

3-1-1955

Preliminary Report on the Epidemiology of Poliomyelitis in Thailand

Hilary Koprowski

Chaloem Puranananda

Somma Sringam

Follow this and additional works at: <https://digital.car.chula.ac.th/clmjjournal>



Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Koprowski, Hilary; Puranananda, Chaloem; and Sringam, Sommai (1955) "Preliminary Report on the Epidemiology of Poliomyelitis in Thailand," *Chulalongkorn Medical Journal*: Vol. 2: Iss. 1, Article 11. Available at: <https://digital.car.chula.ac.th/clmjjournal/vol2/iss1/11>

This Article is brought to you for free and open access by the Chulalongkorn Journal Online (CUJO) at Chula Digital Collections. It has been accepted for inclusion in Chulalongkorn Medical Journal by an authorized editor of Chula Digital Collections. For more information, please contact ChulaDC@car.chula.ac.th.

"Preliminary Report on the Epidemiology of Poliomyelitis in Thailand"

by

Hilary Koprowski M.D., **Chaloem Puranananda M.D., *Sommai Sringam M.D.*

Poliomyelitis was known in Thailand for over 20 years when cases were diagnosed symptomatically. The number of cases in those days were few and the occurrence has no significant because the cases were always mild and the patient always recovered. Some cases had paralysis which was temporary and complete recovery attained after a few months. The picture of poliomyelitis draw less attention from the medical practitioners as well as the few research workers. When the second world war was over, there were quite a large number of foreigners which include European, American as well as Asian, moving in and out of Thailand. The period of rehabilitation started in 1946, very slowly as regarded to public utilities. In 1950 and 1951, there were cases of poliomyelitis reported in Singapore which is one of the nearest port outside the country, connected to Bangkok by three routes; air, sea and rail. The foreign community specially European, and American who are "polio-wised" become worry of the situation. Meetings were called at the Royal Bangkok Sports Club amongst members of committee and medical officials both foreign and Thai to consider the best means and ways to prevent poliomyelitis. Attempts were made to stop new comers to use the facility of the club especially the swimming pool. It was pointed out by the Expert Committee on Poliomyelitis of the

World Health Organization that poliomyelitis can be acquired by association with infected person of such an intimate manner that direct transfer of virus to the alimentary tract of the susceptible is made possible. Under such circumstances, the important of virus in pharyngeal excretions is particularly evident. Similarly, contamination of hand and utensils by pharyngeal virus may be involved.

In September 1952, the first case of poliomyelitis in a European was reported and lost after four days of illness followed by another case of the European after a few days of interval. This case was rushed to Singapore for iron-lung and was saved. Many more cases occurred amongst Thai included all ages group, all classes with mortality rate of about 6%. The epidemic involved 388 cases and lasted from September to December. It was a sad episode for medical practitioner in Bangkok because of the handicap of laboratory and equipment to help them in diagnosis and treatment. Funds were raised from charitable people to buy special equipments like iron-lung, electrical instruments for massage and a clinic for physiotherapy. It is worthy to note that there are not so many cases of spinal-column involvement. Yet no attempts were made to start a laboratory for the diagnosis of poliomyelitis.

The epidemic of poliomyelitis in 1952 has drawn attention for a few epidemiologist

* Expert on Poliomyelitis of Lederle Lab. Pearl River.

** Director of Paster Institute (Thai Red Cross Society) Bangkok Thailand.

*** Physician in Paster Institute Bangkok Thailand.

who wanted to find out the causes. Theories are discussed started with the improvement of the sanitary condition of the country, the introduction of a new strain as well as the transmission of the old strain into a fertile soil (uninfected European or American) resulting in the increase of virulence of the strain.

The improvement of the sanitary condition in Bangkok after the war especially period between 1946-1952 was almost neglectible. The public utilities were not as good as the pre-war years and it cannot be compared with any European country or United States where poliomyelitis abound; therefore the Thai people still have a good chance of getting small repeated infection.

