

ness of 1,25-dihydroxy vitamin D₃ (1,25 (OH)₂ Vit D₃) in the treatment of idiopathic myelofibrosis. *Br J Hematol* 1986, 62: 399-400.

11. Petrini M, Cecconi N, Azzara A, Ambrogi F, Grassi B. 1,25-dihydroxy vitamin D₃ (1,25 (OH)₂D₃) in the treatment of idiopathic myelofibrosis. *Br J Hematol* 1986, 64: 624-625.
12. Mc Glave PB, Brunning RD, Hurd DD, Kim TH. Reversal of severe bone marrow fibrosis and osteosclerosis following allogenic bone marrow transplantation for chronic granulocytic leukemia. *Br J Hematol* 1982, 52: 189-194.
13. Dokal I, Jones M, Deenmamode M, Levis SM, Goldman JM. Allogenic bone marrow transplantation for primary myelofibrosis. *Br J Hematol* 1989, 71: 158-160.
14. Manoharan A. Myelofibrosis: Prognostic factors and treatment. *Br J Hematol* 1988, 69: 295-298.

Knowledge and Practices Regarding Diarrhea in Rural Mothers of Haryana

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Prevention of diarrheal deaths by promoting the use of oral rehydration salt (ORS) is one of the components of the child survival strategy enunciated by the UNICEF. According to an UNICEF estimate, of the expected five million annual diarrheal deaths only one million are at present being prevented by oral rehydration therapy (ORT) whereas 2.5 million potential lives could be saved by ORT(1).

Thus, it becomes imperative that we assess the current usage rate of ORS and make efforts to improve the same.

This study was conducted with this aim and also to use the information generated in constructing an educational campaign for prevention of diarrhea and diarrheal deaths.

Material and Methods

This study was done in two villages—Garhkhera and Atali (population 3000 and 5000, respectively) of Haryana, which fall in the field practice area of Centre for Community Medicine, AIIMS.

One hundred and forty five mothers with under five children were selected by stratified random sampling (with reference to caste) from both the villages. All the mothers were interviewed by the investigator using a pretested schedule having 25 questions. These questions covered various aspects of diarrhea and ORT, such as mother's definition of diarrhea, dietary practices in diarrhea, *etc.* The demographic particulars of the families were also recorded. All the mothers answered the question. The interview was done in June-July 1988. Each interview lasted for about half an hour, and apart from a few, the rest were done in one sitting.

Results

The characteristics of the study population is shown in *Table I*. This population

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TABLE I—Characteristics of Study Population (1988)

Indicators	Value
1. Crude birth rate (per 1000 population)	33.24
2. Crude death rate (per 1000 population)	7.74
3. Infant mortality rate (per 1000 live births)	69.65
4. Immunization coverage (%)	
(a) BCG	81.00
(b) DPT	84.00
(c) OPV	98.00
(d) Measles	77.00
5. Literacy level (%)	
Males	64.3
Females	42.1
6. Prevalence of malnutrition (%)	
Normal	28.2
Grade I	38.0
Grade II	26.0
Grades III & IV	8.8

had a better level of health as shown by comparison with national figures. But the diarrheal incidence in this population was 2.88 ± 1.2 episodes/child/year which is similar to other studies(2,3). The practices pertinent to diarrhea are shown in *Table II*. The source of water was piped supply in Atali and handpumps in Garhkhera. All of them stored water in earthen pots, and utensils like katori and glasses without handles were used for withdrawing water from it.

The results of KAP study are shown in *Table III*. Regarding mother's definition of diarrhea, only 24.1% responded correctly (The WHO's definition of 3 loose stools/day being taken as correct). Significantly, for 40% of women, a diarrheal episode

TABLE II—Practices Related to Diarrhea

Practice	Prevalence (%)
1. Defecation by roadsides or in fields	100
2. Use of soap in handwashing after defecation	41
3. Breast feeding (first 3 months)	97
4. Continuation of normal diet during diarrhea	81
5. Use of liquid supplements	38
6. Type of liquid supplements:	
(a) Weak tea/milk dahi	49
(b) Water	35
(c) Dal water/Khichri	31
(d) Home made ORS	4
(e) Others (juice/cold milk)	9

occurs only if more than 6 stools are passed in a day. Only 16 (11%) correctly ascribed dirty food (assumed to be synonymous with contaminated food) as cause of diarrhea. About 23% related it to teething and 60% of the mothers expressed ignorance.

Of the 145 mothers, only 43 (29.7%) had heard about either sugar salt solution (SSS) or commercial ORS. Of these only 14 (9.7%) knew how to prepare it correctly. The remaining 29 (20%) either did not know how to prepare it or prepared it incorrectly. Only 55 (38%) of the mothers were using some sort of liquid supplement during diarrhea, commonest of which was weak tea or curd. Khichdi and dal water were also used by many of the mothers. It was encouraging to note that 118 (81.4%) of mothers did not restrict the food intake during a diarrheal episode. Breast feeding was continued as usual in children who were being breastfed.

