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Why is oral therapy associated with drugs in the treatment of diarrhea?*

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Introduction

In 1988, WHO published a note on drugs prescribed in the treatment of acute diarrhea in infants and small children. It said that almost 90 percent of the children who come to health care centers presenting with watery diarrhea may be successfully treated with only rehydration and food intake. Antibiotics and antiparasitic drugs should be prescribed only in some very specific cases. In fact, rehydration is the only therapeutic method which has proven to be efficient. Taking its low cost into account, savings resulting from its use should be quite important (6).

A first study was carried out during two periods where the observation of diarrheic episodes was easy; it took place in July-August 1990 in Oran (Algeria), in two clinics and in a specialized unit (2). It was then observed that Oral Rehydration Salts (ORS) are rarely or never prescribed by some physicians and that, when they are prescribed, they are often associated with other drugs.

In a way, oral rehydration is therefore a paradox. How can we explain that a real gap exists between a medical advice whose validity is acknowledged by the practitioners themselves and what these same physicians prescribe?

The assumption on which this study was based is that this discrepancy is not basically due to a lack of information, as most physicians and families who were interviewed knew about ORS and the dangers of diarrhea. This gap would mostly be due to the fact that oral rehydration does not meet the expectations of the families who bring their children. In other words, it would result from the lack of communication between the medical approach and that of the family.

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Method

To verify this assumption, six ethnologists and sociologists have carried out a comparative and qualitative anthropological survey in five locations: Oran (Algeria) and Bangkok (Thailand) for the two in-depth studies, in Cairo (Egypt), Beijing and Urumqi (China) for the two exploratory studies (1).

Criteria for the selection of sites

The following criteria were adopted: diverse cultural backgrounds in the field of therapeutics (Oriental and Arabo-Moslem cultures), urban neighborhoods in which diarrhea was frequent, and finally, clinics and hospitals where ORS were to be prescribed (except in the case of China where the selection of neighborhoods and clinics could only be done via an informal social network).

Data gathering techniques

To be thoroughly informed of the real approaches and proceedings adopted by families and physicians, in-depth interviews lasting from one to three hours were conducted on the work site or in the home.

Health care and diagnosis practices were observed for a half-day, in places where decisions were taken by families or physicians (neighborhood, house, clinic, pharmacy).

The content was analyzed theme by theme following the itinerary method indicating step by step the moments where decisions were made, and the factors having an impact on these decisions.

Discussions took place in French, Chinese, Arabic and English, with the help of bilingual interpreters and ethnologists (French-Arabic, English-Arabic and French-Thai).

The results took the form of notes written during or after the interviews, descriptions of written observations, and photographs of the environment. The survey focused on familial self-medication practices, traditional health care or use of biomedicine. Concerning the latter, it included the use of ORS recommended by WHO and the diversity of therapeutic methods prescribed by physicians in their private or public practice.

Criteria for the selection of observations and interviewed subjects

Families were selected in the clinics at the time the child was brought in; they were asked if they accepted to receive the survey personnel in their own homes, in their neighborhood. At least one major diarrheic episode must have occurred in the family within the last twelve months.

The physicians who were selected for the study were all pediatricians, in both public and private practice, having a good knowledge of ORS, whether they prescribed them or not.

The pharmacists included in the study had to sell antidiarrheic drugs, either biomedical or traditional medicines.

The average number of cases observed per site included 25 families with children between 0 and 2 years, 10 physicians and 8 pharmacists.

Results

Morbidity manifestations and health care as seen by families

Three items were observed:

1) Diarrhea was not always considered by the families as a disease. It is even considered as a normal feature of child development (in Egypt and China), or as a positive sign: especially as an indication that passage to the sitting, then standing position took place normally (in Thailand).

When diarrhea was perceived as a disease, it was most often considered as a simple benign disease.

2) In all societies, however, a difference was made between benign and serious diarrheic episodes.

