Report

Report of the Health Division, Ministry of Health, United Republic of Tanzania, 1965. Section on Leprosy.

The control of leprosy in Tanzania is based on the principle that the most effective measure is early treatment. The campaign has accordingly been centred on the rural dispensary and increased emphasis placed on the training of Rural Medical Aids in the diagnosis and treatment of the disease. Modern leprosaria or leprosy hospitals exist in all areas of high leprosy prevalence with the exception of the Kigoma Region, and the coverage afforded by these hospitals and the rural dispensaries resulted, in 1965, in approximately 50% of the total estimated patients in the country receiving treatment. The routine mass treatment standardized at all out-patient centres has consisted of oral dapsone in one of 2 schedules: 50 mgm. daily for 6 days a week when the patient can be given 1-2 months' supply to take at his home, or (more usually) up to 400 mgm. taken in a single dose at dispensaries holding a weekly leprosy clinic.

Abstracts

1. **Physiotherapy and Leprosy,** by DAVID J. WARD. *J. Rehab. in Asia*, 1967, **8**, 2, 35-38.

The author gives a brief outline of the physical conditions caused by leprosy which call for treatment by physiotherapists before and after surgery. He suggests future line for research by physiotherapists and stresses the need for more fully trained physiotherapists as well as paramedical workers, especially in India. This is a very valuable paper as it has so many practical suggestions.

The following 9 abstracts are reprinted with permission from *Trop. Dis. Bull.*, 1967, **64**, 4:

2. **El programa de control de la lepra en el Ecuador** (Programme of Control of Leprosy in Ecuador), by E. BLUM GUTIERREZ. *Rev. Ecuatoriana de Hig. y Med. Trop.* Guayaquil. 1966, May-Aug., **23**, 2, 183-8, 2 graphs.

This paper reviews characteristics of regional variations of leprosy in Ecuador and merits study in the original. Between 1963 and 1966, 420,000 persons were examined and 978 new patients were recorded, mainly from 4 areas of the country.

J. R. Innes.

3. **Leprous Lymphadenitis. Demonstration of Tuberculoid Lesions,** by K. V. DESIKAN and C. K. JOB. *Inter. J. Lepr.*, Wash., 1966, Apr.-June, **34**, 2, 147-54, 8 figs. (17 refs.).

It is known that lepromatous leprosy frequently involves the regional lymph nodes draining affected parts of the skin, and that these glands are sometimes enlarged. This also occurs in tuberculoid leprosy, but no histological lesions have ever been found in the glands in this latter type. This paper reports the finding of such lesions, and describes the histology of lymph glands in all types of leprosy.

The histology of the lepromatous and borderline groups was similar to that described by earlier workers (this *Bulletin*, 1954, v. 51, 274; 1959, v. 56, 447). In all groups, the histological appearances corresponded fairly closely to those of skin lesions. The largest of the biopsied nodes in tuberculoid patients measures $2 \times 1 \times 1$ cm. The lymph nodes of this group showed the presence of granulomas composed of clusters of epithelioid and giant cells even in true polar (TT) patients. There was no caseation. Acid-fast bacilli (AFB) were found in 1 out of 8 biopsies in the borderline-tuberculoid (BT) group but in none of 5 TT glands. Cultures for AFB were all negative.

D. S. Ridley.

4. **Secondary Amyloidosis in Leprosy,** by S. KRISHNAMURTHY and C. K. JOB. *Inter. J. Lepr.*, Wash., 1966, Apr.-June, **34**, 2, 155-8, 4 figs.

Amyloidosis is known to be a possible complication of prolonged infection with leprosy, but it is rare in the East. Nevertheless, 2 out of 25 autopsies from 27 patients who died of leprosy in India revealed secondary deposits of amyloid in the kidney, liver, spleen and adrenals. In both patients the leprosy was of the lepromatous type and both had nephrotic symptoms. Nine of the other 23 autopsies showed that the patients had had tuberculosis in addition to leprosy; but no amyloidosis. It is concluded that the incidence of amyloidosis appears to be lower in India than in Western countries.

