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STATE OF SINGAPORE

REPORT OF THE MINISTRY OF HEALTH

for the year ended 31st December, 1957

BEING THE ANNUAL REPORT ON THE MEDICAL DEPARTMENT
BY THE DIRECTOR OF MEDICAL SERVICES
FOR THE YEAR
1957

*Presented to the Assembly by Command of His Excellency
the Yang di-Pertuan Negara
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CHAPTER THIRTEEN

INFLUENZA EPIDEMIC

304. At the beginning of May 1957 the Health Division received information that over 30 persons on Pulau Brani, an island just South of Singapore were affected with "an unknown fever"; those recovering were reported to be much debilitated. Clinical investigations suggested that these were cases of influenza. Throat washings were taken from some of these patients and isolation of the causative virus was done at the Department of Bacteriology of the University of Malaya. The onset of these cases occurred in a predominantly Muslim population at the end of the "fasting month"; many of these islanders worked on small craft and Government launches that travel to and fro to ocean going vessels coming into the harbour. About the same time there was a noticeable increase in cases attending Clinics and Dispensaries and by 5th May it definitely reached epidemic proportions.

305. From the epidemiological point of view the entire island of Singapore is one composite urban unit with denser aggregation of population North and South of the Singapore River. In consequence, an island wide spread was inevitable and cases of influenza were reported from all parts of the main and adjoining islands. The epidemic reached its peak about the middle of May and thereafter there was a gradual decline. By the last days of May the epidemic came to an end.

306. The attendances at Government hospitals and at clinics and dispensaries run by Government and the City Council are given in Table 54.

307. The disease is not notifiable and in consequence it is not possible even to make a guess at its real incidence. Clinics run by private medical practitioners—and there are some 300 of them—were extremely busy during the prevalence and there is little reason to doubt that a substantial proportion of the population was affected with the disease.

The virus has been isolated from cases occurring in different localities.

308. *Aetiology*—This virus is neutralised by a Type A antiserum, but facilities are not available locally to take the typing any further. Straits well adapted in the D. Phase were forwarded to the World Influenza Centre and to the Commonwealth Serum Laboratories. The main causative strain has since been identified as a new strain of Type A influenza virus and has been called the Influenza A Singapore 1/57. Other strains have also been isolated.

Clinical features

309. The cases of influenza commonly presented themselves with pyrexia, headache which was severe, aches and pains in the limbs and backs, nausea, and sometimes with cough, sore throat and giddiness.

310. The patients usually had flushed appearance and appeared quite sick.

311. The *onset* was sudden the first symptoms being constitutional symptoms. Premonitory symptoms such as coryza, sore throat and cough were rare at the onset.

312. *Pyrexia*—ranged from 99°–105°F with an average in most cases of 101–102°F. In some cases the temperature was normal in the first 24 hours. Subnormal temperature with circumscribed pallor or cyanosis was rarely seen in toxæmic children and infants.

313. *Cough*.—when present was short, sharp dry cough not productive; the sputum was occasionally flecked with blood.

314. *Throat*—marked hyperæmia of post pharyngeal wall with a pinkish hue and covered with a glistening layer of mucus.

315. *Tonsils*.—usually not involved. When involvement did occur inflammation and enlargement of tonsils was present.

316. *Heart*.—no characteristic signs. Bradycardia present.

317. *Lungs*.—no characteristic signs.

318. *Gastric*.—in cases with gastric complications, nausea, vomiting, abdominal discomfort anorexia and at times mild diarrhœa were seen.

Complications

319. Tracheitis and Bronchitis were the commonest. Gastritis and Conjunctivitis occurred in a fair proportion and sinusitis was rare. Pneumonia was a fatal complication, particularly in the infants.

320. In a study of cases in a closed group (the Police Force) out of 1,858 cases there were 127 cases of Tracheitis or Bronchitis, 13 cases of Conjunctivitis and 5 cases of Gastritis. The complications in this group represented 7.7 per cent of the cases seen.

Sequelæ

321. Common sequelæ after the attack of influenza were lassitude, debility and profuse perspiration. These passed off within a week after the attack of influenza had subsided.

Relapse: Recrudescence or Reinfection

322. A fair number of relapses did occur during the epidemic. Studies in the Police Force, out of a total of 1,858 cases seen, 256 cases (13 per cent) had relapses; 19 of them had two relapses. The interval between relapses varied from 1 day after resuming work to 28 days after resuming work, the majority of relapses occurring within a week of resuming work.

