REVIEWS.

Lowe, John. *Isoniazid in Leprosy.* Lancet **263** (1952) No. 6743. p. 1012-1013.

Twenty patients with uncomplicated leprosy (10 lepromatous and 10 tuberculoid) were treated for $5\frac{1}{2}$ months with Isoniazid commencing with 50 mgm and increasing to 150 mgm daily. Owing to the poor response the dosage was later increased in some cases to 300 mgm daily. No significant improvement took place. Neither was any improvement seen in 7 cases suffering from complications following sulphone or thiosemicarbazone treatment apart from what would apply simply to the withdrawal of the drug: Isoniazid is possibly of slight benefit to leprosy but its action is much less than sulphones or thiosemicarbazone in comparable cases.

G. O. TEICHMANN.

Cochrane, R. G. *The influence of recent advances in leprosy on present day conceptions of the disease in relation to its diagnosis, treatment and prevention.* Edinburgh Med. Journal **59** (1952) 509—

The writer states that by means of the Fite-Farraco method of staining bacilli in the tissues and the Khanolkar method of concentrating bacilli from the tissues it was now possible to find *M. leprae* in every active case of leprosy. This raises again in acute form the question of the infectivity of the so-called non-infective form of leprosy. However he personally believed that this does not alter the generally accepted view that leprosy is only infective in those cases where bacilli can be discovered by standard methods of examination.

The writer then emphasised the importance of tissue immunity in leprosy and its effect on prognosis and gave a modification of the pan-American classification dividing all leprosy cases into Lepromin positive; Lepromin Variable and Lepromin Negative with their various subdivisions.

After dealing with the sulphone treatment of leprosy he discussed the 3 types of reaction found in leprosy—(1) Violent reactions found in tuberculoid leprosy due to tissue response which hastens recovery; (2) Erythema nodosum or acute lepra reactions which is held to be an allergic phenomenon but the antigen—bacillary products—is no longer confined to the tissues, but is circulating and as a result of rapid multiplication of *M. leprae* and its equally rapid destruction a hypersensitisation arises with high fever and erythema nodosum lesions are seen; and (3) Subacute or chronic lepra reactions in which there is a rapid multiplication of bacilli without corresponding destruction.

Dealing with the control of leprosy the writer holds that it is necessary to separate infective cases from healthy persons especially children. Although sulphone treatment is a powerful aid in reducing infection it was not sufficient in itself. G. O. TEICHMANN.

Lowe, John. *ACTH & Cortisone in treatment of complications of leprosy.* Brit. Med. Jour. No. 4787 (1952) p. 746-749.

As some complications of leprosy are difficult to treat and may be precipitated or aggravated by chemotherapy, and as there are certain resemblances between these complications and those conditions alleviated by ACTH and Cortisone, a trial of these hormones was made on 38 cases in Nigeria. Owing to the rigid economy required the full doses recommended could not be given. However, full doses, i.e. 50 mgms of ACTH six hourly, or of cortisone 100 mgm 12 hourly, were given for 2-3 days followed by smaller doses for 2 days as a single course.

The author summarises his results as follows:—

"While the acute manifestations of leprosy can be very readily controlled by hormone treatment, there is a grave danger of aggravating the underlying disease, particularly in those receiving repeated short courses of treatment, and even of aggravating the particular symptoms to alleviate which the hormone has been given. Thus early results are good, and the late results too often bad. Attempts to minimise the bad late results by modified dosage and by energetic chemotherapy during hormone treatment have met with little success. Nevertheless in 2 complications of leprosy and its treatment, both of them serious, the results are striking and are usually attained with such small doses that hormone treatment is fully justified. These 2 complications are (1) Sulphone sensitivity with drug fever, dermatitis and hepatitis; and (2) Acute and subacute leprous eye inflammation, in which condition the local use of cortisone appears to be effective and safe and is to be preferred to injection. Apart from these two conditions the use of hormone treatment of leprosy is usually contraindicated."

G. O. TEICHMANN.

Cochrane, R. G. *The Chemotherapy of Leprosy.* Brit. Med. Jour. No. 4796 (1952) p. 1220-1223.

