

REVIEWS.

Leprosy in India, Vol. XX, No. 2. April, 1948.

What of the Children? by Dr. G. O. Teichmann. This is a useful study, and follow-up, of the fate of children, both healthy and infected, in the Purulia Leper Home in Bihar. The author summarises as follows:

" 1. The history of children separated from parents with leprosy and brought up in the Healthy Home in Purulia and those who had already developed leprosy and were treated in the Purulia Colony between 1927 and 1942 is traced to the present time.

2. Although two-thirds of the children in the Healthy Home did at some period show signs of leprosy only two developed the lepromatous type and the majority are now healthy and many are married.

3. More than half of those who had lepromatous leprosy have since died and of those who remain the majority still have the disease.

4. It is suggested the children removed from infective surroundings may develop an immunity if brought up in a Healthy Home.

5. The need is stressed not only of isolating persons suffering from infective leprosy but also of removing child contacts to Healthy Homes where no further infection can take place."

Intramuscular injections of Hydnocarpus Oil and its preparations by Dr. S. N. Chatterjee. This is a timely and practical discussion on the facts that should be taken into account in the successful injection of Hydnocarpus Oil. It is still true that in many places needless pain and abscess formation are caused by heedlessness and bad technique. (It would be of great benefit to a large number of relatively inexperienced workers and to lay employees in

leprosy, if Dr. Chatterjee, with his vast experience, could make this article part of a practical series dealing with technical points in the examination and treatment of leprosy. We hope that he will consider this.—Ed.).

Leprosy in India, Vol. XX, No. 3. July, 1948.

Rehabilitation of the Physically Handicapped with reference to Leprosy, by T. N. Jagadishan. This is an interesting and sympathetic study of a problem that has been far too frequently neglected. As the author states:

“ It will be well to point out that those who have very large clinical experience are coming increasingly to feel that intelligent and well-planned efforts at early diagnosis (of deformity), careful treatment and management under conditions of increasing facilities can lift the burden of deformity from many a case on which that burden is now needlessly imposed.”

The author's summary, which should be considered carefully by everyone responsible for the administration of leprosy, is as follows:

“ Towards progress in this work of rehabilitation I would advocate:

1. The setting up of a well-equipped, well-staffed Institute of Physical and Occupational Therapy which will be at once a research and training centre. This may be part of the proposed Central Leprosy Institute of India.

2. The organizing of a Department of Welfare Work, Occupational Therapy, Community Services, etc. in every large sanatorium.

3. The establishment of Agricultural Colonies with a cottage industry bias in rural areas for the negatives and disease-arrested.

4. The establishment of After-care Colonies, like the Papworth Colony for tuberculosis patients, where light work, recreation, treatment and rest are combined.

5. The establishment of Industrial Institutes where the urban leprosy patients can find suitable work.

6. The establishment of Influential Employment Bureaux in every province with a view to re-absorption in society as far as possible of disease-arrested cases. The securing of employment for the disease-arrested and the negatives is a most difficult task as the public continue to be afraid of infection from non infective cases. But a resolute attempt should be made to combat such prejudice and set people back in society on their own legs. The correction of deformities by physiotherapy will render this task easier.

Today we are faced with the problems of resettlement of ex-servicemen, rehabilitation of those who have suffered war-accidents, and above all the care and rehabilitation of refugees. Leprosy presents problems very similar, and it would be well to remember that the man who has been disabled in the fight against disease deserves not less sympathy than those who are disabled in war, and that the man who has to seek exile from the habitual, daily civilized cruelty of normal life deserves not less help than the refugees of the insane cruelties of the fratricide that our unfortunate country is witnessing at the present moment. Such extraordinary cruelties will become impossible if we did not throw into unregarded

corners the many sections of oppressed, ill-treated, neglected humanity in normal peace time. For our abnormal cruelties are only the acute exacerbations of our normal civilized cruelties."