323. In assessing the relapses, it is worth bearing in mind that a fair percentage were probably discharged for duty before they had recovered. Nevertheless there were a number of cases that were relapses.

Clinical Course

324. Illnesses tended to last 2–4 days and in practically all cases patients recovered from the disease in one week.

Sex Incidence

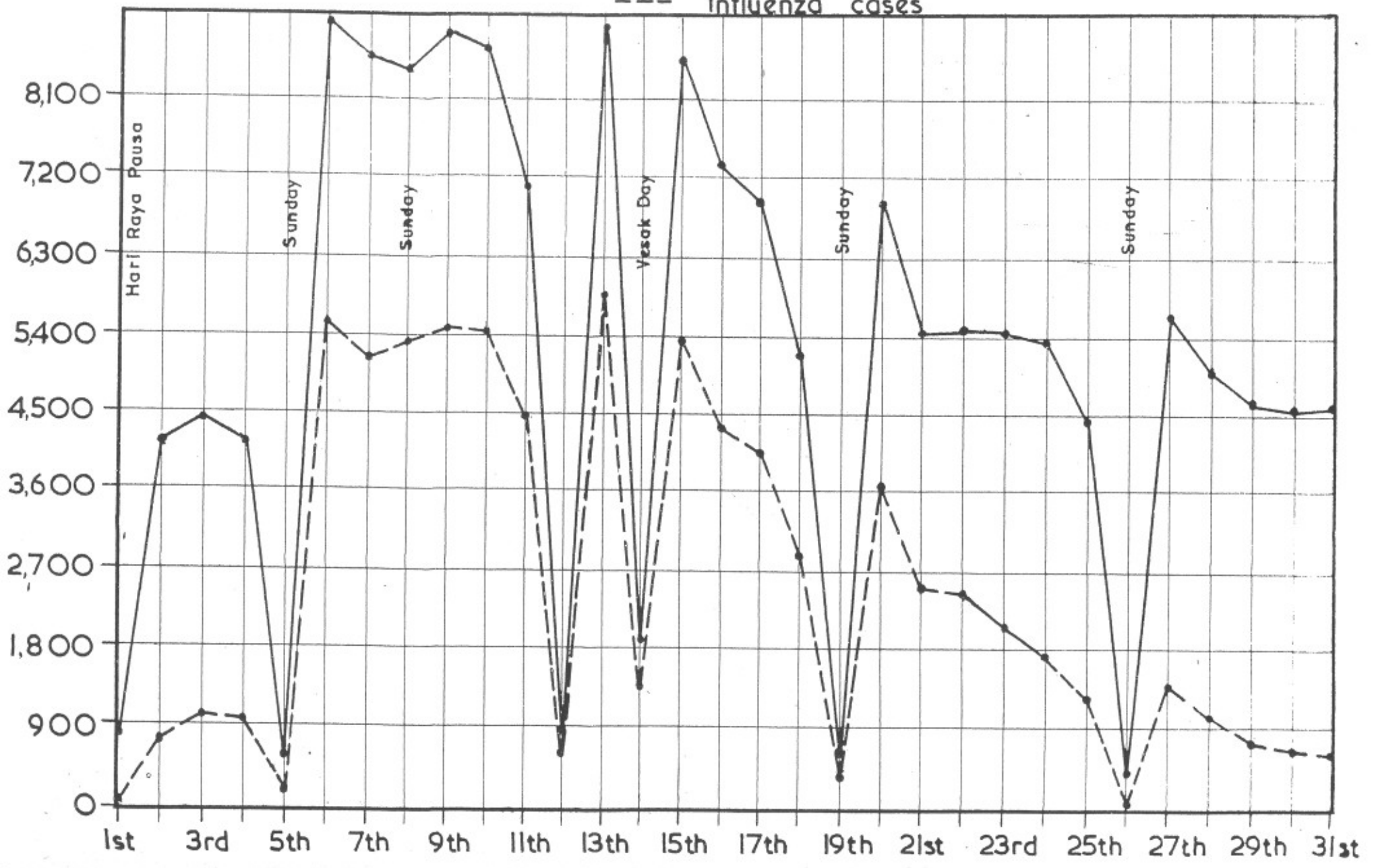
325. Both males and females were equally affected.

Age Incidence

326. There was no predilection for any age group. Infants and young children had a higher proportion of acute cases when first seen and in some cases with marked toxæmia.

