

pre-existing group-specific serum antibody is not protective, the level of immunity to rotaviruses in a community must be verified by neutralization of the locally prevalent serotypes. To do this, local strains of rotavirus must first be identified and collected.

METHODS :

Patients : Children less than 2 years old presenting to the Pramongkutklao Hospital or Children's Hospital clinics between 1 December 1978 and 1 April 1979 were candidates for study if they had gastroenteritis (nausea, vomiting, diarrhea) as judged by the hospital physician. No other restrictions were placed on entry into the study. Specifically, severity of disease was not a criterion.

Clinical specimens collected : The following were obtained from each patient : an acute blood specimen, an acute stool or diaper scraping, a 10-14 day convalescent blood, and a simple questionnaire.

Laboratory studies (Acute stool) : 1. Routine culture for easily identified bacterial enteric pathogens (Salmonella and Shigella). 2. Electron microscopy : The method of Zissis et al. (11) was followed. Briefly, stool specimens were suspended about 30% (v/v) in PBS and centrifuged at 10,000 rev/minute for 30 minutes at 4°C in conical centrifuge tubes. The supernatants were again centrifuged at 10,000 rev/min for 30 minutes at 4°C. Five ml of the clarified supernatant were centrifuged at 250,000 g for one hour in a Beckman centrifuge (SW 50/rotor), and the pellet resuspended in 5 drops of distilled water. Electron-microscope grids, covered by a formular membrane, were placed on a drop of the suspension for 15 minutes, and the virus allowed to absorb to the membrane. After the membranes were dried, they were rinsed four times in a drop of saline, blotted dry after each dip, then negatively stained with 2% (v/v) uranyl acetate or sodium phosphotungstate. After drying, the grids were examined with the Hitachi (H-11C) electron-microscope at the IVR.

RESULTS : Virus particles were detected in 13 of the 44 specimens examined by electron-microscopy. Table 1 summarizes the number of different morphologic types seen.

Of twelve specimens collected at the RTAH, none were positive for rotaviruses, one was positive for adenovirus. Of the 32 specimens collected at Children's Hospital, 9 (28%) were positive for rotaviruses, one for adenovirus, and one for mixed adenovirus and parvovirus-like particles. The number of rotavirus particles visualized varied from <1 to more than 100 per grid square.

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Table 1. Virus-like Particles Visualized in Stool Specimens from Bangkok Children with Gastroenteritis.

	Age (months)				Total
	0-5	6-11	12-17	18-24+	
Rotavirus	4	3	1	1	9
Adenovirus	1	0	0	1	2
? Enterovirus	0	1	0	0	1
Adenovirus + ? Parvovirus	1	0	0	0	1
No particles seen	14	9	3	5	31
	20	13	4	7	44