A short note on experimental investigations on the optimum dose of hydnocarpus preparations at the Lady Willingdon Leprosy Sanatorium, Chingleput, S. India by Doctors Z. J. Rajah, M. Paul and R. G. Cochrane. This is a short account of an investigation to examine the optimum dose of Hydnocarpus Oil and its preparations. After various experiments by the injection of different doses by varying routes, the conclusion is drawn that the most efficient method is to combine intradermal and subcutaneous injections with a maximum combined dosage of 15 c.c. weekly.

The importance of home visits in the control of leprosy in Bombay City by Doctors N. Figueredo and S. D. Desai. The authors have studied the work carried out by Health Visitors in Bombay City over a period of 5 years. They conclude that the steps taken to follow-up patients, to ensure examination of contacts, to educate patients and relatives, and to supervise isolation have met with success and are essential in the control of leprosy.

International Journal of Leprosy, Volume 16, No. 2. April-June, 1948.

Present Status of Sulphone Therapy at Padre Bento Sanatorium, by Lauro de Souza Lima and the clinical staff of the sanatorium. This is a study of sulphone therapy in (a) advanced; (b) moderately advanced; (c) incipient lepromatous cases, with a total of nearly 850 cases. It is interesting that in a considerable series of tuberculoid cases treated with sulphone, progression of the skin lesions occurred, but no influence on the nerve lesions. In 15 cases of the uncharacteristic type, 8 have completely cleared up and three have been converted to the tuberculoid form. At the Lapa Dispensary 130 cases with uncharacteristic lesions received sulphone treatment for eight months. During that period none of the cases have become lepromatous and some have shown partial improvement. Bacteriological and histological findings are also discussed in detail. Dr. de Souza Lima's discussion and summary is as follows:—

DISCUSSION.

"The results of sulphone treatment of which an over-all picture has been presented, never before recorded with other drugs, were obtained without any accident of importance, attesting to perfect tolerance for this medication in all forms of the disease and at all ages. The dosage should be raised to the maximum whenever there is no contraindication. Visceral involvement is no contraindication; on the contrary it is much benefited by this therapy.

Practically speaking, there are no appreciable differences between the results obtained with the oral and the intravenous routes of administration, when they are used exclusively. Our experience indicates that there is an evident superiority in the combination of the two routes, concomitantly or in alternating series. Nevertheless, there are cases in which intravenous injections are definitely preferred. These are: (a) all acute cases, especially those with the so-called leprotic ocular reactions, in which intensification of the intravenous sulphone therapy is decisive and quickly arrests the process; (b) cases of acute eruptions of erythema nodosum or multiforme types, without marked fever; and (c) most important, certain cases of erythema nodosum provoked by the oral administration of the sulphones, which have the special character of being accompanied by ostealgias, arthralgias and intense neuritis; these cases subside when the intravenous administration is substituted for the oral.

In our intensive employment of sulphone therapy for more than four years we have not observed any accident of major importance. The incidents and accidents which would suggest discontinuing the employment of these drugs were predominantly of temporary nature provided, of course, the treatment was correctly oriented. In this connection three kinds of phenomena were observed: (1) Phenomena of toxicity due to the medicament, especially anaemia, without any serious consequences when the proper measures to correct them are taken. (2) Phenomena of intolerance on the part of the patient, such as nausea, vomiting, intestinal disturbances, which might be serious should the treatment be unwisely continued; also certain forms of dermatitis, among them one of special aspect, trichophytoid, and all of them without any real importance. (3) Specific phenomena due to leprosy itself, represented by acute eruptions of erythema nodosum or erythema multiforme, which when not accompanied by marked fever do not indicate a suspension of treatment; and the condition called "pseudoexacerbation" of the disease for which increase of the daily dosage is indicated.

SUMMARY.

Terminating our summary exposition of the results of sulphone therapy at the Sanatorio Padre Bento, we can state in conclusion that:

(1) Sulphone therapy is not yet the ideal treatment we have been wishing for for the treatment of leprosy, but in view of the results so far obtained in a large number of cases over a long period of time it constitutes a really active and useful treatment, the only one in the history of leprosy.

