

STATISTICAL DATA OF 709 KOREAN CASES OF LEPROSY

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In considering the following data on cases of leprosy dealt with in the Biederwolf Leper Colony, it is to be understood that the cases do not represent a cross section of the leper population of Korea. They are almost entirely people who came voluntarily to the institution seeking care and treatment, and not all of those who so applied could be taken in. However, it is believed that the data reveal points of interest.

GENERAL DATA

Sex.—Of the 709 patients here analyzed there are 417 males (59 per cent) and 292 females (41 per cent), a proportion of 1.4 to 1. This predominance of males is also seen in the family relationship, as 12 per cent report leprous brothers and only 6 per cent leprous sisters; there were also more sons than daughters, more fathers than mothers.

Contacts.—Nearly one-third of the patients (215, or 30.3 per cent) stated that they had lived with other lepers, and 41 others said that they had lived in homes formerly occupied by lepers. The ordinary Korean living room is so shaded from direct sunlight that it lends itself to the spread of the disease. The existence of the disease in relatives was admitted by many patients, as is shown by the following list which indicates the degrees of relationships. The last item includes cases of uncertain relationship as well as certain relationships other than those listed.

<i>Relative</i>	<i>Number</i>	<i>Percentage</i>
Father	47	6.6
Mother	37	5.2
Uncle	43	6.1
Aunt	0	0.0
Grandfather	6	0.8
Grandmother	8	1.1
Brothers	86	12.1

Relative	Number	Percentage
Sisters	35	4.9
Sons	7	1.0
Daughters	3	0.4
Nephews	9	1.3
Others	102	14.4

Age.—The ages of the patients when admitted, and the ages at which they claimed to have contracted the disease, are listed below:

Age group	Admitted	Contracted
1 to 10	0 per cent	11 per cent
11 to 20	18 per cent	52 per cent
21 to 30	33 per cent	25 per cent
31 to 40	28 per cent	7 per cent
41 to 50	14 per cent	3 per cent
51 to 60	5 per cent	1 per cent
61 to 70	2 per cent	1 per cent
71 to 80	1 per cent	0 per cent
81 to 90	1 per cent	0 per cent

The predominance of the 11 to 20 period as that of onset of the disease is striking.

Property or possessions.—Most of them (649, or 91 per cent) owned their homes; 51 rented and 8 owned no home. However, this does not mean that most of the people were well-to-do, for usually the poorest Korean has a shack of some nature which he claims as his home, even though it be only a mud hut upon another's land. As for land ownership, 181 (25 per cent) owned land, and 122 (17 per cent) both owned and rented land, these totalling 42 per cent. Of the remainder, 344 (49 per cent of all) rented land. These data again point to these patients being from the poor classes.

Food.—From statements made it appears that 283 (40 per cent) of the patients were accustomed to good food, 237 (33 per cent) to food of fair quality, and 178 (25 per cent) to rather poor food. There is usually a deficiency of protein in the common Korean diet. We have always felt that poor diet, poor sanitation, and some other unknown quantity or condition combined to make the infection possible.

DATA ON THE DISEASE

Type and activity.—The type-classification of these cases was as follows: 316 (45 per cent) neural, 318 (45 per cent) cutaneous, and

75 (11 per cent) mixed. In 66 (9 per cent) the condition was still active, in 66 (9 per cent) quiescent, and in 568 (80 per cent) arrested.

Anesthesia.—All of the patients showed anesthesia at times—loss of sensation to heat, cold or pain. If there is no anesthesia we would hesitate to diagnose a case as leprosy.

Eyebrows.—Falling of the eyebrows, which is the second most common symptom, was reported by 600 patients (84 per cent). Recently we have seen three cases with falling of the eyebrows, sent to us with the diagnosis of leprosy, that proved to be luetic, which further inclines us to require anesthesia before making a diagnosis.

Baldness.—This is much more common and extensive in Japan than here. Of our patients 79 (11 per cent) report some baldness, and 96 others (13 per cent) report falling of the hair. Much of this is of leutic origin. In glancing over an assembly of our patients we could count only ten with marked baldness.

Vision.—This is good in 428 cases (60 per cent), only fair in 172 (24 per cent), and poor in 56 cases (8 per cent); 32 cases (4 per cent) are blind in both eyes and 21 (3 per cent) in one eye. Facial paralysis with drooping of the lids allows exposure of the eyes which results in various complications that are very difficult to correct. There is a certain number with direct inflammation of the optic nerve. Adhesion of the pupil is a common and trying condition.

Hoarseness.—This was present in 86 cases (12 per cent). Here again it is quite impossible to state how much of this is due to lues and how much to leprosy. Tracheotomy for stenosis of the larynx is quite a common operation here, but it is about as common in the general hospital in syphilitic cases.

Orchitis.—Of the 417 men 58 (14 per cent) had orchitis, and quite a number of these show enlargement of the breast and pubes and other feminine characteristics. A few have feminine voices.

Ulcers.—These were present in 184 cases (26 per cent). Most of them were trophic.

Scabies.—A history of scabies before leprosy was given by 278 (39 per cent) of the patients, but it is held probable that at least 75 per cent of them had had it; they do not like to report such things. This condition is a likely source of entry for the infection.

RESULTS OF TREATMENT

Treatment has been by intramuscular injections of chaulmoogra oil. The average number of injections given per patient in 1933 was 64.

From time to time 290 patients (41 per cent) have complained of symptoms that indicate direct transportation of the drug to the lungs. The needle strikes a small vein and at once it is felt in the lung; a trying, irritating cough begins and usually lasts a good part of the day. We have had no deaths from this.

Results.—With regard to change of condition from the time of admission, 513 (72 per cent) of the patients state that they are "much improved", 105 (14 per cent) admit only slight improvement, 30 (4 per cent) are about the same, and 17 (2 per cent) are worse. Our data with regard to the actual condition shows that 312 (44 per cent) are arrested without deformities and 295 (42 per cent) are arrested with deformities, making a total of 607 cases (86 per cent) in the arrested stage. The chief deformities are contractures of the fingers and toes, and facial paralysis. Decrease in the anesthesia is claimed by 288 patients (32 per cent), but in most cases the destruction of the fine nerve-endings is permanent. When the cases have not been put under early treatment and the anesthetic spot has been established for some time, the skin cannot be restored to normal.

Lepra reaction.—This was noted during the year in 240 cases (34 per cent), and 48 (7 per cent) had it before arriving at the hospital. This annoying condition is seen most often in new cases after treatment has been started. It makes them very sick, quite like a severe erysipelas.

Neuritis.—The most annoying and painful complication is neuritis, seen in 370 cases (39 per cent).

Pellagroid.—A pellagra-like condition has been experienced by 121 of our cases (17 per cent), most of them after coming to the hospital. It appears as an erythema, or like an iodine burn, upon the arm, neck and the exposed parts. Pork meat or fat seems to relieve it more quickly than anything else.

Relapse.—This has occurred in 31 cases (4.4 per cent) which had been arrested. We have no statistics on relapses in discharged cases.

CONCLUSIONS

Leprosy appears most commonly among the poorer classes with poor sanitary conditions. They usually have lived in close contact with their leper relatives or friends, the quality of their food is **poor**, and thus with a lowered resistance and probably some unknown element (*x*-factor) the spread of the disease is furthered. Neural and cutaneous types are about equal, the condition being arrested in 80 per cent. Anesthesia is present in all, and falling eyebrows is the next most common symptom. Neuritis, rheumatism and lepra reaction are the commonest complications. In treatment, 40 per cent complained of oil in the lungs during injections. Results of treatment are **encouraging**.
