

Ngomahuru Leprosy Hospital.

ANNUAL REPORT FOR YEAR 1933.

B. MOISER.

	European Male.	Coloured Male.	Native Male.	Native Female.	Total.
Number of Patients on 1/1/34	1	1	259	138	399
Admitted	—	—	78	49	127
Returned for further treatment	—	—	5	2	7
Returned for economic reasons	—	—	—	—	—
Discharged	—	—	14	10	24
Died	—	—	22	8	30
Deserted (Gone to Mnene) ..	—	—	1	—	—
Number of Patients at 31/12/33	1	1	305	171	478

It should be mentioned here that the Medical Officer was away on leave for six months of the year, and no discharges were made in his absence.

EUROPEAN STAFF.

The Staff has remained as before, i.e., four Europeans, including Mr. Burn, who is still a patient, and who has become negative to the microscope.

NATIVE STAFF.

This consists of a clerk, a builder, two trained hospital orderlies, a laboratory boy (Wilfred), and a varying number of labourers, the total being 19. The leprous native staff number 11, including five compound heads, school master, two dressers, an interpreter, gate-keeper, and vegetable garden superintendent. The total staff, European and Native, is thus 34.

TREATMENT.

After a trial of various remedies during the past five years, ethyl esters of the oil of *Hydnocarpus wightiana*, both iodised and non-iodised, have been chosen as giving by far the best results, and are now being used exclusively. Of the two kinds of esters, iodised and non-iodised, the former is much preferred. It can be given in heroic doses without any ill effects, it keeps well, it causes little or no pain, little or no induration, and does not tend to abscess formation.

Iodised esters are given here in doses up to 10 c.c. intramuscularly, with or without a portion given intradermally twice a week without causing any ill effects whatever. Six-ounce bottles are opened as required and fluid taken direct into the syringe from the bottle and the bottle kept corked until finished, and it has been found to keep well for two weeks or more under these conditions. As far as can be seen, no change takes place after admission of air to the bottle, so that I cannot support the statement that a bottle of iodised esters, when once opened, cannot be used again. Our experience here is in direct contradiction of this belief, and is an important point. The preparation is not treated with ultra-violet light, or in any other way. It is simply kept in a cupboard, or on a shelf in the laboratory.

Our supply of iodised esters comes from two sources. (1) Burroughs Wellcome's "Moogrol." (2) Government Chemical Laboratory, Cape Town.

A preference is held for the former, but so far, we have not found a great deal of difference between them. Both are quite satisfactory and are producing results much in advance of other preparations.

In the case of non-iodised esters, the maximum dose has been about 5 c.c. twice weekly, but such doses cause a good deal of pain and induration, a few general reactions and abscesses. The conclusion has thus been drawn here that the iodised ester is the best remedy. It is expensive, but results show that it is worth the money. Dosage is not determined by weight of patient, but simply judged by condition of site of last injection. If indurated and painful the dose is lessened or withheld; if the patient has general febrile reaction (very rare) the dose is withheld. It is found that most patients become "saturated" at the end of about six or seven weeks, and no injections are given for a week or even a fortnight.

Trichloroacetic acid is applied to nodules, and raised edges of maculae, and is much desired by the patients themselves. I consider it to be of great value in cauterising nodules and infiltrations.

In addition to the above specific treatment, other diseases are sought out and remedied. Malaria is countered by mass quininisation during the rainy season, intestinal parasites (which are not common) being got rid of by appropriate treatment, and syphilis controlled where necessary, such cases being very few in number.

RESULTS OF TREATMENT.

It can be stated definitely that results with modern treatment (in this case iodised esters) are far better than I have ever seen in an experience of 25 years' active work. Even the apparently hopeless cases are given treatment, for it is impossible to state beforehand which cases are likely to improve and which are unlikely. Some of the very worst cases have shown remarkable improvement. It is true that here and there one comes across a case, generally not of the worst type, who exhibits no improvement whatever, no matter what drug is employed, or he even becomes worse. But it is very seldom that such cases desire cessation of injections. The drug, although it fails to control the disease, appears to give the patients a feeling of well-being. This applies specially to the worst nodular type.

