2. Title: Longitudinal Surveillance of Respiratory Viruses in Bangkok

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Period of Report: January 1968 – April 1969

OBJECTIVE

To determine by means of longitudinal studies, the occurrence and relative prevalence of respiratory viruses associated with respiratory disease in children.

DESCRIPTION

Children presenting to the out–patient department, Children's Hospital were first examined by a physician and if thought to represent cases of non–bacterial infections of the upper respiratory tract were selected for study. Only children under the age of 12 with symptoms of less than 48 hours were included. Nasopharyngeal (N/P) swabs and blood for acute sera were obtained. N/P swabs were inoculated into appropriate cell culture systems (primary monkey kidney, HEp–2 and WI–38) before freezing. Laboratory procedures were adequate to detect most respiratory viruses.

PROGRESS

With completion of a full year's surveillance, paired sera from all patients studied will be serologically tested against a battery of respiratory viruses. Isolotion data are shown in Table 1 for the 414 children studied during the 15 month period. A potential etiologic agent was identified in 31.7% of all cultures (isolation data of cytomegalovirus is discussed in a separate section). Confirmation of infection in those children from whom virus was isolated awaits serologic data, as well as serological evidence of the infectious agents involved in those children from whom an agent was not isolated.

As was expected, the predominant agent circulating in this population varied with time. During the early part of 1968 the clinically obvious epidemic of rubella was confirmed by virus isolation. During this time also Coxsackie B_2 virus was frequently isolated. Subsequently, waves of adenovirus, parainfluenza virus (on two occasions), rhinovirus and influenza A_2 were detected.

Respiratory syncytial virus was rarely recovered, despite the existence of clinical bronchiolitis during June, 1968 and again in December. This may reflect either the relatively small sample size, or insensitive laboratory methods for detecting this virus.

SUMMARY

A sample of 441 children with respiratory symptoms over a 15 month period has yielded respiratory viruses from 140 nasopharyngeal swabs. Parainfluenza viruses were most frequently detected, followed by influenza A_2 (during Aug–Nov 1968) adenoviruses, rhinovirusses and Coxsackie B–2 virus. Different agents predominated at different times of the year. Serological work on the patients studied has not been completed.

Table 1. Isolation of Viruses from Nasopharyngeal Swabs of Children with URI's

Month					Number Positive For:			
	No. Pt.	Cox B_2	Rubella	Rhino	Pflu*	Adeno	Influenza	Misc.
Jan '68	25	2	6		2			
Feb	43	7	2			2		
Mar	49	3			4	8		(2 Polio 3 1Echo)
Apr	22				2	2		1 (RS)
May	28	1			8			2 (1 Reo 1 Rubeola)
Jun	46			9	14	3		
Jul	41			2	5	3		
Aug	22				1		1	
Sep	31				1		8	
Oct	15						8	
Nov	21			2	3		3	
Dec	26			2	1			1 (Herpes)
Jan '69	31			2	7			2 (Echo)
Feb	21				1			
Mar	20				6			
TOTAL	441	13	8	17	55	18	20	9 Total isolates 140

*Parainfluenza viruses