

## Parents' Knowledge on Diarrhea in a Plantation Area

Arizal, Ali Antoni, Sari Leyli Harahap, Atan Baas Sinuhaji, A.H. Sutanto

(Department of Child Health, Medical School,  
University of North Sumatra, Medan)

**ABSTRACT** The parents' knowledge on diarrhea was evaluated by a cross sectional study in Balimbingan plantation PTP VIII Kabupaten Simalungun on December 18-19, 1992. The study was conducted by providing questionnaires to 216 parents of infants and children with diarrhea. Most parents (97.2%) knew that diarrhea was a disease, while six of them (2.8%) thought that diarrhea was not a disease but was associated with the increase level of intelligence or teeth eruption. Seventy-five percent of parents thought that fluid and electrolyte ought to be given to children with diarrhea, and 16.5 % thought to give anti-diarrheal drugs or traditional medicaments. Fluid and electrolytes were given as an initial treatment for diarrhea by most of the parents (69%). Eight per cent of parents gave diarrheal drugs and 12% used traditional medicaments. They got oral electrolyte solution (OES) from the health workers (63.3%) or from the dispensaries or drug stores (36.7%). Most of the parents (53.7%) thought that OES was useful to stop diarrhea. Only 30.3% knew that OES was used as the substitute of fluid loss, 16% thought it was to cure for stomach ache. As many as 57.4% parents knew diarrhea as an infectious disease and 57.4 % knew how to prevent it. Most of them knew that environmental sanitation could prevent the disease (23.3%). Food and beverages were known as vehicle of infections by 37.5 % parents. [*Paediatr Indones* 34:149-153]

### Introduction

Diarrhea is still one of the major health problems in Indonesia. Some surveys in Indonesia show that morbidity rate of diarrhea is around 120-360 per 1000 inhabitants. Diarrhea in infants is found

in 1-2 episodes per year and estimated accounts for 60% of all morbidity.

The mortality for all ages due to diarrhea is about 12%, and most of them (76%) are babies and children. Survey of family health in 1991 showed that the morbidity rate of diarrhea for all ages was 200 per 1000 inhabitants, with diarrheal episode for children was around 1 per year.<sup>1</sup> Rehydration by giving fluid and oral or parenteral electrolyte together

Accepted for publication March 25, 1994. Author's address: Arizal, MD, Dept of Child Health, Medical School, Universitas Sumatera Utara, Medan, Indonesia.

with continuing feeding can decrease the number of death in infants and children caused by diarrhea.

The efforts of preventing diarrhea are mainly influenced by the knowledge of parents about diarrhea. A few parents do not give oral electrolyte solution (OES) to children, discontinue feeding, and start giving anti-diarrhea. Early administration of OES by the parents at home can prevent dehydration and other fatal complications.<sup>2-6</sup> The parents' knowledge on diarrhea and its management depend upon some factors such as experience, educational level, and culture.<sup>7</sup>

The aim of this study was to evaluate parents' knowledge on diarrhea in PTP VIII Balimbingan plantation, Simalungun district, North Sumatra, Indonesia.

## Methods

This study was a cross sectional observation held on 18-19 December 1991 at PTP VIII Balimbingan Plantation, Kabupaten Simalungun, by performing interviews and providing questionnaire. The questionnaire consisted of several questions on knowledge with regard to the etiology of diarrhea, the first aid measures, the use of OES, the way to get OES, the meaning of getting infections, and steps how to prevent diarrhea. The participants were all parents (mothers) of babies or children visiting Posyandu (Integrated Service Post). The area of PTP VIII Balimbingan Plantation is 12 633 hectares consisted of 15 "Afdeling". The number of population in that plantation was 7356. Two hundred and sixteen mothers actively has participated in this study.