D. S. Ridley.

5. (**Serological Tests with Sera from Patients with Lepromatous Leprosy during Periods of Exacerbation**) by G. V. MERTSLIN and V. N. STRUCHKOVA. *Vestnik Dermat. i Venerol.*, Moscow, 1966, **40**, 10, 41-3. (In Russian.) English summary (7 lines).

The author studied serological reactions in 22 patients suffering from lepromatous leprosy, and found that the CFT (in the Mertslin modification) became gradually

negative during effective treatment with antileprosy drugs but usually sharply intensified in exacerbations.

Serological tests for syphilis often become positive in patients suffering from leprosy, and these show a decrease during effective treatment.

W. Odrzywolski.

6. **Classification of Leprosy according to Immunity. A Five-Group System,** by D. S. Ridley and W. H. Jopling. *Inter. J. Lepr.*, Wash., 1966, July-Sept., **34**, 3, 255-73, 21 figs. (20 refs.)

In their summary to this important paper the authors state that:—

'The tuberculoid-lepromatous classification of leprosy is recognized to be an expression of the patient's resistance to the infection. As such its object must be a statement of his resistance.'

Resistance can be assessed by the lepromin test, and indirectly by the therapeutic response in patients who are bacteriologically positive, and by the stability of the infection. The conclusions drawn can be correlated with other features, such as histological findings, suitable for the definition of groups. On this basis 5 groups have been strictly defined.

This system is intended for the use of research workers and those who have full facilities for the investigation of patients. It complements the simple clinical classification that is needed by others.

This is a careful study and should be consulted in the original. The paper is illustrated with 11 clinical photographs and 10 photomicrographs.

J. R. Innes.

7. **The Karimui Trial of BCG. 2. Tuberculin Reactions in a Leprosy-Endemic but Tuberculosis-Free Population,** by G. C. Scott, S. G. Wigley and D. A. Russell. *Inter. J. Lepr.*, Wash., 1966, Apr.-June, **34**, 2, 139-46. (25 refs.)

The authors chose the Karimui area in the Eastern Highlands of the Territory of Papua and New Guinea for a 'blind' controlled trial of the efficacy of BCG as a prophylactic against leprosy because it is an area where leprosy is endemic and tuberculosis is absent (for a preliminary report see this *Bulletin*, 1965, v. 62, 537). Tuberculin surveys indicate that infection with *Mycobacterium tuberculosis* at some time in the past may have resulted in a small number of positive tuberculin reactions. 'Clinical evidence of infection with *M. leprae* is not associated with tuberculin reactivity, nor is presumed latent or inapparent infection, nor the tuberculoid form of the disease when compared to all other types.' The variation in natural tuberculin reactivity is about 1% per annum. Details are given in 6 tables, which include figures showing the tuberculin positivity among members of 'leprous and non-leprous' households, the tuberculin reactivity of persons with and without leprosy and the frequency distribution of the diameter of positive tuberculin reactions by age, sex, leprosy status and membership of a leprous household.

J. R. Innes.

8. **La régression tuberculoïde dans la lèpre lépromateuse** (Tuberculoid Regression in Lepromatous Leprosy), by J. Languillon. *Bull. Soc. Path. Exot.*, 1965, Sept.-Oct., **58**, 5, 780-88. (12 refs.)

The possibility of lepromatous leprosy changing into the tuberculoid form has long intrigued leprologists, and the histological and immunological bases for such a change have been well examined by Wade (*Inter. J. Lepr.*, 1955, v. 23, 443) and others.

After a brief review of the literature, the author describes the clinical history of 5 patients (from the Institut Marchoux, Bamako, Mali), and presents evidence that he considers sufficiently cogent to justify the assertion that 'tuberculoid regression' occurred. All 5 patients had leprosy diagnosed as lepromatous on clinical grounds, but in one the original diagnosis had been indeterminate leprosy with tuberculoid features. In this latter patient the lepromin reaction was slightly positive, varying from 4 to 5 mm. In the remaining 4 patients, the lepromin reaction had initially been negative (the actual diameter of any response occurring not being given), but in 3 of them it became positive (3, 4 and 7 mm. in diameter) after the 'tubreculoid regression' described. A summary of the histological findings suggests that the multibacillary lepra or Virchow cells were replaced by epithelioid and possibly giant cells—supporting evidence of a change in the immunological pattern.

