

Report on Anti-Leprosy Work in British Guiana during the Year ended December 31st, 1930.

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TREATMENT OF IN-PATIENTS AT THE MAHAICA LEPROSY HOSPITAL.

THE number of patients at the end of the year 1929 was 271, and on the 30th June, 1930, 278. Of this number, 141 had received treatment for a period of more than 3 months; those who had been under treatment for less than 3 months have been omitted from consideration.

New cases numbered 32; the rest have been under treatment for periods varying from 6 months to 4 years; 12 persons were discharged conditionally during the period under review.

During the second half of the year (June to December) 169 persons received treatment, but 7 have been omitted from consideration, having been treated for less than 3 months. New cases admitted numbered 16; the rest have been under treatment for periods varying from 3 months to $4\frac{1}{2}$ years. 21 persons were discharged conditionally.

Table I gives the results of treatment from 1928 to 1930.

	<i>Cases.</i>	<i>Improved.</i>	<i>Including Negs.</i>	<i>Including Stationary.</i>	<i>Worse.</i>
		Per cent.	Per cent.	Per cent.	Per cent.
Jan.—June, 1928 ..	222	64·0	14·9	27·0	9·0
July—Dec., 1928 ..	135	76·3	5·5	15·6	8·1
Jan.—June, 1929 ..	142	56·6	15·2	24·7	19·7
July—Dec., 1929 ..	152	50·7	23·1	33·5	15·8
Jan.—June, 1930 ..	141	56·7	15·0	36·9	6·4
July—Dec., 1930 ..	162	76·6	24·2	22·2	1·2

Treatment of Out-Patients.

In addition to lepers isolated in the Leper Hospital, there are now a number of negative cases who attend for out-patient treatment. These belong to two categories, *viz.*, positive cases who after treatment as in-patients have become negative and have been conditionally discharged, and cases which have never been positive and so have never been isolated in the Leper Hospital. It is now the practice after a patient has been consistently negative for at least six months, to discharge him conditionally and require his attendance monthly for further treatment and re-examination for a further period of at least four years.

Out-patients are negative cases both those conditionally discharged and those who, having never been bacteriologically positive, have never been admitted to the Leper Hospital. The numbers are as follows :—

<i>Discharged but still under Treatment.</i>		<i>Other Out-Patients.</i>
No.	..	37
		9

Drugs used.

(1) Chaulmoogra oil with 0·5 per cent. creosote (T. Curzii).

(2) Ethyl esters of chaulmoogra oil.

(3) Anti-leprol (a mixture of chaulmoogra esters).

(4) Esters of "Crab-oil" (prepared from *Carapa Guianensis*).

(5) "Alepol" (sodium hydnocarpate) in 3 per cent. solution.

The first four are given as a rule intramuscularly, the esters also by subcutaneous infiltration and intradermally.

Alepol by the intravenous route.

The esters are prepared by Dr. Muir's method.

The pure oil is always given warm, and it has been found useful to keep it in a cheap thermos flask, pouring out through a glass tube only a small quantity at a time.

The following tables show the comparative results of the administration of these drugs.

ESTERS OF CHAULMOOGRA OIL.

	<i>Patients.</i>	<i>Improved.</i>	<i>Including Negs.</i>	<i>Including Stationary.</i>	<i>Worse.</i>
		Per cent.	Per cent.	Per cent.	Per cent.
1927	95	51·6	41·8	46·3	2·1
1928 (1st Semester) ..	52	57·7	10·4	34·6	7·7
1928 (2nd ..) ..	21	80·9	16·7	4·8	14·3
1929 (1st ..) ..	15	66·7	11·1	13·3	20·0
1929 (2nd ..) ..	53	79·2	32·4	17·0	3·8
1930 (1st ..) ..	105	57·1	11·7	38·1	4·8
1930 (2nd ..) ..	118	76·3	25·0	22·9	0·8

PURE CHAULMOOGRA OIL.

	<i>Patients.</i>	<i>Improved.</i>	<i>Including Negs.</i>	<i>Including Stationary.</i>	<i>Worse.</i>
		Per cent.	Per cent.	Per cent.	Per cent.
1928 (1st Semester) ..	10	40·0	12·5	40·0	20·0
1928 (2nd ..) ..	12	75·0	33·3	16·7	8·0
1929 (1st ..) ..	14	92·9	63·6	0	7·1
1929 (2nd ..) ..	19	73·7	61·5	21·0	5·3
1930 (1st ..) ..	23	65·2	35·3	34·8	—
1930 (2nd ..) ..	34	76·5	30·0	20·6	2·9

"ALEPOL."

