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The Secretary of the Expert Committee on Malaria
has the honour to communicate hereunder
the following note:

A. RETROSPECT OF THIRTY-FIVE YEARS OF MALARIA CONTROL
BY ANTI-PARASITE MEASURES

by

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(Item 2.1 of Provisional Agenda)

Although malaria control today by means of drugs is not recommended, we may give a retrospective example of its results in Taiwan where it was applied by the Japanese authorities from 1911 to 1945.

It was thought in 1911 that the method of malaria control by drugs which was apparently successfully carried out by Robert Koch (1900) in New Guinea, might have been applicable to Taiwan. The method is based upon defining of all the parasite carriers of the community and upon their treatment. Following an experimental pilot project carried out in Peitou, a community of about 1,600 population near Taipei, a project which resulted in a considerable decrease of fever cases and of the parasite rate within four months from its inception, the Government decided to apply this method on a large scale over eleven areas where malaria was highly endemic in the island.

Since then the application of the method was progressively extended so that in 1942 185 areas were included in this scheme with a total population of 614,011. Blood examinations were made of 281,267 subjects, generally once a month. This brought the total number of blood examinations in the same year to 3,891,585. The law prescribed that people living in controlled areas should have their blood examined and if the blood was positive they should take the relevant drug.

Besides these regular examinations, anybody living in the control areas was examined at any time at his own request in cases of fever, and was treated if the blood was positive. Treatment was, of course, free of charge.

Quinine was the main drug, sometimes replaced by totaquina. Occasionally plasmoquine was also administered to falciparum gametocyte carriers. The number of people treated in the latter years at the malaria stations went above 120,000.

Anti-mosquito measures were also recommended and implemented in various localities but there is no doubt that most of the attempts at malaria control were by means of drugs. The following data will make it possible to get an idea of the results of the campaign.

1. The morbidity was reduced as much as could be expected:

Table I

Year	No. of population in control areas	No. of acute cases consulted	o/oo
1933	307,511	21,551	70.08
1937	349,111	13,463	46.27
1940	507,702	12,799	25.10

2. Malaria deaths.

It was also expected that a number of deaths would be reduced thanks to the large use of drugs. As a matter of fact until 1911 malaria was ranking first among all causes of death and in 1935 it was relegated to eighth place. Obviously the influence of other health and medical activities upon the relevant fall in the death rate should not be forgotten.

Table II

Year	No. of malaria deaths	Index per 1,000 population
1902	13,444	4.48
1907	11,715	3.77
1912	6,909	1.94
1917	9,729	2.51
1922	8,916	2.33
1927	5,083	1.20
1932	3,335	0.62
1937	3,716	0.64
1942	5,882	0.94

3. Parasite rate.

The parasite rate given in the following table of a five years' period does not, on the other hand, seem to show a successful outcome of the campaign. The following table should be read keeping in mind that the population examined for the parasite rate in the different years did not always belong to the same areas.

Table III

Year	No. examined	Parasite index
1911	101,064	4.27
1917	690,369	3.02
1922	1,210,433	2.50
1927	1,927,826	1.89
1932	2,431,655	2.77
1937	2,811,822	3.04
1942	3,891,585	3.61

4. Spleen rate.

Unfortunately, only a few data are still available concerning the spleen rates, and although it is our general impression that this rate decreased substantially, as one could easily surmise by the intensive use of drugs, it is regretted that no statistically significant figures can be provided.

In conclusion, the "Taiwan method" by using quinine, as stated above, has decreased malaria mortality and morbidity but did not bring about malaria control.