The clinical findings were roughly in keeping with previously reported examples of this phenomenon. After a period of treatment (with sulphamethoxypyridazine sulphamethoxine (3 patients) or injectable thiambutosine) varying from 3 to 20 months, an exacerbation occurred in the existing lepromatous lesions. When the acute inflammatory phase subsided, the lesions became well defined, resembling those of reactional tuberculoid or major tuberculoid leprosy. At the same time the peripheral nerve trunks passed through a phase of enlargement and tenderness, with appropriate neurological results.

With previous writers on the subject, the author attributes the underlying change in clinical and immunological state to the existence in these patients of a latent or potential resistance that was not revealed by the initial lepromin testing. His 'para-lepromatous' classification corresponds to the 'BL' of Ridley and Jopling (see above, abstract no. 6) and the 'lepromatous with borderline features' of other leprologists.

S. G. Browne.

9. **Observations on the Macular Series in African Leprosy,** by S. G. Browne. *Inter. J. Lepr.*, Wash., 1966, Apr.-June, **34**, 2, 175-8.

Completely flat and well-defined leprosy lesions, uniformly hypopigmented and showing some degree of tactile loss, may be pathologically dissimilar. The bacteriological findings vary within wide limits, and the histological appearances may differ likewise. All such lesions might be termed 'macular tuberculoid' if the clinical aspects were the sole criterion.

In Africa, a high proportion of these macular lesions would conform to Leiker's 'low-resistant tuberculoid' form (this *Bulletin*, 1965, v. 62, 760), but some appear to fit better into the Indian 'maculo-anesthetic' description (*ibid.*, 1964, v. 61, 676). Others, again, indistinguishable on purely clinical grounds from these, are in reality far from the tuberculoid pole when the bacteriological and histological findings are taken into consideration.

The proportions of these diverse macular manifestations of leprosy, all non-lepromatous, may vary from country to country. Their pathological interest is matched by their epidemiological importance.

This paper is of particular interest and value, and is recommended for personal perusal.

J. R. Innes.

10. **La mise en évidence des troubles de la sudation dans la lèpre par l'hygrophotographie** (The Demonstration of Disorders of Sweating in Leprosy by Hygrophotography), by H. A. Floch, M. Duchassin and J. Sivadjian
Arch. Inst. Pasteur de la Guyane Française et de l'Inini. Publication No. 492. 1965, June, 10 pp., 5 figs.

Having mentioned that disorders of sweating are but lightly touched on in works on leprosy, the authors record their experiences in applying the technique of hygrophotography in investigating the sweat pattern of the skin of 17 patients suffering from various kinds of leprosy (Sivadjian, *Anneé Biol.*, 1960, v. 36, 199). They consider this test superior to the tests usually employed (exercise, pilocarpine, histamine, and so forth).

An emulsion of the double iodide of silver and mercury has the property of undergoing a colour change from yellow to black on exposure to light, and of becoming yellow again when in contact with water. A film treated with this emulsion, held in close contact with the skin, will indicate by punctate change of colour (to yellow) the openings of the sweat glands.

The authors found that this demonstration of impaired sweating function showed that in lepromatous leprosy damage to sweat glands might be more widespread than the macules themselves, even in the absence of sensory impairment. In tuberculoid leprosy, the areas of impaired sweating corresponded generally to the visible lesions; but in one patient there was a definite area of impaired sweating that corresponded to no pigmentary or sensory changes apparent in the skin. In such patients, hygrophotography appeared to be a more searching test of early damage to the cutaneous adnexa by leprosy than the usual tests for sensory impairment.

S. G. Browne.

The following 6 abstracts are reprinted with permission from *Trop. Dis. Bull.*, 1967, **64**, 5:

11. **WHO Epidemiologic Random Sample Surveys of Leprosy in Northern Nigeria (Katsina), Cameroon and Thailand (Khon Kaen)**, by L. M. Bechelli V. Martinez Dominguez, and K. M. Patwary. *Inter. J. Lepr.*, 1966, **34**, 3, 223-43.

