

## LEPROSY IN THE OUTPATIENT DEPARTMENT AND CLINICS SUPERVISED BY THE SWABUE MISSION HOSPITAL

N. D. FRASER, M. B. CH. B., D. T. M. & H.

*Medical Secretary for China, The Mission to Lepers  
Swabue, South China*

### INTRODUCTION

The idea that patients suffering from the noncontagious forms of leprosy have every right to expect treatment in the outpatient departments of general and mission hospitals has not as yet been generally accepted by physicians throughout China. Yet these forms of the disease are less contagious than syphilis, trachoma or scabies, for which outpatient treatment is provided; and adequate treatment given at an early stage can prevent deformities and contractures, and can bring about the disappearance of maculoanesthetic and tuberculoid lesions.

The introduction of the sulfones, however, has led to increasing interest in the problems of the treatment of persons suffering from leprosy. I have received numerous letters asking if it is possible to secure grants of diasone from the supply allocated to China by the American Mission to Lepers, and stating that "in this hospital we have lepers coming for treatment in rather small numbers," and "we have a few lepers coming regularly to our O. P. D. here," and "we see a few leper patients;" or "we see new cases every day," and "some tens of lepers each year."

Such information tells only that in each center there is a situation which needs fuller investigation; and it has apparently not been appreciated that such an investigation might well begin in the outpatient department. Something is known of the distribution of leprosy throughout China, and it is commonly said that there are a million people suffering from the disease; but there is little exact knowledge, and the number receiving treatment in colonies and clinics is well under 10,000. A register filled in at the first visit, to insure that records are secured whether the patients come regularly for treatment or not, serves to provide invaluable information.

### THE OUTPATIENT REGISTER

For this register a dozen columns ruled down the pages of an exercise book are sufficient, particularly if two or three lines

are allowed for each entry. The following headings have been found useful:

1. Date of first visit.
2. Serial number in register.
3. Outpatient registration number.
4. Name. Since the outpatient registration number gives any necessary cross reference, the name can be omitted if it is feared that the register might fall into the hands of anyone unscrupulous enough to use it to blackmail the patients. Our records have never, to my knowledge, been used for this purpose but I have known of patients being blackmailed and threatened.
5. Age; sex; married or single.
6. Number and ages of children; other people living in the same house.
7. Address. This item should at least record the name of the village from which the patient comes; and if he has moved into a town from the country, or has lived abroad, a brief note of the length of residence in each place should be made.
8. Occupation.
9. Contact with other cases of leprosy. More often than not it is impossible to elicit any history of contact, as patients refuse to associate events of many years ago with the appearance of symptoms in comparatively recent times. But in every case there must have been contact, direct or indirect, with a precedent one, so it is always worth while trying to find out the fact of such contact, and its time, duration and nature.
10. Age when symptoms were first noticed, and their nature; the development of subsequent symptoms. Little of this information can be recorded in 3 or 4 lines of a narrow column, but some indication can be given and that record can be supplemented later on the history sheets used in the clinic.
11. Laboratory examinations. Whenever possible the clinical diagnosis should be confirmed by examinations of skin smears (scraped-incision technique), even in frank nodular lepromatous cases since mistakes in diagnosis can be made. Suspected diffuse infiltrated lesions should also be examined; and smears from apparently normal parts will not infrequently be found positive. A provisional classification can be based on the results of the combined clinical and smear examinations. Further, the patients should be instructed to bring, at later visits, specimens for examinations for hookworm and roundworm infections, which can easily interfere with the success of any treatment given.

12. Classification. At a first visit it may be possible to come only to a provisional classification, which can be reviewed at later visits and confirmed or modified if the progress of the case, the results of the lepromin test, or the report on a biopsy specimen requires it. With experience, however, it should become possible to recognize the "polar" types—the frankly lepromatous, and the typically tuberculoid—and the cases with simple neural lesions.

A register kept on some such lines will, in the course of a few months or years, provide information of the utmost value. Physicians will be able to report not "some tens of lepers" but so many men, so many women, and so many children suffering from the lepromatous, tuberculoid, simple neural or intermediate forms of the disease, and they will be able to indicate from which villages or districts the greatest numbers of patients come. The keeping of a register is only a step, but it is a first step in a much more comprehensive program which ultimately should aim to provide, (a) both hospital and village clinics for the treatment of cases of the noncontagious forms of the disease, and, (b) means for the segregation and treatment of cases of the contagious forms.

#### CLINICS SUPERVISED BY THE SWABUE MISSION HOSPITAL

Before detailing the steps taken to establish clinics for the treatment of leprosy in the Swabue district of Eastern Kwangtung, a brief note of the present state of the mission hospital and medical work is indicated.