As for the second theory of strain being introduced, it is worth while doing a survey of the immunity in local inhabitant against the 3 types of polio-virus which was carried out as mention in this report. A group of Thai inhabitant of Cholburi, situated 100 kilometers east of Bangkok on the coast of the Gulf of Thailand, are selected included both sexes, age over 40. Their blood were drawn and serum separated and tested by neutralization method against 3 types of polio-virus, the result is tabulated as follows:—

According to the above table a group of 42 adults of both sexes age varies from 48-82 residing in Cholburi and Sriraja were asked to have their blood sampled for a determination of antibodies against

the 3 types of polio-virus. The result is that 23 out of 42 give positive antibodies against the 3 types; 11 give positive reaction on type 2 and 3 doubtful on type 1; 3 cases give positive on type 1 and 3 and doubtful on type 2; two individual give positive on type 1 and 2 and negative on type 3; one case gives positive on type 2 doubtful on type 1 and negative on type 3 one case gives positive on type 2 and 3 and negative on type 1; one case gives positive on type 3 and doubtful on type 1 and 2.

It is clear that the majority of inhabitants of this area possess the antibody against the 3 types of polio-virus in their blood which shows the existence of the 3 types of polio-virus in the country.

After the above result it can be concluded that the 3 types of polio-virus existed in Thailand all the time as report of such investigation in Cairo, by John R. Paul et al, but it cannot exclude the possibility of the new strain of the 3 types being introduced into the country, or the old strain of the types already existed in Thailand being introduced into new fertile soil. These lead to further experiments.

An investigation is carried out to give a certain information on the epidemic of poliomyelitis which occurred in Bangkok in 1952. The place has a history of mild cases of poliomyelitis reported each year for the last 20 years. A survey of blood samples from old age group indicates existence of the 3 types of polio-virus thus

eliminates the idea that there was a mild type of polio-virus and new type or types are introduced into the country but this does not exclude the possibility that new strain were introduced or an old local strain is introduced into a fertile soil thus increases the virulent and can be more harmful to the Thai people. This encourages further

investigation.

The authors wish to thank Dr. Luang Indhri Ayurved of Pasteur Institute, Dr. Sngar Viehbun director of Cholburi hospital, Dr. Sugree Suebsanguan of Somdeth hospital - Sriraja and Dr. Udom Chindavanich of Cholburi hospital, who are responsible to make sampling of blood possible.



References :

1. First report of Expert Committee on Poliomyelitis World Health Organization.
2. The report of the Department of Public Health, Ministry of Public Health, Bangkok, Thailand to the World Health Organization.
3. A survey of Neutralizing Antibody to Poliomyelitis-virus in Cairo - Egypt by John R. Paul, Joseph L. Melnick, Vo Hammie H. Barnett and Natan Goldblum.

Cancer in Chronic colitis

When the cancer has developed in the face of chronic ulcerative colitis, no matter whether it was discovered accidentally or in routine search for it *the prognosis had been bad.*

Dr. Daniel S. Ellis.

Incidence of Cancer in Chronic ulcerative colitis

Mayo Clinic - 5.4 percent (Bargen et al)

Cleveland Clinic - 3.8 percent (Brown et al)

Lahey Clinic - 2-44 percent (Johnson et al)

Massachusetts General Hospital 3 percent. (Dr. D. S. Ellis)

