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Leprosy in Indonesia

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Summary The leprosy control programme in Indonesia is discussed. The epidemiological situation of leprosy is assessed from the statistics of the registered cases and through comparison of several leprosy surveys.

In a certain province leprosy showed a marked decline, while in other provinces the prevalences are still high.

We need to recognize the limitations of the present measures employed to control leprosy, and to accept that if we want to control the point of eradication, the only hope lies in immunization.

Introduction

Indonesia is a country of more than 3,000 islands stretching along the equator with 140 million inhabitants – 72,000,000 women and 68,000,000 men. The age distribution indicates a population with 2.4% of growth. It is not equally distributed, the most densely populated area is Java with a population density of 565 people per square kilometre, while in the outer islands the density is 1.8–35 per square kilometre.

Although poverty is widespread, expanding building programmes and rising standards of living bear witness to economic advances.

Major health problems

The major health problems in the present stage of economic development in Indonesia do not differ much from those of other developing countries.

Communicable disease is a major part of the total health problem, followed by the problem caused by malnutrition.

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Communicable disease control is the first priority programme within the framework of the general health programme in Indonesia. At present, the 5 major national programmes in communicable disease control are: malaria, improvement of rural sanitation, basic immunization, tuberculosis control and epidemic containment programme. At a lesser extent follow second priority programmes: the leprosy control programme, filariasis, soil transmitted helminths and rabies control.[1]

Leprosy control programme

It was the late Dr Sitanala who, since 1928, pioneered leprosy control by giving treatment to patients outside the leprosaria and colonies. In early 1935 a survey was carried out among the population in Bali and Lombok. It was found that the prevalence rate was 1‰. With the assistance of the WHO and UNICEF leprosy control has been started since 1950, but a systematic leprosy control started in 1956 in several areas in Java and Bali and gradually extended to the other provinces.[2]

There are now 39 leprosy hospitals in Indonesia. All of them are financed by the government, except a few leprosy hospitals/leprosy villages which obtained support from foreign foundations.[3]

The prevalence of leprosy in Indonesia is relatively high, and scattered throughout the many islands with unequal distribution of the cases in each location. A national leprosy control programme within the framework of the communicable disease control programme is being constrained by the limited resources and manpower. Therefore, for the sake of efficiency, the leprosy control programme in Indonesia has been integrated in the health centre system. At present there are more than 3,500 health centres throughout the country.[4]

The present national policy[1] of leprosy control consists of:

1. Case finding through the health centres available in the country.
2. Treatment by the health centres and hospitals on ambulatory basis.
3. Health education.
4. Training of leprosy workers and professional staff.

Epidemiology of leprosy

Data reported by the provincial health authorities to the Ministry of Health show that the highest prevalence of leprosy is in the eastern part of Indonesia with the highest prevalence in Irian Jaya (7.7 per 1,000 population). The total number of leprosy cases registered by the health services throughout Indonesia

Table 1. Leprosy situation in Indonesia (as of 30 June 1977)

No.	Province	Population (in thousands)	Number of cases to be treated				Regularity of Treatment (%)	Prevalence rate (‰)
			I	*T*	*L/B*	Total		
1	D.I. Aceh	2,499	468	1,361	1,290	3,119	72.42	1.24
2	North Sumatera	7,996	202	1,710	1,395	3,307	73.83	0.41
3	West Sumatera	3,249	261	536	526	1,323	62.33	0.40
4	Riau	1,999	53	139	243	435	58.62	0.21
5	Jambi	1,249	26	27	58	111	91.89	0.08
6	South Sumatera	3,998	95	926	491	1,512	61.11	0.37
7	Bengkulu	750	61	282	93	436	61.68	0.58
8	Lampung	3,249	2	63	33	98	89.79	0.03
9	D.K.I. Jakarta Raya	6,458	97	1,061	551	1,709	56.93	0.25
10	West Java	24,185	596	5,167	1,999	7,762	78.82	0.32
11	Central Java	24,992	54	4,663	1,067	5,784	47.06	0.23
12	D.I. Yogyakarta	2,419	39	125	71	235	43.40	0.09
13	East Java	29,022	2,234	14,137	8,234	24,605	68.64	0.84
14	Bali	2,431	33	446	578	1,057	87.79	0.44
15	West Nusa Tenggara	2,532	300	913	887	2,100	83.29	0.82
16	East Nusa Tenggara	2,734	2,707	7,110	2,526	12,343	67.13	4.51
17	West Kalimantan	2,383	169	622	470	1,261	71.46	0.52
18	Central Kalimantan	827	52	246	112	410	69.59	0.49
19	South Kalimantan	2,000	447	1,531	1,463	3,441	71.46	1.72
20	East Kalimantan	869	120	466	545	1,131	82.31	1.30
21	North Sulawesi	2,014	292	1,232	1,082	2,606	75.05	1.29
22	Central Sulawesi	1,108	247	646	537	1,430	44.61	1.29
23	South Sulawesi	6,142	379	9,553	6,728	16,660	52.44	2.53
24	South East Sulawesi	806	652	1,151	677	2,430	75.96	3.07
25	Maluku	1,317	209	2,870	2,203	5,282	79.52	4.01
26	Irian Jaya	1,087	11	6,358	1,811	8,180	17.20	7.52
	Total	138,325	9,809	63,341	35,670	108,817	64.13	0.78