I think it is a mistake to assume that any case is not likely to improve. Here, every new patient is given treatment, *i.e.*, increasing injections twice weekly, and changes of drug made if no improvement noted. The number of cases that remain stationary or become worse are very few, and we have less than half-a-dozen cases of active disease who are not receiving treatment. We have a few completely burnt-out cases who are settled here for purely economic reasons, and these receive no specific treatment. The earlier the stage of the disease the better the results. I believe that almost all early cases are easily curable. Experience here shows this conclusively. Sometimes the results are spectacular, all symptoms clearing up completely in six months.

But curability is by no means confined to early cases. Later stages require more prolonged treatment, but eventually many are apparently cured and are discharged on parole and followed up to a certain extent, which is much less than could be desired.

The number of cases discharged, who are not seen again, is far too great, and it is in this respect that we fail here rather lamentably.

I might mention here, too, a second failure, namely, the omission to examine contacts. The Medical Officer should tour his district in the dry season to examine all discharged cases and contacts of new admissions. Many early cases would surely be discovered by this means, and I'm afraid that a number of relapses would be brought to light.

BACTERIOLOGICAL.

The rule to examine smears from every patient four times a year still holds good, but owing to the absence of the Medical Officer for six months the patients have been examined only twice this year. This routine microscopic examination occupies a great deal of time each day, but I consider it to be of the greatest importance, and the best indication of the progress of the patient. The appearance, arrangement, size, degree of staining, etc., of the bacilli, under the microscope are, I believe, reliable indications of the state of the disease in the patient. Severe cases show masses of large closely-packed clumps, deeply stained, whilst, as the patient improves, the clumps become smaller, less compact, less deeply stained, and the bacilli become scattered and dotted. If bacilli are present in any numbers, it takes only a very short time to ascertain the fact, but 15 minutes examination is necessary before a case can be declared negative.

Smears are taken from the lobe of the ear (small portion snipped off with scissors, and raw surface lightly scraped with knife) ; from the nose (mucus membrane scraped until it bleeds), palate (scraped), nodules (incised), enlarged glands (syringe aspirations), and skin ulcers and raised edges of maculae (small incisions and scrapings).

GENERAL.

Regular occupation and exercise is insisted upon for everybody, the patients are kept busy out of doors four mornings in the week from 6.30 a.m. to 11 a.m. In the afternoon they have to fetch their own wood and water, cook their food, and till their small farms. They are also taken to bathe and wash their clothes once a week. They construct and repair roads, drains, keep the place clean, make and tend plantations, nurseries, vegetable gardens,

build houses, tend cattle, make clothing, etc. It is not practicable for them to grow cereal food for the hospital, neither would it be economical. Seasons are so uncertain, and mealie meal can be bought more cheaply than it can be grown at Ngomahuru.

SCHOOL.

This is now attended by boys only, from 2—4 p.m. on five days of the week. The number of pupils on the register is 16, and attendances are very regular, illness interfering but little.

TAILORING AND DRESSMAKING.

This year the method of obtaining clothing has been radically altered, and a great saving of expense effected. Formerly, clothing of all kinds was bought ready-made from local suppliers, but this year the material has been imported direct from England and the clothing made up here with our own labour. Three tailors using two treadle machines cut and make all jumpers and shorts for the men, and cut them to measure, whilst the Matron, with her class of about ten girls, make all blouses and skirts for the women. By this method we can now supply each patient with two suits a year for less money than one suit a year formerly. One suit per annum is insufficient. Instead of patients going about in absolute rags, they are now decently and warmly clothed. I should like to mention that the credit for this innovation is entirely due to Mr. Burn, who has had many years experience of this sort of thing in West Africa.

Vests and blankets are still bought as before. All sacks in which mealie meal is supplied are made use of as rain-coats and bedding and are most useful. Shoes are necessary and are cut out from old motor tyres.

HOUSING.

The number of separate villages is now six, the additional one being set apart for early closed cases, and for those nearing discharge. More than 70 new huts have been built during the year, made of Kimberley bricks and thatched, the work done entirely with our own labour.

BUILDINGS.

