

NEWS

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* * * * * Fatal pediatric diarrhea
subject of talk.

DALLAS--Diarrhea in infants and toddlers can be lifethreatening, aside from being messy and inconvenient.

"Rotavirus," a viral infection common year-round in the southern U.S. because of its affinity to warm climates, causes diarrhea that can be fatal. Often victimizing children under one year, it can be blamed for one in 20 deaths of this age group in the state of Texas. Estimates say that as much as 50 percent of all pediatric diarrhea in Texas is caused by rotavirus.

Pediatrician Dr. Alan Strickland of The University of Texas Health Science Center at Dallas will speak on the dangers of rotavirus and the importance of nutritional support methods at the Postgraduate Seminar in Nutrition and Dietetics to be held at UTHSCD Dec. 4 and 5. The seminar, offered by the Department of Nutrition and Dietetics of the School of Allied Health Sciences and the Division of Continuing Education, will feature a distinguished group of medical specialists speaking on such topics as obesity, the dietary approaches to heart disease and diabetes during pregnancy.

Rotavirus was not identified by scientists until about 1975. Three years later the reasons for its destructive effects were proven by a group in Toronto.

How does it kill?

Strickland, a pediatric gastroenterologist, explains that it cuts off the tops of the thread-like villi which cover the mucosal lining of the small intestine. These tiny structures normally serve to absorb water and vital nutrients into the body. The enzyme for digesting lactose (milk sugar) is located in cells at the tip of the villi. Lactose, the primary nutrient present in breast milk, cow's milk and most infant formulas, would therefore be denied the child with the tip of the villus gone. And malnutrition can result.

Water is also inhibited from entering the body. Death from dehydration can come within six hours in severe cases, Strickland says. One way of telling if a child is dehydrated is by pinching the child's skin--if it sticks together the child may be dehydrated. These children need hospitalization to get fluids into the body intravenously (by I.V.).

Malnutrition must also be dealt with by hospitalization. "With the top part of the villus gone, we have to be smart enough to give foods that can be absorbed by what's left," says Strickland, who is frequently called upon to treat children when their conditions become critical.

The enzyme sucrase, responsible for digesting sucrose (the usual table sugar), is located in cells further down the villus than is the enzyme lactase. Mild villus damage may result in the loss of lactase but not sucrase. So the child can be fed a sucrose solution orally.

Glucose, the simplest sugar, is absorbed anywhere on the villi, including the base, and can almost always be given the children with good results. "The villi regenerate in about 5 days time," says Strickland, "and the child is back to normal."

The doctor says that rotavirus is less and less a problem as one goes north in this country. Mexico, however, has a serious problem. Reports are that as many as 30 percent of the children in any village have rotavirus at a given time.

Strickland says he suspects that the B vitamins may be absorbed at the villus tip. Part of his research focuses on this hypothesis.

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