Ninety three mothers (64% were

TABLE III—*Mother's Knowledge Regarding Diarrhea (n = 145)*

	%
1. Definition of diarrhea	
(a) Any loose stools	17
(b) ≥ 3 stools/day	24
(c) ≥ 6 stools/day	40
(d) Don't know	19
2. Cause of diarrhea	
(a) Teething related	23
(b) Dirty food	11
(c) Others (worms, hot food, etc.)	6
(d) Don't know	60
3. Knowledge of ORS/SSS	
Present	30
Absent	70
4. Knowledge of preparation of ORS/SSS (n = 43)	
Correct	33
Wrong	49
Don't know	18
5. Recognition of danger signs	
Diarrhea ≥ 3 days	17
≥ 6 stools/day	14
Blood in stools	8
Child becomes drowsy/weak	4
Don't know	64

ignorant about danger signs at which a child should be taken to a health centre. The most frequently given answers were related to duration of frequency of diarrhea. Only 12 (8.3%) considered blood in stools and 6 (4.1%) thought drowsiness as dangerous signs.

Discussion

The study villages despite provision of better health care and better health indicators, do not differ markedly from other North Indian villages as far as socio-

cultural practices regarding diarrhea were concerned.

One of the major impediments in the successful control of diarrheal diseases is the non-recognition of diarrhea as a significant health problem. This study confirms this notion. The majority considered diarrhea only if six or more stools are passed in a day. Comparison with previous studies was not possible as this aspect has been studied by very few workers. The recently concluded study "Diarrhea in rural India" reported that in Haryana the mothers considered passage of 3-5 stools/day as "Non-serious" diarrhea and 6 stools/day as "Serious" diarrhea(4). They also found that Haryana mothers considered approximately 5 or more bowel motions per day as diarrhea.

Regarding cause of diarrhea, this study more or less confirms what earlier workers have observed. This study also observed about 60% mothers were ignorant(5) and rest cited teething and dirty foods as the cause(7,8).

The knowledge of ORS/SSS was present among 29.7% of mothers in this study as compared to 45.3% in a study by Datta(7) in Calcutta. Of these, 20% had heard about it but did not know how to use it, whereas 9.7% knew its correct use. The corresponding figures for the study by Datta was 16.3 and 29%, respectively. Another study(4) found knowledge of SSS to be 1% and ORS at 12% among Haryana mothers.

The study by Kumar *et al.*(5,6) reported almost universal food restriction during an attack of diarrhea whereas another study(4) found that only 22% of Haryana mothers practised food restriction. In this study no obvious food restriction was observed. This does not mean that children got adequate diet as the appetite may be

decreased during diarrhea. Feeding during diarrheal illness should continue to feature in the educational campaigns for management of diarrhea.

The mothers considered the duration and frequency of diarrhea as the only important factors which made them seek medical care. A similar finding was seen in multicentric study(4) where 49% of mothers gave the same reply. It was also seen that parents sought medical care usually within 2 days of onset of an episode but their reasons for seeking this intervention are not due to known danger signs. Educational campaigns need to stress on this point. Future studies should focus on the component of money saved on unnecessary medical consultation. How many of the practicing RMPs knew and advised ORS to these patients of diarrhea was not studied but could have serious implications on efforts to control diarrheal mortality.

Despite the technological revolution in the field of diarrheal diseases management, the information revolution is yet to come. Despite the gains achieved, lot more still needs to be done and a concerted communication strategy is needed.

REFERENCES

1. UNICEF. The State of World's Children, 1991, p 23.
2. Kumar V, Clements C, Marwari K, Diwedi P. Morbidity and mortality of diarrhea in rural Haryana. *Indian J Pediatr* 1985, 52: 455-459.
3. Gupta KB, Walia BNS. Longitudinal study of morbidity in rural area in Punjab. *Indian J Pediatr* 1980, 47: 297-301.
4. Hema V, Rhode J. Diarrhea in rural India. A nationwide study of mothers and practitioners: North Zone. New Delhi, Vision Books, 1980.

5. Kumar V, Clements C, Marwari K, Diwedi P. Beliefs and therapeutic preferences of mothers in management of acute diarrheal disease in children. *J Trop Pediatr* 1985, 31: 109-112.
6. Kumar V, Clements C, Marwari K, Diwedi P. Maternal beliefs regarding diet during acute diarrhea. *Indian J Pediatr* 1981, 599-603.
7. Datta T. Awareness about breast feeding, immunization and oral rehydration. *Indian J Pediatr* 1985, 32: 929-930.

Values for Total Hand Length, Palm Length and Middle Finger Length in Newborns from 26-42 Weeks Gestation

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Abnormalities of hand and fingers are important features of some syndromes that are recognizable at birth(1). There are few good studies giving standards for various morphometric measurements for Western infants, children and newborns of different gestational ages(1,2). No standards are available for the size of hand and fingers of Indian newborn babies, in relation to gestational age. These standards for newborns

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