## Results

As many as 210 mothers (97.2%) of 216 knew that diarrhea was a disease, while 6 (2.7%) thought that diarrhea was not a disease (Table 1). Two of the six mothers who thought that diarrhea was not a disease thought that the children were growing more intelligent, and 4 parents associated diarrhea with teeth eruption (Table 2). Of 210 mothers who knew that diarrhea was a disease, 75% thought to give to their children fluid and electrolyte (75%), 16.5% gave diarrheal drugs, and 8.4% gave traditional remedies (Table 3).

Table 1. Mothers' knowledge on diarrhea

| Knowledge                  | No. of mothers | %    |
|----------------------------|----------------|------|
| Diarrhea was a disease     | 210            | 97.2 |
| Diarrhea was not a disease | 6              | 2.8  |
| Total                      | 216            | 100  |

Table 2. Knowledge of the cause of diarrhea

| The cause               | No. of mothers | %     |
|-------------------------|----------------|-------|
| Increasing intelligence | 2              | 33.3  |
| Teeth eruption          | 4              | 66.7  |
| Total                   | 6              | 100.0 |

For initial treatment when the child had diarrhea, 145 (69%) of 210 mother gave OES, 8% gave a plenty of water to drink, 8% gave diarrheal drugs, while 12% gave some kinds of traditional medicaments (Table 4).

Table 3. First aid in children with diarrhea

| Measures                | No. of mothers | %     |
|-------------------------|----------------|-------|
| Liquid and electrolyte  | 158            | 75.1  |
| Diarrheal drug          | 35             | 16.5  |
| Traditional medicaments | 17             | 8.4   |
| Total                   | 210            | 100.0 |

Table 4. Necessary step taken by mother when their children got diarrhea

| Step taken                       | No. of mothers | %   |
|----------------------------------|----------------|-----|
| Give OES                         | 145            | 69  |
| Give plenty of water             | 17             | 8   |
| Give diarrheal drug              | 17             | 8   |
| Fasting but continue breast milk | 4              | 2   |
| Food stopped                     | 2              | 1   |
| Traditional medicament           | 25             | 12  |
| Total                            | 210            | 100 |

Table 5. The use of OES

| The use of OES                    | No. of mothers | %     |
|-----------------------------------|----------------|-------|
| To stop diarrhea                  | 113            | 53.7  |
| To substitute fluid & electrolyte | 64             | 30.3  |
| Diarrheal drug                    | 33             | 16.0  |
| Total                             | 210            | 100.0 |

Most of the mothers (113 of 210) or 53.7% knew that OES could stop the diarrhea, 69 (30.3%) thought that OES could substitute fluid lost, 33 (16%) thought it as a diarrheal medicament (Table 5). Of 210 mothers, 133 (63.3%) mothers got OES from health workers, while 77 (36.7%) from the dispensaries or drug stores (Table 6).

Table 6. Sources of the OES

| Sources               | No. of mothers | %    |
|-----------------------|----------------|------|
| Health workers        | 133            | 63.5 |
| Pharmacies/drug store | 77             | 36.5 |
| Total                 | 210            | 100  |

Of 210 mothers, 120 (57.4%) knew that diarrhea was an infectious disease while 90 (42.6%) thought that it was not an infectious disease (Table 7). Of 120 mothers, 45 (37.5%) thought that the infection could be transferred from food and beverages, 27 (22%) thought it was transmitted through fecal-oral route, while 14 (11%) of them thought that the transmission is by insects; the remaining 34 (28.7%) believed that diarrhea was transmitted by close contact with person or clothes (Table 8).

Table 7. Diarrhea as an infectious disease

| An infectious disease | No. of mothers | %    |
|-----------------------|----------------|------|
| Yes                   | 120            | 57.4 |
| No                    | 90             | 42.6 |
| Total                 | 210            | 100  |

Table 8. Means of infection

| Sources of infection                                  | No of mother | %     |
|---|--------------|-------|
| Food and beverages                                    | 45           | 31.5  |
| Fecal matter  | 27           | 22.0  |
| Insects   | 14           | 11.8  |
| Other (close contact with diarrheal patients/clothes) | 34           | 28.7  |
| Total   | 120          | 100.0 |