This paper summarising the past and present treatment of leprosy was read at the B.M.A. meetings in Dublin. After a short

summary of the use of chaulmoogra oil the writer discusses the mode of action of the three forms of sulphones—basal, mono— and disubstituted forms—at present in use. Whereas Lowe holds that all forms are broken down either in solution or in the body to the parent DDS before becoming therapeutically effective, the writer believes that there is not sufficient DDS present in 50% sol. of Solapsone (Sulphetrone) when given parenterally to account for the remarkable improvement that takes place in leprosy. He admits the possibility, as suggested by Payne, that a monosubstituted derivative may be produced in the body which explains the effectiveness and lack of toxicity of solapsone when given parenterally. On the whole he considers it is safer to give either the mono- or di-substituted forms parenterally in preference to DDS owing to the toxicity of the latter.

Dealing with the criteria of cure the writer says that there appear to be 4 stages in the progress of the disease to clinical cure:— (1) A change in the morphology of *M. Leprae.* (2) a phase in which *M. Leprae* is stimulated into activity. (3) a phase when the bacilli begin to diminish and presumably reproductive capacity is affected and (4) when *M. Leprae* cease to multiply the process of disintegration continues until the bacilli are reduced to acid-fast dust, and the macrophages dispose—in the large majority of cases —of these degenerate forms, thus curing the disease. He holds that these granular forms, often found in the small nerves of the skin may be a resistant phase of *M. Leprae* and a potential source from which relapse can take place. As long as sulphones are given these cannot develop, but if treatment is stopped the prelepromatous stage of leprosy may re-develop and so we may have to wait 10-15 years before concluding that the " cure " is permanent.

G. O. TEICHMANN.

Leprosy in India. Vol. 24, 1 (January, 1952).

Recent Advances in the Treatment of Leprosy by Dharmendra.

This is a short, but succinct, review of the modern treatment of leprosy with sulphones. For parenteral administration 50 per cent watery solution of sulphetrone or novotrone (the Indian equivalent) is recommended. For oral use DDS is preferred. In view of the tendency to relapse, small doses of sulphone drugs should be continued for a long period.

The work on streptomycin is mentioned, but " apart from the question of toxicity, the high cost of the drug will limit its use in most countries where leprosy is prevalent." The work done on aureomycine, para-amino-salicylic acid and cepharanthin is shortly mentioned, but none of these are recommended.

Regarding thiosemicarbazone the author says: " It is still too soon to assess the value of the drug in leprosy, but from the results obtained so far it can be said that it appears to be of definite use in the treatment of leprosy. However it is not free from toxicity . . . since in certain cases even a small dose of 25 mg. or less results in the production of a febrile reaction which may be accompanied by iritis and fresh crops of nodules. A special feature of improvement found in some of the cases with marked sensory disturbance, has been the partial return of sensation in the affected parts."

E. MUIR.

Leprosy in India. Vol. 24, No. 2, (April, 1952).

A method of Concentration of Acid-Fast Bacilli in Skin Biopsies from Leprosy Patients.

The method used is to take from a selected area a biopsy of 5 x 3 x 5 mm. Soak for 4 to 8 hours in 1 per cent acetic acid. After removing the epithelium, drop the remainder into a homogenizer tube containing 3 c.c. of 1 per cent acetic acid, and crush at about 2000 r.p.m. with an electrically operated glass crusher for 5 to 10 minutes. The resulting emulsion is shaken up with 20 drops of a petroleum-ether—sulphuric-ether mixture (1 in 10). The disk which forms on the surface contains the bacilli.

Eight drops removed with a 3 mm. platinum loop is spread out on a slide over an area of 2 x 2 cm. The slide is dried in an incubator, fixed for 15 minutes in Carnoy's fixative, and stained with a slight modification of the Ziehl Neelsen method.

In 50 cases, in 36 of which no bacilli could be found by ordinary methods and only a few in 14, bacilli could be found by this method, and in some there were considerable numbers. Sixteen cases from the cancer hospital furnished negative controls. Photomicrographs of one case show the difference as between this and the usual method of examination. E. MUIR.