

## PRELIMINARY REPORT ON TREATMENT OF ULCERS IN LEPROSY PATIENTS AT NDJAZEN LEPROSY COLONY, FRENCH CAMEROUN

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In the leprosy colony at Ndjazen, French Cameroun, financed by the American Léprosy Missions, Inc., and staffed by the American Presbyterian Mission, a recent survey of the entire colony showed that there were 1,140 patients being treated, of whom 86 were lepromatous and the balance non-lepromatous. Of the 86 lepromatous patients, it was found that 25 patients, or 29 per cent of that group were suffering from ulcers of hands, legs or feet. From the non-lepromatous group of 1,054 patients, 493 were found to be suffering from ulcers, an incidence of 47 per cent. The incidence of ulcers in the whole colony was 45.4 per cent. In view of this very high incidence of ulcers and the very considerable degree of incapacity resulting therefrom, and in view of the already straightened economic circumstances of most of the patients who must be self-supporting all through their years of treatment, it seemed imperative that a renewed effort be made to bring the problem under control. Accordingly, a revised schedule of treatment was begun on July 1st, 1954, and at the end of six months the results were tabulated in Tables I, II, III. The brevity of the period of treatment prevents this from being more than a preliminary report, or a base line from which to start the search for better methods of treatment.

The logical beginning of such treatment is obviously prevention. A study of the habits of the African patients living in mud and thatch houses and working daily in forests and gardens or in the colony's lumber mill and carpenter shop, revealed that the most frequent causes of foot and leg ulcers were as follows:

1. Burns caused by putting anesthetic parts too near the fire in the middle of the floor, or resting them directly on stones that have been too near the fire. Such practices are especially frequent on cold, wet nights and among the elderly patients who feel the need of a fire's warmth more than their younger counterparts.

2. Lacerations, contusions and abrasions caused by striking the feet or legs on stumps of small trees, stones, sharp stubble, or branches near the ground while working in the forest or gardens.

3. Walking barefoot on gravel roads where small stones cause bruising with every step.

4. Crude shoes with rough thongs and other rough parts that rub off the insensitive skin without giving warning.

Ulcers and infected wounds in hands which have become insensitive from leprosy are usually found to begin from one or more of the following causes:

1. Handling of food, vessels and other objects as cigarettes, which are too hot.
2. Careless use of tools such as the cutlass in cutting the ever present brush and grass, resulting in blisters, bruises, scratches and abrasions.
3. Use of a bare finger to guide the reeds in basket making, until the finger has lost its skin.

Once the causes have been found, it would seem, after reading the list, a simple enough matter to prevent the great majority of them, and an effort along this line was instituted. The whole colony was called together and given a series of talks on prevention of burns on hands and feet, the protection of feet with proper shoes free from rough straps, protruding nails, etc., the covering of fingers used for directing of reeds in basket making, the use of forest paths whenever possible rather than the gravel covered roads; and intensified efforts were made to have all early wounds treated before they became chronic. Simple as these remedies sounded, their enforcement was found exceedingly difficult, since any one of them meant the changing of life-long habits.

Before beginning the treatment, the patients were divided into three groups according to the type of lesions they presented. Group I was made up of patients with relatively clean and superficial ulcers, although many of them were three or more inches in diameter. Group II was made up of patients whose ulcers were grossly infected and foul. Group III was patients whose ulcers were of many years duration, deep and highly resistant to previous treatment. Group I patients were dressed at four-day intervals, their wounds being first exposed to the direct sunlight for fifteen minutes whenever possible, and then painted or sprayed with a  $\frac{1}{2}\%$  solution of Aldrich triple dye (1.5 parts crystal violet, 1 part brilliant green and 0.75 part acriflavine neutral). Group II, those with foul ulcers, were given daily dressings medicated with a saturated solution of magnesium sulfate in glycerine previously autoclaved. Three to five days of this treatment were usually sufficient to bring the patients into Group I.

Group III patients, with their deep ulcers of many years' duration, were first subjected to a light surgical curetting, the wounds were packed with vaseline gauze and a plaster of Paris cast applied. The wounds were left undisturbed for six weeks, during which no weight bearing was permitted. If the patient had only one such cast, he was permitted to walk with crutches on his sound leg. If he had ulcers on both legs, he was required to spend the six weeks in bed. At the end of six weeks, when the cast was

opened, many of the wounds were completely healed. Many others were graduated to Group I. The few that were still deep were again encased in plaster of Paris for another six weeks.

All of the patients eventually found their way into Group I and so were subjected to triple dye treatment. It was the authors' impression that this dye, used under the conditions described, was definitely more effective in promoting healing than medications previously tried.

TABLE I

Total number of patients in leprosarium	...	...	...	1,140
Lepromatous cases	...	...	...	86
Non-lepromatous cases	...	...	...	1,054

TABLE II

Incidence of ulcers:				
Lepromatous patients with ulcers	...	...	25	or 29%
Non-lepromatous patients with ulcers	...	...	493	or 47%
Total			518	
Incidence of healing of ulcers in 6 months or less:				
Lepromatous patients healed	...	...	13	or 52%
Non-lepromatous patients healed	...	...	285	or 58%
Total healed			298	

TABLE III

Methods of treatment used:				
Triple dye	...	...	...	235 patients
Salts and glycerine	...	...	...	14
Combined salts and glycerine and triple dye	...	...	...	49
Plaster of Paris cases	...	...	...	3
Curettage	...	...	...	28
Amputation of digit	...	...	...	1
Adjuvant methods:				
Bed rest for from 2—6 weeks	...	...	...	102 patients
Crutches for 6 weeks	...	...	...	8