

SEATO MEDICAL RESEARCH STUDY ON ENTEROVIRUSES

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Period of Report: 1 April 1966—31 March 1967

General Information:

No major research program on enteroviruses was carried out during the period of this report. However diagnostic studies on cases of central nervous system diseases indicated that poliovirus infection continues to be significant cause of meningitis and paralytic disease in Thailand. Eleven strains of type-1 poliovirus were isolated from 19 cases (8 from Bangkok and 5 from Korat) during 1966.

A serologic survey was done in February 1967 to determine the rate of acquisition of neutralizing antibody to polioviruses among children in Bangkok. Sera were collected from a random sample of children in the Makasan area of Bangkok. The 226 sera were a representative sample, the children under 15 years of age residing in the district. An additional 243 sera were collected from out-patients at the Children's Hospital. This second group was not a random sample. Neutralizing antibody was measured by testing heat inactivated (56°C, 30 min) serum diluted 1:10 against approximately 100 TCID₅₀ of each poliovirus serotype in a metabolic inhibition test using BS-C-1 cell culture. Tests were done in triplicate in plastic plates.

When testing was completed it was found that there were no differences in prevalence of antibody by age group between the two groups. The combined results are summarized in Tables 1 and 2. In the age group under 2 years type-1 poliovirus antibody was significantly more prevalent than type-3. In the older groups the differences between types are minimal. Over 50% of children above the age of 5 have antibody to all three serotypes.

Table 1. Prevalence of polio neutralizing antibody by agent among children in Bangkok, February 1967

Age Group	Number Tested	Number with Antibody (%)		
		Type-1	Type-2	Type-3
<1	24	6 (25%)	6 (25%)	1 (4%)
1-3	131	82 (62%)	56 (42%)	36 (27%)
3-5	141	113 (80%)	101 (71%)	95 (69%)
5-7	77	68 (88%)	62 (80%)	54 (70%)
7-9	23	21 (91%)	23 (100%)	19 (83%)
9-11	22	22 (100%)	22 (100%)	19 (86%)
11-13	22	11 (86%)	22 (100%)	19 (86%)
13-15	29	23 (80%)	28 (96%)	25 (86%)

Table 2. Accumulation of neutralizing antibodies to 3 types of poliovirus with age among children in Bangkok.

Age Group	Percent with Antidody to:			
	None	<u>1 Type</u>	<u>2 Types</u>	<u>3 Types</u>
<1	50	46	4	0
1-3	18	40	30	12
3-5	3	21	36	44
5-7	5	11	27	57
7-9	0	4	17	80
9-11	0	0	13	87
11-13	0	9	9	82
13-15	0	5	9	86