The only new brick and iron building erected is the mealie meal store, which has been connected to the distributing shed, and the two together now form a very

convenient arrangement. This was erected with our own labour.

Close by is the new butchery, made of Kimberley bricks and thatch, with cement floor. This should last a few years, but should later be replaced by a brick and iron structure.

WATER SUPPLY.

The pump has given a good deal of trouble on occasions, but there has been no lack of water in the bore hole.

CHILDREN AND CRÛCHE.

The number of healthy infants born here is 10, seven being illegitimate ; brought in by mothers, 13, the number sent home being 12, died 2, remaining 23, one leprous contracted outside.

There is no crêche in existence as yet, and the difficulty of separating infants from mothers remains as acute as before. It is an exceedingly difficult problem, but it is hoped to build a new crêche near the women's compound, and that this will prove effective.

The cost per head per day, including staff salaries, works out at 5.98d.

ANALYSIS OF 722 NATIVE CASES OF LEPROSY.

At Ngomahuru there are no out-patients, all patients living within the hospital fence in six villages, arranged according to type of case. The total number who have been treated here since the records began (about 1913) is 909.

The preparations that have been mainly used are alepol, plain esters of hydnocarpus oil, and iodised esters. The last named is now being used to the exclusion of the others.

The total number of patients who have been discharged as "arrested" cases is 271, of whom six have been re-admitted for further treatment. Of these 909 patients, 722 have been fairly completely recorded in the books, sufficient data being available for analysis.

The patients are classified in the following table according to the types recommended by the International Leprosy Association, N representing purely neural cases, NC representing mixed cases, whilst the purely cutaneous cases are indicated by C. In each case the numeral following indicates the degree of severity. This numeral would vary with different observers, and thus is not strictly comparable with the records of others, but differences would not be great.

MALE AND FEMALE.

Type of Case	Number	Discharged	Improved	Stationary	Worse	Died	No. become Negative
N1.	98	55	38	2	—	3	—
N2.	203	126	52	2	—	23	—
N3.	22	12	7	1	—	2	—
N1 C1.	106	8	87	3	2	6	49
N1 C2.	47	1	28	8	2	8	11
N1 C3.	4	—	2	1	—	1	—
N2 C1.	135	13	88	5	1	28	47
N2 C2.	54	—	22	22	—	10	5
N2 C3.	15	—	3	5	2	5	—
N3 C1.	14	—	6	5	—	3	8
N3 C2.	8	—	3	1	—	4	—
N3 C3.	2	—	—	1	—	1	—
C1.	5	1	4	—	—	—	2
C2.	4	—	1	—	—	3	—
C3.	5	—	1	1	1	2	1
Total	722	216	342	57	8	99	123
Percentages ..	%	30.0	47.3	7.9	1.1	13.7	30.8

Total Admitted to 31/12/33. 909

„ Discharged „ 271

From the table it will be seen that—

Neural cases total 323 ... 45%

Mixed cases total 395 ... 53%

Cutaneous cases total 14 ... 2%

Mixed cases predominate, whilst purely cutaneous cases are very rare.

The 98 N1 cases are all early cases. Of them 55 have been discharged as “arrested” (56%) whilst 38 showing improvement are still here and will probably all be discharged. Thus 95% of these cases have been or will be discharged. Only two remain stationary. The three deaths were not caused by leprosy. (I may interpolate here that the causes of deaths at this hospital are not always definitely

known. Autopsies are never performed for reasons of policy, and sudden deaths are not uncommon).

The N1 is the type of case that we should have here in much larger numbers. They are easily curable, and the simplest way to find them is to examine contacts at the homes of infectious cases. I believe this method of examination of contacts is much better than surveys, as a practicable way of getting early cases under treatment. Very early cases are difficult to diagnose, and require time and detailed examination, which cannot possibly be given during a survey. Surveys produce interesting information, and they show up advanced cases, but they do not produce the early cases. These are certain to be found at the kraals of infectious cases, so why not go straight for them and examine each individual carefully? We have had the experience of two surveys in this country, but I advise examination of contacts in preference to surveys.