SINGAPORE INFLUENZA EPIDEMIC (May 1957)

— Total Attendance
 - - - Influenza cases



Racial Incidence

327. The disease was markedly present in Asians, and Europeans appeared to be little affected. Whether this was an immunological or sociological phenomenon it is difficult to state. It is perhaps a combination of both because European children were certainly susceptible given adequate contact whereas in European adults a few cases occurring even in barrack room conditions are not followed by marked spread. Upper class Asians were not affected but this again may be combination of both factors, better living conditions but also they are frequently well travelled.

Deaths

328. Post-mortem examinations record the diagnoses of influenzal bronchopneumonia and/or hæmorrhagic pneumonia in 22 cases. A further 6 cases have been recorded as having died of influenza with myocarditis or heart failure. Only in one case has it been possible to recover the virus.

Preventive Measures

329. Influenza is not a notifiable disease in Singapore and as such no notification was done by practitioners during the epidemic.

330. No quarantine measures was taken against inward or outward passengers, ships or aircraft as it was not a disease that called for quarantine measures against International traffic. At the request of one International airline (Air India) the airport health officer checked outward passengers from Singapore. One shipping line (Eastern Shipping Corporation) had all passengers booked for a voyage to South India checked by their own doctors, passengers who were not passed by their doctors were disallowed embarkation. Passengers from Malayan ports were subject to quarantine in India and two ships were subject to quarantine examination in Australia.

331. Schools were closed on 8th May, 1957 and reopened when it was considered the epidemic was abating on 20th May, 1957.

332. Public were warned through the press, radio, rediffusion and at clinics and dispensaries to keep away from crowded places. During the height of the epidemic there was a fall in attendances at cinemas, etc. Unfortunately, as many were not ill enough to be confined to bed, they moved freely in the community and spread infection around.

Other Administrative Measures

333. To release more staff for treatment, elective surgery was reduced to a minimum.

334. School health and maternal and child health centres all over the island became centres for the treatment of influenza patients and took a fair proportion of the case-load that would normally have fallen on out-patient dispensaries.

335. Two additional travelling dispensaries were put on the road during the epidemic and the mobile dispensary service thus augmented ran a more frequent schedule to outlying areas.

336. Government assisted with drugs, equipment and facilities, the operation of voluntary clinics opened at three centres.

Comment

337. It is possible that the epidemic of influenza which appeared in a mild form in Japan in April 1956 and then again in November 1956 and April 1957 spread through a large part of South East Asia in less than two months.

338. It is possible that this epidemic followed the shipping routes and struck at the great ports of Hong Kong, Singapore, Manila, Djakarta and Saigon and then spread into the hinterland, Malaya, China, the Phillipines, Indonesia and Indo-China. There is no positive proof that this is so however and in the absence of serological evidence must remain a presumption.

TABLE 54
SINGAPORE INFLUENZA EPIDEMIC

May 1957			GOVERNMENT AND CITY COUNCIL CLINICS			Deaths Influenza and Complication of Influenza
			Attendances	Influenza Cases	Hospital Admissions	
1st	..	..	811	72	1	..
2nd	..	..	4,041	740	4	..
3rd	..	..	4,349	1,021	7	..
4th	..	..	4,049	954	5	..
5th	..	..	591	201	12	..
6th	..	..	8,940	5,528	11	..
7th	..	..	8,550	5,158	8	..
8th	..	..	8,435	5,337	19	..
9th	..	..	8,822	5,474	20	..
10th	..	..	8,668	5,423	12	3
11th	..	..	7,160	4,468	17	..
12th	..	..	817	640	16	1
13th	..	..	8,933	5,866	10	2
14th	..	..	1,856	1,355	15	2
15th	..	..	8,568	5,390	14	..
16th	..	..	7,322	4,384	17	..
17th	..	..	6,915	4,028	23	1
18th	..	..	5,134	2,896	15	..
19th	..	..	407	366	17	1
20th	..	..	6,861	3,656	20	6
21st	..	..	5,425	2,469	13	2
22nd	..	..	5,455	2,441	12	3
23rd	..	..	5,431	1,991	7	3
24th	..	..	5,369	1,707	5	1
25th	..	..	4,394	1,213	5	2
26th	..	..	394	24	4	..
27th	..	..	5,662	1,329	6	..
28th	..	..	4,958	1,008	3	..
29th	..	..	4,618	766	2	..
30th	..	..	4,564	693	2	..
31st	..	..	4,594	613	4	1
Total ..			162,093	777,211	326	28

