

Acute diarrhea, feeding and diet: Is caregivers approach out of rationale?

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Abstract

Background: The feeding and or diet in infants and young children with acute diarrhea is an unresolved health problem at the community level. Despite recommendations from several bodies, including the World Health Organization that feeding should be continued during diarrhea. The practice of withholding balance diet or breast feeding during the acute diarrhea is still prevalent and it is one of the major public health issue, and this may lead to development of malnutrition, which may further prevent recovery from diarrhea. **Aims & objectives:** We aimed to assess caregivers approach towards feeding and or diet in children with acute diarrhea. **Subjects and Methods:** This was a qualitative, cross-sectional, hospital based survey carried among caregivers of infants and young children aged 6 months - 24 months of either sex with acute diarrhea from April 2017 to December 2018. **Results:** the attitude of caregivers towards feeding and or diet in children with acute diarrhea was not appropriate, which may lead to bad clinical outcomes in terms of recovery from diarrhea and further may increase the burden of malnutrition. **Conclusion:** There was gross irrational approach of caregivers found towards feeding and or diet in younger children with acute diarrhea and to prevent myths towards feeding and or diet, the health awareness towards basic nutrition is need of era and to be maintained at the highest level in the community

Keywords: Acute Diarrhea, Feeding, Diet, Caregivers Approach

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Introduction

Diarrhoeal disease is one of the leading cause of death in under five. Children younger than 5 years accounted for 40% of the diarrheal deaths even though they represent less than 10% of the world's population.^[1] One in eight deaths in this age group, or a total of approximately 499,000 annually, are attributed to diarrheal disease.^[1,2] 90% of which occurs in Sub-Saharan Africa and South Asia. The risk of growth faltering, ill health, and cognitive impairment increases among survivors.^[3] The diarrhoea can persist few days to several days, and can lead to water and salt depletion from body that are necessary for survival. The malnutrition leads to impaired immunity which is one of the risk factor for life-threatening diarrhoea. At present, it is commonly accepted that rehydration is the first goal of therapy.^[4] Evidence also exists that, for children, continuous feeding is advantageous.^[5] Mixed diets were as successful as highly processed formulas, and dietary fiber reduced the duration of liquid stool excretion.^[6] The myth related to feeding or diet in acute diarrheal diseases in children is not uncommon especially in developing nation that may contribute to malnutrition and, more so some diseases are more common among malnourished children especially diarrhea, pneumonia measles and malaria, so vicious cycle is established between malnutrition and some common

childhood diseases. Current WHO guidelines on the management and treatment of diarrhea in children strongly recommend continued feeding alongside administration of oral rehydration solutions, plus zinc therapy.^[7,8] The benefit of early feeding of children with diarrhea has been known since the late 1940s^[9], with clinical and community based studies since then providing further evidence to support early and continued feeding during diarrhea.^[10-12] Many studies have found that the majority of young children with acute diarrhea can be successfully managed with continued feeding of undiluted non-human milk. The dilution of milk and routine use of special formula are not necessary, especially when oral rehydration therapy and early feeding (in addition to milk) form the basic approach to the clinical management of diarrhea in children. Children who are fed exclusively with human milk and those who receive solid foods with or without human milk may safely continue to receive their usual diets during diarrhea. Those who are fed exclusively with non-human milk—especially when very young and with severe diarrhea or malnutrition—should be closely observed if they continue to consume milk or they should receive a special formulation (e.g., a cereal-milk mixture or fermented milk product). Despite recommendations from several bodies such as the World Health Organization and others that feeding should be continued during diarrhea, the practice of withholding food

during diarrhea is still widely prevalent. This contributes to deterioration in child nutritional state as well as delayed recovery from diarrhea.

Subjects and Methods

This was a cross-sectional, hospital based survey among caregivers of young children aged from 6months to 24months with acute diarrhea attending pediatric outdoor and indoor department of Career Institute of Medical Sciences Lucknow, India from April 2017 to December 2018. A self-designed questionnaire was administered to caregivers to know their attitude towards feeding and or diet in younger children with acute diarrhea.

Sampling methods and sample collection

Total 168 caregivers were enrolled and a self-designed questionnaire was asked to caregivers to know their attitude towards feeding or diet in acute diarrhea. The prior consent from the caregivers was taken. Out of 168 caregivers, 17 caregivers did not participate in survey and they were excluded from the survey. The study was approved by the local independent ethics committee.

Exclusion and inclusion criteria

The study included all caregivers of children aged 6months - 24months with acute diarrhea who had given prior consent for the survey.

Statistical analysis

Data were analysed using SPSS statistical software version 20. Mean and SD were calculated for categorical variables.