N1 C1 are also early cases, but not so easily amenable to treatment as N1. We have had 106 N1 C1 cases, of whom only eight have been discharged, but 87 have improved, and most of these will be discharged in time.

So it can be said that over 90% of early cases will be "arrested," and called "cured" if we do not quibble about the word. How important it is to get hold of the early case!

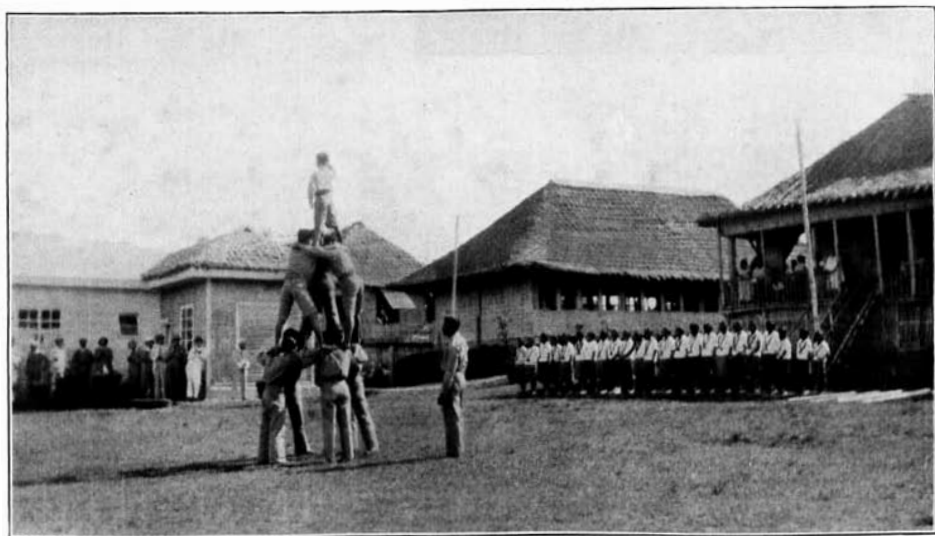
As noted above, the purely cutaneous case is very rare. We have only had 14 cases of all degrees of this type, and of these only one has been discharged, and six others have improved. These cases are treated intradermally, and generally improve. The four C1 "improved" cases will probably all be discharged later.

It will be noticed in the table that 203 is the highest number of any one type, the type being N2 in this case, and it must be explained that the great majority of these come under the heading of "secondary neural," *i.e.*, they have been "mixed" cases, and have lost all signs of cutaneous involvement. They have not been N1 cases that have become N2 through extension of the disease to other nerves.

Improvement has been shown by all types except N3 C3. These are really hopeless cases, and fortunately they are few. The table does not show that we do any good at all by giving these people treatment, but I do not consider it justifiable to withhold treatment, for it produces a feeling of well-being and comfort in the wretchedness of their lives,



EVERSLEY CHILD TREATMENT CENTRE, CEBU,
PHILIPPINE ISLAND



WESTERN VISAYAN TREATMENT CENTRE, ILOILO,
PHILIPPINE ISLANDS

NGOMOHURU LEPROSY HOSPITAL, S. RHODESIA



CASES WITHOUT MUTILATION, ABOUT TO BE DISCHARGED



CASE OF NODULAR LEPROSY WITH MASSIVE ENLARGEMENT
OF CERVICAL AND THYROID GLANDS

and is not a great expense when the smallness of the numbers is considered.

The rest of the table is self-explanatory, and it only remains to give an indication of age and sex.

0—10 years of age	...	2.6%
11—20 " "	...	11.9%
21—30 " "	...	34.1%
31—40 " "	...	26.8%
41—50 " "	...	15.5%
51—60 " "	...	6.2%
61—70 " "	...	2.9%

The peak is reached in the decade 20—30. This is too old. We ought to have many more between 10 and 20, for this is the most susceptible age. The figures are another indication of desirability of examination of contacts. To my mind, this is the "royal road" in any leprosy campaign and is quite practical with the help of Native Department.

With regard to sex, 469 were males, 253 were females, *i.e.*, in the proportion of 1.8 to 1. Number of cases positive that became negative, is 123, *i.e.*, 30.8% of positives.