Source: Louhenapessy.[5]

are 108,817. The *L* proportion is 33.16%. Male and female ratio among the cases is 2.3 : 1.0. The child proportion is 13.4%.[5] Only 64.13% of the cases are having regular treatment.[1] (See Table 1.)

Between 1975 and 1977, random surveys have been carried out by Dr B Zuiderhoek, WHO leprologist, in the eastern part of Indonesia, in the provinces of South Sulawesi, Maluku and Bali. The results throw a new light on the local leprosy situation.[6] (See Figure 1.)

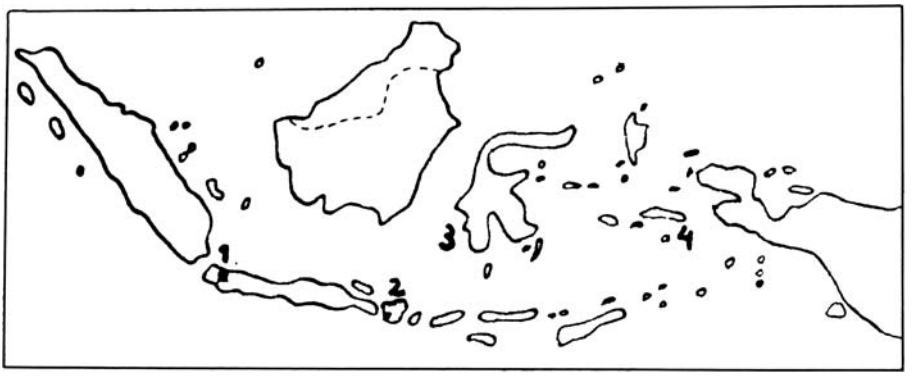

Figure 1. Indonesia (scale 1 : 30,000,000): (1) Jakarta, (2) Bali, (3) South Sulawesi, (4) Maluku.

In the province of Bali, 3 out of 8 regencies were surveyed among the 903,000 population (37% of the total population of the island of Bali). New cases have been found in the survey: 9 active *T*, 1 active *L* (adult patients). The prevalence is 0.8 per thousand while in 1957 it was 2.4 per thousand. It is concluded that after a successful campaign of 20 years, leprosy is not a problem any more in this island.[6]

In the Maluku province, 9 out of 20 sub-districts were surveyed among 12,960 population. Registered cases found in the survey were 19 *T*, 14 *L*. Newly detected cases: 1 *I*, 74 *T* and 6 *L*. The total is 1 *I*, 93 *T* and 20 *L*. Before the survey started the prevalence was 2.6 per thousand, and after the survey 9.1 per thousand.

The result showed that although leprosy is found spread over the whole area, it occurs in pockets.

In the South Sulawesi province, 10 regencies showed registered cases (6 *T*, 18 *L*) and newly detected cases (2 *I*, 232 *T* and 33 *L*). In the South Sulawesi province with 3.5 million population, the known prevalence was 1–2 per thousand.

Statistically analysed, the true prevalence appears to be at least 10 per thousand, most probably higher.

Treatment

Ninety per cent of the leprosy patients were treated with Dapsone. Thiambutosine is used when the patient is allergic to Dapsone. Clofamizine (Lamprene) is used only for leprosy reaction. Rifampicin is not used in the leprosy control programme, except in hospitals and private practice. Chloroquin tablet 100 mg, 3× a day for 3 days, is given for light leprosy reaction.

Data on resistance to Dapsone is not well-documented because of the lack of laboratory facilities.

In view of the therapeutic difficulties in leprosy, together with the limited number of drugs available and the practical problems of distributing them regularly and for long enough to a significant percentage of those with the disease, many will consider that the facts call for even further impetus towards the development of a vaccine.[7]

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