Results & Discussion

Out of 151 young children 69.5% were male and 30.5% were female. Among all 70.8% belonged to rural area and 29.1% were from urban area. Out of all 72.1% were from low socioeconomic strata and 27.8% were from higher social strata. Among all hospital and home delivery reported 80.1% and 12.8% respectively. The normal and cesarean delivery was seen 62.9% and 37% respectively. The full vaccination coverage was seen in 54.9% while 29.8% were partially vaccinated and remaining 15.2% were unvaccinated. Among all 40.3% were exclusive breast feeding, 33.7% formula milk, 11.2% bovine milk and 14.5% were given mixed feeding during first six months. Among infants before six months the bottle feeding was used in 47% while katori spoon feeding was used in 19.2%. Other than milk 15.8% infants that were below than six months received local traditional oral substances in the form of Ghutti, Gripe water, Water, Kishmish, Honey etc. Among infants aged 6 months -24months the adequate complementary feeding was reported in 35% while 52.9% children were given inadequate complementary feeding and in remaining 11.9% infants complementary feeding was not started yet. The food restriction was found in 58.2%, while 36% stopped breastfeeding and 11.4% reduced frequency of breastfeeding. The switching from breast milk to bovine milk was found in 11.9% while 2.6% switched to formula

milk. The simple sugar solution was given in 7.9% children while WHO-ORS was given in 13.9% children to prevent dehydration.

Table 1: Demographic profile of young children with acute diarrhea.(n=151)

Demographic characteristic	n(%)
Male	105(69.5%)
female	46(30.5%)
Age(months)	
>6mo-12months	98(64.9%)
>12mo-24 months	53(35%)
Wt(kg) mean+_sd	7.7+_2
length(cm)mean+_sd	70.6+_7.7
Social status	
rural	107(70.86%)
urban	44(29.1%)
low	109(72.1%)
high	42(27.8%)
Hospital delivery	121(80.1%)
Home delivery	30(19.8%)
Normal delivery	95(62.9%)
Caesarean delivery	56(37%)
Vaccination status	
Fully vaccinated	83(54.9%)
Partially vaccinated	45(29.8%)
unvaccinated	23(15.2%)

Table 2: Current trend of feeding/dietary practices among younger children (6months-24months)

Feeding practiced in the first six months (n=151).	
Exclusive breast milk	61(40.3%)
Formula milk	51(33.7%)
Bovine milk	17(11.2%)
Mixed feeding	22(14.5%)
Mode of artificial feeding	
i- Bottle feeding	71(47%)
ii-Katori spoon feeding	29(19.2%)
Others(ghutti,kishmish, honey,water,griewater,ajwin water)	24(15.8%)
Complementary feeding among children 6months -24 months (n=151).	
adequate	53(35%)
inadequate	80(52.9%)
not started yet	18(11.9%)

Table 3: Dietary & ending practice by caregivers among younger children (6m-24m) with acute diarrhea (n=151).

Feeding /diet	N(%)
Food restriction	88(58.2%)
Breast feeding(n=61)	
a-stopped	22(36%)
b-reduced frequency	7(11.4%)
c-not changed	32(52.4%)
Shifted to bovine milk from human milk	18(11.9%)
shifted to formula milk from human milk	4(2.6%)
Simple sugar solution	12(7.9%)
WHO OR	21(13.9%)

The basics health awareness is very poor among people especially in developing countries like India. The poor dietary/feeding intake is very common in children, more so if child is suffering from some diseases like diarrhea. Far into the 20th century, grandmothers were persistently stating that diet was the number one measure for treating diarrhea. The primary goal was to bring the “gut to rest,” and thus patients were starved to minimize stool frequency. Although some physicians warned as early as 1924 that withholding fluids, in particular, was giving disastrous results^[13], traditions lacking evidence have persisted in industrialized as well as developing countries, where restriction of diet may compromise the nutritional status of the patient even further and lead to malnutrition.^[14] In our study the food restriction was observed in 58.2% while in studies conducted in past reported the average reduction of food intake in children during a diarrheal period is 30%–40%.^[15] Okunribido OO et al (1997) reported that 3 % of mothers stating they stopped giving solid or semi-solid foods during the episode of diarrhea in Oyo State, Nigeria.^[16] Oyoo A et al (1993) reported that 53 % of mothers reporting they stopped feeding in Kenya.^[17] The present study founded only 13.9% of mothers gave WHO-ORS to their child at home while study by Ansari Mukhtar et al (2010) reported only 8.5% of the mothers stated that the purpose of giving ORS solution during diarrhoea is to prevent the child from getting dehydrated.^[18] In present study 36% mothers stopped breastfeeding and 11.4% reduced frequency of breastfeeding in children with acute diarrhea while study by Moawed SA et al (2000) reported 62 % of mothers stopping breast or milk feeding in a hospital-based study in Saudi Arabia.^[19] The study by Prohmmo A et al(2006) reported no mothers reporting breastfeeding cessation in a surveillance study in northeast Thailand.^[20] Thus the finding of our survey clearly showed that due to lack of basics health education caregivers keeping away the younger children from feeding/diet ,which may further increase the burden of malnutrition.

Conclusion

There was gross irrational approach of caregivers found towards feeding and or diet in younger children with acute diarrhea and to prevent myths towards feeding and or diet, the health awareness towards basic nutrition is need of era and to be maintained at the highest level in the community.

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