Table 9. Preventive measures

| Preventive measures                                       | No of mother | %     |
|---|--------------|-------|
| Sanitation  | 49           | 23.3  |
| Cooking food and water                                    | 33           | 15.7  |
| Washing food  | 24           | 11.4  |
| Others (washing hands before eating and after defecation) | 14           | 7.0   |
| Don't know  | 90           | 42.0  |
| Total   | 210          | 100.0 |

Of 210 mothers who knew that environmental sanitation was an important factor to prevent diarrhea, 33 (15.7%) knew preventing diarrhea by cooking food and beverages. Twenty-four (11.4%) parents thought that washing the food, washing the hands before eating or after defecation, could prevent diarrhea and 90 (42%) did not know how diarrhea could be prevented (Table 9).

### Comment

This survey adds further information about parents' knowledge and attitude

on diarrheal diseases. Some differences are found between results in this study and other studies for some obvious reasons, i.e. parental education and local culture. In this study only 2.8% of the participants thought that the diarrhea was not a disease. This was smaller if compared with the study of Affandi<sup>8</sup> and Sahid<sup>9</sup> who found that 6.3% and 13%, respectively, of their respondents considered that diarrhea was not a disease.

For the treatment of diarrhea most parents (75%) gave fluid and electrolyte. However, 16.5% of the respondents gave diarrheal drugs, and 8.4% gave traditional medicaments. Fluid and electrolytes were given as an initial treatment in 1.8% in Affandi's study,<sup>8</sup> 22.5% in Sudarjat study,<sup>10</sup> and in 27.5% in Sahid's<sup>9</sup> study. In our study 69% of the mothers gave fluid and electrolytes as an initial treatment for diarrhea.

In this study 12% of the mothers still used traditional medicament for diarrhea treatment, which is higher than found by Sudarjat (1.5%).

More than 50% of our respondents thought that OES could stop diarrhea. This and other misconceptions about OES certainly need correction, one or another by providing more information about the advantages of OES.

In summary, our study indicates that the majority of parents surveyed had a sufficient knowledge on diarrhea. Some of them, however, still have some misconceptions on several issues related to certain aspects of diarrhea in babies and children. For example, some believed that OES is used as the treatment of diarrhea instead of as fluid and electrolyte substitution.

### References

1. Sutoto. Program pemberantasan penyakit diare. Pertemuan Pemantapan Program P2ML. Cisarua, 15-19 Pebruari 1993: 1-15.
2. Ismail R. Pengetahuan dan perilaku masyarakat dalam mengelola penyakit diare di daerah Panduan P2D Sumatera Selatan. *Medika* 1992; 17:449-55.
3. Lubis IZ. Risiko terjadinya diare identifikasi faktor pada bayi. *Medika* 1991; 17: 106-9.
4. Naim M. Rehidrasi oral pada diare akut. *Medika* 1990; 16:319-29.
5. Sunoto. Patogenesis dan patofisiologi diare pada anak. Dalam: *Gastroenterologi anak praktis*. Jakarta: FKUI; 54-65.
6. Wahyu H. Aspek klinis diare akut pada anak dan pengobatannya. Pertemuan Ilmiah Penelitian Penyakit Diare di Indonesia, 21-23 Oktober 1982:1-10.
7. Notoatmodjo S, Sarwono S. Perilaku di dalam kesehatan dan gizi. Dalam: *Pengantar ilmu perilaku kesehatan*, Jakarta: BPKM FKM-UI, 1985; 1-8.
8. Affandi. Sikap dan kebiasaan masyarakat dalam menghadapi Diare. *Medika* 1980; 1: 28-32.
9. Sahid HW. Perilaku ibu penderita. Poliklinik dan BKIA RS Dr. Kariadi terhadap diare. Naskah Lengkap BKGAI Semarang: 345-57.
10. Sudarjat. Sikap dan perilaku ibu balita penderita diare di kecamatan Mengin. *Medika* 1986; 8: 22-4.