In 1936 the English Presbyterian Mission planned to rebuild, re-equip and reorganize the Swabue Mission Hospital and to introduce for the first time an up-to-date nursing service. In 1937 the Japanese blockade of the China ports cut off communications, and such progress as had been made in the planning of this development came to an end. During the war the buildings of the old hospital, which had at times accommodated 120 patients and had supplied an efficient medical and surgical service, were looted of all equipment and even stripped of doors, windows, floors and roofs.

In 1947 an outpatient clinic was begun in one of the mission houses, and later two quonset huts were secured from UNRRA-CNRRA in which inpatient accommodation was provided for 20 patients. The only available staff were doctors who had been trained in the Swabue Mission Hospital and whose certificates had been recognized by the Ministry of Health in Nanking, and

"technicians" who received training in one or another of our mission hospitals. In the course of the first 12 months more than 25,000 outpatient visits were recorded and a number of common ailments and infections were adequately treated—syphilis, hookworm, roundworms, scabies, conjunctivitis, diarrhea, ulcers, abscesses and gunshot wounds. Most of the drugs used were supplied by relief organizations through the International Relief Committee of China, and grants of equipment enabled us to set up a laboratory and an operating theatre. Much of the free treatment given has been possible only because of these gifts.

#### THE SWABUE HOSPITAL LEPROSY CLINIC

From the reopening of the general outpatient clinic in July 1947, a register of patients suffering from leprosy was maintained along the lines indicated above. Among the first patients listed were two who had been treated in 1936.

One had been suffering from a nerve abscess—of which I have seen only two cases in China—and had been operated on and the sheath incised; his present condition was entirely satisfactory, the condition in the nerve having resolved and the hand having undoubtedly been saved from a progressively crippling deformity. The other patient, a young girl, showed a trophic ulcer of the foot which rapidly responded to local treatment combined with injections, and further observation has shown complete arrest of her disease.

Patients came from near and far, some returning regularly for treatment and others—more easily discouraged, or unable to make the long journey from their homes—attending only at long intervals. From that work there has developed an extension in the form of clinics in two neighboring towns, Tshan-ki and Chiap-cheng, to be related shortly.

In the two years since the general outpatient department of the Swabue Hospital was opened, the numbers of patients attending the leprosy clinic have been growing. Apart from those transferred to the other clinics, 93 cases have been registered. No classification of them is of any great value, as many patients come from over a wide area simply for confirmation of diagnosis and do not return. On the other hand one group comes from a village more than 16 miles away, leaving there before dawn, walking to Swabue, and returning home after their injections have been given.

Until recently all but two of the 40 patients who have been attending regularly have been on chaulmoogra oil treatment. However, two patients suffering from lepromatous leprosy have

been on sulphetrone<sup>1</sup> on an experimental basis. Further supplies having been obtained, it is now planned to put a number of patients whose attendance has been regular on sulfone treatment. Here at the Swabue clinic it is possible for examinations of blood and smears to be made for each patient as required.

No. 37, male, aged 29. Nodular leprosy with nasal obstruction. Began sulphetrone treatment on December 8, 1948, and has maintained a dose of 6 tablets (3 gm.) daily since January 19, 1949. The nasal obstruction and nodular condition has improved clinically to a very marked degree after 6 months treatment, but there has as yet been no change in the bacillus index determined by Cochrane's multi-smear method (1).

No. 28, female, aged 24. Lepromatous leprosy of a mild generalized infiltrative form. Treated for 14 months with chaulmoogra oil injections, the clinical condition has improved but smears taken from all parts of the body remained positive. Sulphetrone, one tablet (0.5 gm.) daily, was begun on December 1, 1948, the dose being increased each week by one tablet daily until on January 5, 1949, she was taking two half-gram tablets three times a day (3 gm. per day). After 6 months of the treatment there has been very marked improvement in the clinical condition, and a reduction of the bacillus index from 4.01 to 3.46. The only disturbance has been some anorexia and a slight drop in the erythrocyte count.

#### THE TSHAN-KI LEPROSY CLINIC

By the time 50 leprosy cases had been registered in the Swabue outpatient clinic, it became apparent that the biggest group was coming from the town of Tshan-ki, a place 12 miles away reached by a road running around the head of the Swabue Bay. Inquiries made of the doctors practicing in that town revealed that leprosy was known to be common in those parts. A suggestion that the staff of the Swabue Mission Hospital would be willing to supervise a clinic organized in cooperation with the Tshan-ki Church and the Village Elders was enthusiastically taken up and acted on. A local Christian Leprosy Relief Committee was formed, buildings were secured, repaired and furnished, and the Swabue Hospital arranged to send each week a doctor and other helpers as necessary.