Each culture group, even each family, had established its own scale regarding the gravity of a disease. This scale varied, which explains why some families consulted a physician when the child presented with the first manifestations, others after two weeks of diarrhea.

The signs of a serious episode, however, were generally associated with an increased number of stools, some alarming changes in the child's behavior (crying, weakness, refusing to eat) and the occurrence of new signs such as blood in the stools.

3) In all cultural backgrounds, diarrhea was never considered as a serious dramatic event, contrary to what happens with AIDS in Europe, for instance. It is seen as a "down-to-earth disease".

Because this disease is most often considered as banal, the designers of public health campaigns have been led to dramatize the real danger of diarrhea. This type of information sensitizes the families, but it also creates more expectations regarding therapy. In particular, families expect to receive some kind of prestigious drug, with a fancy packaging or a high price. Above all, they expect that diarrhea will stop immediately, and the therapeutic management will have to take these expectations into account.

Family's therapeutic approach and medical prescriptions

Four items were noted:

1) Observations and interviews emphasized the great diversity of the therapeutic approaches: families could decide alternately to come to the hospital or the clinic, to use traditional medicines or visit a private practitioner (except in China where there is no biomedical private medicine) or a pharmacist. To provide health care, the physicians were therefore in a competitive situation.

2) In the case of diarrhea, patients did not perceive easily that dehydration had stopped because it escaped the eye.

Families could observe the disappearance of the signs of diarrhea which were readily visible: no more liquid stools, no more cries from the child, no more blood, etc.

3) Physicians could not ascertain their diagnosis. Without laboratory tests, they could not know for sure if the diarrhea had a bacterial or viral origin, but these tests were not always possible because of their cost or great geographic distance.

4) Observation and detailed knowledge of the adopted practices indicated that private physicians, and even those of the public sector, would base their biomedical treatment of diarrhea on the prescription of five or six drugs: antidiarrheic, antiemetic and antipyretic agents, often associated with antibiotics and sometimes ORS.

Practices and family opinions regarding ORS

Two items were noted:

1) The observation in the family environment of oral rehydration practices showed that the families did not follow easily the rules established in the prescription. It was often noted that the packet of salt was poured in the baby's bottle all at one time and not given teaspoon by teaspoon for a longer period.

2) ORS had a negative image, because they are not efficient, according to some families. The mother (or in Algeria, the mother-in-law) did not see the end of the diarrhea. ORS did not appear to be serious enough to counter the dangers announced in the information campaigns.

Discussion

The survey on medical practices carried out in the four countries confirmed the gap between the advice given by WHO and what was really prescribed.

This survey also showed that approaches of families and practitioners did not converge. It focused on the following paradox: the efficacy and scientific validity of a drug, its easy and simple preparation, and its low cost may be contrary to its widespread distribution as a therapeutic agent. Accordingly, to ascertain that oral rehydration will be used by families, a sociological analysis has shown that five conditions must be met but that only one is really satisfied.

1) A scientific condition: oral rehydration must prove its efficacy; it is the only requirement that has been met (3).

2) A cultural condition: families must consider diarrhea as a disease, but it is not always the case.

3) A semiologic condition: the manifestations of the efficacy of the treatment must be easily recognized by the child's family, but ORS does not stop the signs of diarrhea.

4) A strategic condition: a treatment must not represent a threat to the physician's expertise, but ORS is one (4,5).

5) An information-related condition: in the communication process no contradiction must appear between the dramatic image given of the disease and the banality of the treatment; but the ORS packaging is not seen as serious by the families and this goes against the prestige of the physician.

Recommendations

To encourage adopting an oral treatment of diarrheic episodes, it is necessary to better take into account the constraints imposed on physicians and their prescriptions in their daily practice, and those related to the success of their professional career; it may also depend on the development of a drug that, in association with ORS, could stop the manifestations of diarrhea without the disadvantages of usual biomedical treatments prescribed to children under two years of age.

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