of oral rehydration solution whereas in a study by Mohsin A, 76% of mothers and study done by Jamil et al, 58.5% of mothers

correctly prepared oral rehydration solution.^{6,7} In this study we saw that approximately 25% of the mother had misconceptions regarding ORS while comparing to study done by Rasania SK showed similar results of 29.3% this is mainly due to the illiteracy of mothers among the rural population.⁸

About 65% mothers had awareness regarding diarrhoea prevention. Eighty percent of mothers were aware of oral rehydration solution (ORS) and 72.7% knew how to prepare and administer ORS. Majority of mothers 78% were aware about home available fluids for rehydration. There was lack in knowledge of danger sign of severe dehydration. Mothers educated only till class eight were almost twice less likely to know about ORS preparation as compared to better educated mothers (70% vs 30%).⁹

Diarrhoea was defined correctly by 62.2% parents. About 51.8% felt seeking doctor advice before any intervention and only 33.5% parents felt to use ORS first. About 70.7% parents had heard of ORS and among them only 65.9% had given ORS during the last diarrhoea episode. About 20.1% parents had given metronidazole for diarrhoea.¹⁰ Good knowledge of ORS was found among 59.5% of the respondent with a corresponding 60.8% engaging in good use of ORS in the management of diarrhoea disease for their under five children.¹¹

About 84.6% of respondents said they have heard about ORT, only 74.4% were knowledgeable. Only 72 percent of the mothers knew the harmful effects of giving too much ORS at a time and 57.6 percent knew the danger of keeping ORS for a longer period. The findings also reveal that 11.6 percent of mothers had misconceptions about the use of ORS. Significant proportion of mothers has a misperception than feeding the child with diarrhoea aggravates the disease 11.2%.¹²

CONCLUSION

Although awareness regarding spread of diarrhoea and ORS was adequate in our community, many had inadequate knowledge and misconceptions on the importance and appropriate use of ORS. The health care workers should therefore spend more time to emphasize on the need of ORS for the prevention of dehydration due to diarrhoea. Thus, educating mothers of under-five children regarding correct practices of home management of diarrhoea is likely to further reduce diarrhoea morbidity and mortality.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Bassani DG, Kumar R, Awasthi S, Morris SK, Paul VK, Jha P et al. Million Death Study Collaborators.

Causes of neonatal and child mortality in India: A nationally representative mortality survey. Lancet 2010;376(9755):1853-60.

- 2. Cezard JP, Bellaiche M, Viala J, Hugot JP. Medication in infectious acute diarrhea in children. Arch Pediatr. 2007;14(3):S169-75.
- 3. Sultana A, Riaz R, Ahmed R, Khurshid R. Knowledge and Attitude of Mothers Regarding Oral Rehydration Salt. J Rawalpindi Med Coll. 2010;14(2):109-11.
- 4. Datta V, John R, Singh VP, Chaturvedi P. Maternal knowledge, attitude and practices towards diarrhea and oral rehydration therapy in rural Maharashtra. Indian J Pediatr. 2001;68(11):1035-37.
- 5. Ibrahim MM, Aden AS, Omar HM, Wall S, Persson LA. Diarrhea among children in rural Somalia. Maternal perceptions, management and mortality. Ann Trop Paediatr. 1994;14(3):215-22.
- 6. Aiza M, Afsheen BR, Tahir MA. Knowledge, Attitude and Practices of the Mothers Regarding Oral Rehydration Solution. PJMHS 2012;6 (1):107-12
- 7. Jamil A, Adiba IA, Ibrahim KG, Adnan MH. Knowledge and attitude of mothers regarding oral rehydration solution in Sulaimani. Mustansiriya Med J;2016;15(1):7-10
- 8. Rasania SK, Singh D, Pathi S, Matta S, Singh S. Knowledge and attitude of mothers about oral rehydration solution in few urban slum of Delhi. Health Popul Perspect Iss. 2005;28(2):100-7.
- 9. Jain H, Bamnawat S. Knowledge and attitude towards oral rehydration therapy among mothers of under-five children of South Rajasthan, India. Int J Contemp Pediatr 2016;3(2):394-7.
- 10. Essomba NE, Koum DK, Adiogo D, Ngwe MI, Coppieters Y. Use of oral rehydration therapy in the treatment of childhood diarrhoea in Douala, Cameroon. Malawi Med J 2015;27(2):60-4.
- 11. DA Bello, TO Afolaranmi, Z I Hassan, FC Ogbonna, PG Inedu, C Ejiga et al. Knowledge and use of oral rehydration solution in the home management of diarrhea among mothers of under fives in Jos, Plateau State. IJBR 2017;8(1):33-37.
- 12. D Dawit, E Kumalo, Y Yasin, Y Halala. Assessment of Knowledge, Attitude & Practice of Child Care Givers towards Oral Rehydration Salt for Diarrhea Treatment in under 5 Children in Wolaita Sodo Town, SNNPR/2016. JBAH. 2017;7(4):9-18.

Cite this article as: Haricharan KR, Punith S, Harsha PJ, Gowtham R. Knowledge, attitude and practices of oral rehydration therapy among mothers coming to tertiary care centre. Int J Contemp Pediatr 2019;6:127-30.