Thirty patients attended the first clinic, including those who had been making the trip to the Swabue clinic. Forty turned up at the second session, and the numbers increased rapidly until over 100 were recorded. With the limited staff and the journey to be made before and after the clinic sessions (the distance only 12 miles, but the time involved 2 hours each way) it has not been possible as yet to catch up with all of the confirmatory examinations, but the crude data of the first 100 patients are:

<sup>1</sup> Supplied by Burroughs Wellcome & Co. for research purposes.



*Sex.*—Males, 63; females, 37; ratio, 1.7:1.0

*Age.*—Under 14 years, 8; 15-19 years, 21; 20-29 years, 32; 30-39 years, 20; 40-49 years, 13; 50-58 years, 8.

*Duration.*—The known duration, as stated for record, varies from very recent to more than 40 years. In 80 per cent of the cases the first symptoms were noticed before the age of 20 years.

*Classification.*—The clinical classification is shown in Table 1. It is exceedingly probable that some of those classified as tuberculoid should have been called "indeterminate," and it is planned in time to confirm or modify these groupings when smear examinations and other tests can be made.

TABLE 1.—*Clinical classification of 100 cases registered at the Tshan-ki clinic.*

Age group	Sex	Type or form		
		Lepromatous	Tuberculoid	Simple neural
14 years or less.....	Male	0	2	1
	Female	1	4	0
Over 14 years.....	Male	27	16	17
	Female	5	24	3
TOTAL.....		33	46	21

It will be realized that this group of patients is a select one, namely, those who have themselves chosen to come for treatment, and it cannot be considered truly representative of the incidence of the different types. A survey of the village—which contains some 6,000 inhabitants within its boundaries, with another 6,000 in the surrounding hamlets—has been begun by the examination of school children. Visits have also been made to the homes of those patients living in the town to see to what extent house segregation is possible. This work can, however, be effectively carried through only when a larger trained staff is available.

Treatment has been confined to the use of chaulmoogra oil by the intradermal, subcutaneous and intramuscular routes, along with the supplying of dressings and ointments for ulcers and other skin eruptions. For intradermal use Shama Rao's method (2) of adding iodine dissolved in ether to the sterilized oil has been found satisfactory, giving better results than the pure oil alone. In a few patients the dose has reached 10 cc. subcutaneously plus 10 cc. intramuscularly without causing any reaction. The fact that there is a fairly regular weekly attendance of 70 patients out of the 100 registered patients indicates

that they are conscious of improvement or are encouraged by the improvement in others to keep up the treatment. Clinically the results vary from very marked improvement in early neural and tuberculoid cases to slight or insignificant changes in the more recently-treated lepromatous cases.

Plans are under consideration for introducing sulphetrone treatment for the more serious cases of lepromatous leprosy, using supplies donated by the American Mission to Lepers, but this development will depend on the establishment of facilities for making regular blood and multiple-smear examinations. Inquiries are being made, too, regarding the possibility of securing land for a leprosy colony. This region has recently come under communist control; not only has there been no interference with our work, but we have been assured of the assistance of the new regime in developing it further.

#### THE CHIAP-CHENG LEPROSY CLINIC

As a result of the establishment of a clinic at Tshan-ki, the Village Elders of a neighboring town, Chiap-cheng, begged us to start a similar clinic there—or, better still, to start a branch clinic of the Swabue Mission Hospital treating all varieties of ailments. The Elders offered full cooperation with both the small Chiap-cheng Church and the Swabue Hospital in establishing and maintaining this work; moreover, they secured and repaired for the purpose of the clinic a 300-year-old temple of Kwan-yin, the Goddess of Mercy, which had been stripped by the communists of 25 years ago.

This clinic has been running for only two months at the time of writing but already 40 leprosy patients have been registered. In addition, more than 80 patients suffering from a variety of forms of secondary and tertiary syphilis lesions have appeared; and this demand, in addition to that for treatment of simple ailments, has made us extend the service provided. Only one clinic a week is held here, but as soon as staff can be spared a group will take up residence in Chiap-cheng and take over supervision of the work in both Tshan-ki and Chiap-cheng.

The three clinics operated under the auspices of the Swabue Mission Hospital provide tremendous scope for fuller clinical investigations, including lepromin tests and biopsy examinations, and for the training of workers in the treatment of leprosy. The first and most useful step that can be taken in establishing

similar clinics in China is the maintenance of a register of those patients that turn up in the medical and surgical outpatient clinics who are found to be suffering from leprosy.

#### REFERENCES

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