No.	Name	age	Birth Place	No. of year	Present Residence	No. of year	Antibodies Found Against --		
							Type 1	Type 2	Type 3
1.	Mr. Pechra Suengchaue	70	Cholburi	—	Cholburi	—	+	+	+
2.	Mr. Boon Markprathom	82	Cholburi	—	Cholburi	—	+	+	+
3.	Mrs. Chang Koha	62	Cholburi	—	Cholburi	—	+	+	+
4.	Mrs. Thanorm Kaigear	58	Cholburi	—	Cholburi	—	+	+	+
5.	Mrs. Boonmee Bunpote	62	Cholburi	—	Cholburi	—	+	+	+
6.	Mrs. Tiur Tun	62	Cholburi	—	Cholburi	—	+	+	+
7.	Mr. Sri Kongpavedh	64	Cholburi	—	Cholburi	—	+	+	+
8.	Mr. Prom Boonmee	59	Cholburi	—	Cholburi	—	+	+	+
9.	Mr. Eume Kongmeesook	61	Cholburi	—	Cholburi	—	+	+	+
10.	Mr. Kloiy Kongkasilpa	63	Cholburi	—	Cholburi	—	+	+	0
11.	Mrs. Vieng Tieng	53	Cholburi	—	Cholburi	—	+	+	+
12.	Mrs. Yukhiea Pueng	50	Cholburi	—	Cholburi	—	+	+	+
13.	Mr. Ting Tung	60	Cholburi	—	Cholburi	—	+	+	+
14.	Mrs. Dang Sungcharern	56	Cholburi	—	Cholburi	—	+	+	+
15.	Mrs. Lek Puncharearn	54	Cholburi	—	Cholburi	—	+	+	+
16.	Mr. Chong Meesai	55	Cholburi	—	Cholburi	—	+	+	+
17.	Mrs. Eng Lee	63	Cholburi	—	Cholburi	22	+	+	+
18.	Mrs. Ngeg Meesai	48	Cholburi	48	Cholburi	48	+	+	+
19.	Mrs. Ou Gumrat	78	Bangkok	68	Sriracha	68	+	+	+
20.	Nun. Cheu Palamoltut	60	Ayudhaya	10	Sriracha	10	+	+	+
21.	Nun. Tanggva Pravpraay	66	Bangkok	10	Sriracha	10	+	+	0
22.	Nun. Chery Knomratie	58	Petchaburi	—	Sriracha	58	+	+	+
23.	Mrs. Chunang Tung	66	China	40	Sriracha	40	+	+	+
24.	Mrs. Bouy Tunteam	55	Sriracha	55	Sriracha	55	+	+	+
25.	Mrs. Choy Muchakeur	62	Sriracha	62	Sriracha	62	+	+	+
26.	Nun. Engchai Tunsiri	64	Sriracha	64	Sriracha	64	+	+	+
27.	Nun. Lek Teo	72	Sriracha	72	Sriracha	72	+	+	+
28.	Mrs. Pratum Wutiporn	69	Sriracha	69	Sriracha	69	+	+	+
29.	Mrs. Kimtou Chaayagul	56	Sriracha	56	Sriracha	56	+	+	+
30.	Mrs. Paung Kumpipat	59	Sriracha	59	Sriracha	59	0	+	+
31.	Nun. Hoi Sikow	71	Sriracha	71	Sriracha	71	+	+	+
32.	Mrs. Oun Ratananon	65	Sriracha	65	Sriracha	65	+	+	0
33.	Mrs. Kimson Ruangararm	55	Sriracha	55	Sriracha	55	+	+	+
34.	Mrs. Sup Sangtong	67	Sriracha	67	Sriracha	67	+	+	+
35.	Mrs. Supap Weralit	59	Sriracha	59	Sriracha	59	+	+	+
36.	Mrs. Tongkum Timkrachang	59	Sriracha	59	Sriracha	59	+	+	+
37.	Mrs. Chai Kimchai	63	Chantaburi	29	Sriracha	34	+	+	+
38.	Mrs. Jui Pongsiri	64	Sriracha	64	Sriracha	64	+	+	+
39.	Mr. Nguan Timgrachang	63	Sriracha	63	Sriracha	63	+	+	+
40.	Mr. Chum Intravong	69	Sriracha	—	Sriracha	—	+	+	+
41.	Mrs. Yen Pimdee	62	Nakornmayok	19	—	19	+	+	+
42.	Mrs. Reed Gertglavla	73	Chacherngsao	10	—	10	+	+	+