	<i>Patients.</i>	<i>Improved.</i>	<i>Including Negs.</i>	<i>Including Stationary.</i>	<i>Worse.</i>
		Per cent.	Per cent.	Per cent.	Per cent.
1928 (1st Semester) ..	142	70·5	19·0	21·1	8·4
1928 (2nd ..) ..	102	68·8	3·1	25·6	10·5
1929 (1st ..) ..	113	63·9	13·5	20·2	15·8
1929 (2nd ..) ..	26	34·6		57·7	7·7
1930 (1st ..) ..	10	30·0		30·0	40·0
1930 (2nd ..) ..	3	33·3		66·7	

Five patients were treated with anti-leprol, all of whom have improved ; though none has yet become negative.

Two patients were treated for six months with esters of crab-oil both of whom improved, but neither has yet become negative.

Alepol is used only until a dosage of 10 c.c. has been reached, after which the patients are given 10 c.c. of esters or oil increasing to 15 c.c. intramuscularly. Therefore, it must be borne in mind in interpreting the results that "Alepol" is never used for more than six months, generally three to four months, as a preliminary stage of treatment, and that anti-leprol has been under trial less than six months.

Sometimes reactions may be so severe with alepol as to necessitate a change even sooner.

In our hands, the pure chaulmoogra oil continues to give the best results.

Painful Swellings and Abscesses.

For two years all the drugs before injection have been exposed to ultra-violet radiations from a mercury-vapour lamp at a distance of 12 inches for 1 hour on the day of injection. The solution or oil is spread in Petri dishes in a very thin layer.

Originally, this was done owing to the differences in appearance of the samples of oil obtained, on the assumption that changes induced in the oil in the process of manufacture might account for the varying results of its administration.

After exposure the oil becomes lighter in colour and more translucent, rarely produces abscesses, and appears to produce quicker results. Similar changes result in the solution of alepol after exposure and no sclerosis of veins leading to venous obstruction is now noted even after six months' administration of a 3 per cent. solution.

Solganal and Keysolgan.

Corneal ulceration, choroiditis, irido-cyclitis and other eye conditions are a very distressing feature of the disease, and during the year, experiments were begun with these gold preparations as recommended among others by Hoffman.

The results of this treatment are very promising and it bids fair to revolutionise the whole outlook in leprosy with regard to eye-disease.

Local Treatment.

The method of local treatment remains the same.

After trial of different caustics, it appears that the only one which at all approached trichloroacetic acid in value was the oil expressed from the seed of the local Cashew tree. Mr. E. D. Martyn, of the Government Department of Agriculture, whom I consulted on the subject, gives me the following information as to the Cashew :—

"*Anacardium occidentale* L. is a native of South America and belongs to the family Anacardiaceæ. The stem yields a gum like arabic, the shell of the nut yields a caustic oil which is, however, destroyed by heat." Following on the demonstration of the usefulness of this oil seeds were procured and several plants are now growing in the compound in addition to the original old one.

Electrical Treatment.

Over twenty-six people received treatment here with great benefit. The use of the ultra-violet radiation has been described elsewhere.

Operative Treatment.

The usual operative procedures have been undertaken, such as excision of nodules, trimming of ears, plastic operations on the face, etc.

Discharges.

77.2 per cent. of the patients discharged in 1930 (35 in number) were able-bodied men and women who are earning their own living outside. With few exceptions, they attend monthly for treatment and examination.

The following table show the percentages of able-bodied persons discharged in each of the five years, 1926 to 1930.

<i>Year.</i>		<i>Percentage of able-bodied among those Discharged.</i>
		Per cent.
1926..	..	Nil.
1927..	..	23.5
1928..	..	21.2
1929..	..	34.0
1930..	..	77.2

This is a striking illustration of the fact that very many more persons are now being admitted in an early and, therefore, curable stage of the disease.

Relapses.

Two cases relapsed during this period, both nodular.

During the last five years, the patients discharged as recovered after treatment number 150, and of these 13 have died of diseases other than leprosy, while 11 have relapsed and have returned to the Asylum. All the rest, 126 in number, are being periodically examined and have kept in good health and free from any evidence of recurrence of the disease.