(2) It is highly desirable that its benefits be extended to all segregated patients, and to the dispensaries for treatment of early cases, even to those which are non-infectious, as a possibility—at the moment—of approaching with success the problem of the prophylaxis of leprosy."

A Comparison of Sulphone and Hydnocarpus Therapy of Leprosy, by Dr. R. G. Cochrane. In this study the author has specifically excluded neuro-macular or neuro-anaesthetic cases. In early lepromatous cases under intensive treatment with hydnocarpus preparations 50 per cent of cases become bacteriologically negative in an average period of 94 weeks. He concludes:—

“ So far as the Indian race is concerned, the sulphone remedies are at present indicated only in the following types of cases:—

(1) Advanced lepromatous cases, especially those with nasal and laryngeal symptoms.

(2) Cases which have not responded to properly administered hydnocarpus therapy.

(3) Cases which have relapsed.

Our better results with hydnocarpus remedies are explained on two grounds. First, the Indian racial group with which we usually work responds better to the hydnocarpus therapy than Europeans. This is demonstrated in our generally poor results with hydnocarpus in the Anglo-Indian (Eurasian) group. Second, our insistence on intensive intradermal medication.”

Comparative Study of Chaulmoogra Oil in high doses and Promin in the Treatment of Leprosy, by Dr. Salomon Schujman. In this brief paper the author gives a precis of his results:—

“ For comparative appraisal of the results obtained with each medication, we have studied in our patients the clinical, bacteriological and histological evolution shown by similar lesions.

It would be premature to say, after an investigation lasting only a year and one-half, which of the two drugs is the more active; observation of the future evolution of these cases is necessary. We can, however, affirm that they are both efficient, and emphasize especially the following facts:

1. Both the sulphone used and chaulmoogra in the large doses given have an evident therapeutic activity in lepromatous cases.

2. Both drugs, administered as described, give within the same period of time similar favourable results.

3. Both drugs benefit not only the cutaneous lesions, causing leveling of the tubercles and reabsorption of the nodules, but also the lesions of the mucosa, with improvement of rhinitis and healing of erosions and ulcerations.

4. We have noted in both groups of cases that the clinical improvement is accompanied by the same favourable bacteriological alteration (fragmentation and diminution of the bacilli) and histopathological changes (gross cellular reticulation, diminution of the infiltrate, and sclerosis).

5. Although none of the patients of either group discontinued treatment, tolerance has been inferior in those undergoing chaulmoogra treatment because of pain and aseptic abscesses experienced by some of them.”

CONCLUSION.

“ Because of the similarity of the results obtained with these drugs up to the present moment of observation—a more prolonged observation should establish whether one of the two is more effective—it is concluded that all investigations designed to increase the tolerance to and therapeutic activity of both the sulphones and chaulmoogra oil or its derivatives should be stimulated.’

Bone Changes in Leprosy under Sulphone Therapy, by Drs. P. T. Erickson and F. A. Johansen. This study of bone leprosy should be studied in full as it is a subject to which far too little attention has been paid. It is a study of 82 patients showing by X-Ray leprotic involvement of osseous tissue. While the authors suggest that the sulphone treatment of these cases has had a predominant effect in the arrest of bone changes, it should be noted that the patients also received vitamins, iron, liver and calcium preparations. The discussion and conclusions by the authors are as follows:—

DISCUSSION.

“ One of the most recent and extensive clinical and roentgenologic reviews of bone changes in leprosy is that by Paget and Mayoral. In an exhaustive study of 505 cases at the National Leprosarium these investigators, in addition to confirming the existence of bone lesions in leprosy previously described by others, made it clear that certain of them correspond to certain categories of the disease.

