



Technical

Discussions



Washington, D. C.
September-October 1974

Agenda Item 19

CSP19/DT/8 EN
1 October 1974
ORIGINAL: ENGLISH

STUDIES AND STRATEGIES TO REDUCE MORBIDITY
AND MORTALITY FROM ENTERIC INFECTIONS

by

Dr. Eugene Gangarosa

STUDIES AND STRATEGIES TO REDUCE MORBIDITY
AND MORTALITY FROM ENTERIC INFECTIONS

There is now abundant documentation on the appalling mortality due to acute enteric diseases in the developing countries of the Western Hemisphere. Several of our speakers have cited the excellent studies of Puffer and Serrano, that underscore the priority well established in the Ten-Year Health Plan for the Americas, to reduce by 50 per cent the mortality due to enteric infections. How can this objective be achieved? As a first priority, attention needs to be directed to treatment of patients who present acute dehydration and metabolic disorders produced by fluid and electrolyte loss of any diarrheal disease. The medical profession should recognize the important breakthroughs that have been made in recent years, primarily resulting from studies on cholera, in the treatment of diarrheal diseases by oral fluid and electrolyte replacement therapy. Good evidence now indicates that diarrheal disease not associated with cardiovascular collapse, can be successfully treated using only oral fluid therapy. We should be able to immediately reduce mortality from diarrheal disease in the Americas if we embark on a program to make this treatment available in all clinics and treatment facilities using prepackaged mixtures of glucose and electrolytes. Medical personnel and mothers will enthusiastically accept this simple treatment, as they have in many other places of the world. The expense is minimal; the ingredients for the glucose-electrolyte mixture are readily available throughout the world. The composition recommended by the World Health Organization is as follows:

Oral Solution Formula for the Treatment
of Diarrheal Diseases *

	Drinking Water (gm/L)
Glucose	20.0
Sodium chloride	3.5
Sodium bicarbonate	2.5
Potassium chloride	1.5

*

WHO-BD-CHOLERA 74.27

We recommend that this mixture be prepackaged in every country and widely distributed wherever patients are seen for treatment of diarrheal diseases. The treatment can be readily administered by mothers, following instructions and training by paramedical personnel. Because of its simplicity, this approach to treatment will greatly relieve physicians and hospitals.

Dr. Nelson Moraes spoke of the dangers of excessively protracted and imprudent use of antimicrobial drugs. We know these drugs often do more harm than good. Antimicrobial drugs cannot substitute for the patient's fluid and electrolyte loss. Furthermore, many if not most enteric infections will not respond to such treatment, and, in some such as salmonellosis, the infectious process may actually be aggravated or prolonged by drug treatment. Unsupervised drug usage may result in dangerous toxicity. Drug resistant strains often emerge when antimicrobial drug use is excessive and unsupervised, creating another public health problem.

Several speakers have referred to the serious epidemics of dysentery 1, typhoid fever, and Salmonella typhimurium, that have been due to such resistant strains.

In most of the countries of the Hemisphere it is possible for anyone to purchase these drugs without restriction. Mothers often purchase antimicrobial drugs when they seek the advice and guidance of chemists and pharmacists in the treatment of their children ill with diarrheal diseases. Such drug sales undoubtedly involve large sums of money with little if any benefit to the patient, and with aggravated risk to society. Each country should therefore reexamine its policies regarding drug sales and distribution, and do what is necessary to better regulate their use in diarrheal diseases. As a constructive alternative, pharmacists should be encouraged to participate in the program to promote the use of the glucose-electrolyte mixture. In this way patients will benefit and expenses will be markedly reduced.

Miss Maria Borges has suggested a practical solution to alleviate shortage of medical manpower. Paramedical personnel, supervised by nurses, should be given major responsibilities in health care delivery, especially in rural areas. She identified three major problems and challenges; the need to train more nursing personnel, the need to provide better incentives to attract and retain nurses, and need to better utilize their services in various public health roles. These include health care delivery, health planning, health education and epidemiological surveillance.

Health education is essential for both the medical profession and the public to achieve the above goals. Physicians and other medical workers must be informed of the new and important development in treatment referred to above. They must be retrained with regard to their reliance in antimicrobial drugs and should be given renewed incentives to use laboratory and other health services. Innovative ways need to be found to deliver health education to the public in order to supplement conventional forums, i.e. press, radio, television.

Surveillance must be improved. Dr. Oscar Grados mentioned the tragic full year delay before the etiology of the dysentery epidemic was recognized in Central America, resulting in thousands of deaths. Other equally tragic examples resulting from deficient surveillance could be cited. These underscore the need for better demographic and epidemiologic data. It is not enough to assemble, collect, tabulate and file this information; it must be analyzed and used as a basis for planning and action, and the interpreted information must be disseminated in a timely way to all those who have a need to know.

Laboratory services must be upgraded. As Dr. Grados has pointed out, all clinics and hospitals must have a minimal capability to collect and transport fecal specimens to reference laboratories. Simple inexpensive means have been well developed for such services. Wherever possible, reference laboratories should be integrated into general hospitals to encourage a closer working relationship between the clinician and the laboratory. These reference laboratories should also have the capability to initiate epidemiologic investigations. Dr. Grados emphasized the need for "a Continental Reference Laboratory." This recommendation should be given a high priority in order to facilitate hemispheric surveillance, to coordinate the training and technical services performed by the reference laboratories, to coordinate a program of a quality control, and, finally, to provide reference functions not readily available at the national level.

Dr. Moises Behar has raised important issues concerning nutrition that again emphasize the importance of health education. His message is clear and emphatic: diarrheal diseases can be prevented by prolonging breast feeding as far into infancy as possible, and by discouraging supplemental, artificial feeding in early infancy. This message should be transmitted to mothers not only by physicians, nurses and other paramedical personnel, but also by the mass communications media.

Dr. Abel Wolman's fine presentation, given by Eng. Harry Hanson, though the last item on the agenda, is really the core of the solution to the problem. Long-term programs to expedite the delivery of water and to correct the environmental fecal contamination are absolutely essential. Though costs may appear high, Dr. Wolman has argued persuasively that the return in better health fully justifies the expenses.