It is the opinion now, for instance, that lepromatous leprosy, if relatively free from neural involvement, is usually free from bone lesions except those possibly due to the direct action of *M. leprae*. Such lesions are cysts and osteomyelitis. Enlarged nutrient foramina due to vascular disturbances also occur, as do osteomyelitis and periostitis from secondary infections. The most intense and important bone changes occur in the pure neural type, where the degenerative effects from nerve involvement cause secondary bone absorption of neurotrophic nature. In mixed cases are seen bone changes common to both the lepromatous and neural types.

It appears, then, that the important consideration is the nerve lesion, and that in order to arrest bone changes—except in the rather rare, probably true lepromatous involvement—the leprous nerve process must be aborted. Existing permanent injury and degeneration of nerves cannot be corrected, and bone changes may occur long after the time of that injury.

Although the figures given are not significant because of the small numbers of patients concerned, they indicate that sulphone treatment probably produces a restraint on further progression of atrophic bone absorption. The degree of this restraint depends in a large measure on the extent of neural involvement prior to treatment. If the nerve changes are marked, bone changes are liable to continue; if involvement of the nerves is slight or early, arrest of the process in the bones is probable. Early treatment is therefore of primary importance with a view to preventing extensive neural involvement and secondary bone changes.

Bone cysts and osteitis or osteomyelitis, presumably of leprotic origin, have been noted to heal more rapidly under sulphone therapy than that observed in our experience as due to spontaneous healing. The same can be said for necrosis of bone secondary to infected trophic ulcers. Two almost identical cases of local rarefying osteitis of the head of the astragalus, appearing shortly after inception of sulphone treatment, later healed within a relatively short time. These cases are not included in the comparison groups because of lack of five-year follow-up studies. Improvement in bone texture or rarefaction and in diffuse rarefying osteitis, also, does take place under sulphone therapy.

Another bit of evidence that sulphone treatment has been beneficial is indicated by the proportion of true lepromatous cases found in each group. Group II contains a slightly higher percentage of such cases than Group I. Because of this factor of selection, less bone involvement and less increase in bone changes would be expected in Group II than in Group I providing sulphone treatment has no effect. The results obtained are the contrary, and in favour of sulphone treatment.

Spontaneous arrest of bone changes, such as atrophic absorption and spontaneous healing of cysts, undoubtedly occurs, as does spontaneous

regression in skin lesions. To what extent such a process has occurred in this study it is difficult to determine. The fact, however that the shorter-treatment group did not do as well as the group treated for more than five years suggests that the lack of retrogression of bone changes in this group was not entirely due to spontaneous arrest.

To give a definite answer as to the value of the sulphones in bone lesions of leprosy, a more prolonged study of a larger group of patients is necessary. Any follow-up period of less than ten years is considered insufficient for determining the true probability and degree of prevention or arrest.

CONCLUSIONS.

Observations of bone changes in leprosy over a five-year period in a group of patients treated adequately with sulphone drugs indicates that lesions of bones presumably due to the direct action of *M. leprae*, such as cysts, heal; and that a restraint on further progression of atrophic bone absorption, secondary to neural involvement, probably occurs.

Where extensive neural involvement is present prior to treatment, secondary bone changes are liable to increase in severity.

The apparent relatively rapid healing of bone cysts under sulphone treatment suggests that they may be true lepromata of bone.

Studies of bone changes during treatment of leprosy must of necessity be of long duration because of the usual slow evolution of such lesions, and the slow response of most lepromatous lesions to treatment.

The prevention of bone changes in leprosy through early treatment with sulphones is an apparent possibility.

Further study of bone changes during sulphone therapy, in a larger group of patients over a longer period of time, correlated with accurate observations on nerve lesions, is recommended as necessary before final conclusions can be drawn."

The Present Status of the Sulphones in Therapy, by Drs. A. E. Sharp and E. H. Payne. This article is a general study of sulphone therapy ending with a plea for the complete avoidance of any control of these drugs. [The authors apparently fail to realise that the indiscriminate use of anti-leprosy drugs by patients and physicians with inadequate knowledge will almost certainly (a) drive the disease underground and (b) lead to a spread of infection by cases which, although clinically improved, may still be highly positive.—Ed.]