12. **WHO Surveys of Disabilities in Leprosy in Northern Nigeria (Katsina), Cameroon and Thailand (Khon Kaen)**, by V. Martinez Dominguez, L. M. Bechelli and K. M. Patwary. *Ibid.*, 244-54.

With a statistician as a member of the 3-man WHO Leprosy Advisory Team, carefully planned surveys of representative areas of 3 countries have been carried out. After a detailed account of the geography and population of each area, the methods are fully delineated. Statistically valid sample sizes were chosen, as detailed in an appendix, and care was taken to ensure that 100% of each sample was examined.

In Cameroon, 14,473 people were examined, in north-east Thailand, 16,568 people and in Katsina, Northern Nigeria, 24,538 people were examined, 500 patients being examined per day. The results are given in 17 tables, and cannot be easily summarized. (Much of the information could have been more effectively presented as histograms.) The prevalence of leprosy per 1,000 inhabitants was found to be 12.37 in north-east Thailand, 25.84 in Cameroon, and 28.73 in Katsina. However, the number of lepromatous patients per 1,000 inhabitants, the 'lepromatous rate', was 4.58 in Thailand, 2.90 in Cameroon and 2.08 in Katsina. In Cameroon, 55.6% of the leprosy patients were diagnosed as having tuberculoid leprosy, in Katsina 48.3%, and in Thailand 38.5%. The leprosy prevalence rate was higher in females in Katsina, higher in males in Cameroon, and in Thailand the rate in males and females was similar. However, males had a significantly higher lepromatous rate than females. An analysis is made of possible reasons for different sex rates. The leprosy prevalence in different age-groups and the age of onset of leprosy in the 3 areas is detailed. The lepromatous rate was found to be much higher in the older age-groups. In the 2 ethnic groups in Katsina no significant difference was found in leprosy prevalence and lepromatous rates.

The frequency and type of leprosy disability was also studied and its relation to the different forms of leprosy, and its frequency in different sex, age and ethnic groups. Disabilities were classified according to the scheme proposed by the Second WHO Expert Committee in Leprosy (this *Bulletin*, 1960, v. 57, 598).

Eleven tables contain the findings and these should be studied in the original. In Katsina, 23.4% of leprosy patients were found to have some kind of disability of the hands, feet or face, which indicates a total of over 100,000 disabled leprosy patients in Northern Nigeria. In Cameroon, 35.6% of leprosy patients had some disability, giving a probable total of 30,000 leprosy disabled in the country. In north-east Thailand 41.5% of leprosy patients had some disability, although 25% suffered only from Grade 1 disability. In Katsina, 37.8% had some hand disability, 10% having partial loss of fingers; 30.4% had some foot disability, 8.7% having plantar ulcers; and 15% had some facial 'disability', 9.4% having nasal collapse, lagophthalmos or considerable loss of vision.

In Cameroon, 43.4% had some hand disability, 33% having partial or gross loss of fingers; 47.9%

had foot disability, 25% having partial or gross loss of the foot; and 14.8% had facial disability, 8% having nasal collapse with or without lagophthalmos. In Thailand, 52.2% had hand disability, 20% having partial finger loss; 55.1% had foot disability, 8.3% having plantar ulcers with or without some foot paralysis; and 33.9% had facial disability, 10% having lagophthalmos. No involvement of the larynx was found in Cameroon or Thailand, and only 0.9% in Nigeria. In Thailand, pure neural patients were relatively frequent, although in some of these patients leprosy bacilli were found in smears from ear lobes. Disabilities were slightly more frequent in males; and much more frequent in older people. The considerable economic and social effect of leprosy disabilities is emphasized. The WHO survey team recommend that prevention and treatment of disabilities, at least by simple methods, should be started as soon as possible.

(The application of strict statistical significance tests to leprosy studies is to be welcomed; but a consistent reporting of the value of P, or the level of significance such as in footnote 8, would be clearer than lits of χ^2 when the value of v is not immediately mentioned. These papers merit close study, and many epidemiological opinions can be tested against their findings.)

C. S. Goodwin.

13. **Study of Contacts of Leprosy,** by S. Ghosh and B. K. Das. *Bull. Calcutta Sch. Trop. Med.*, 1966, **14**, 2, 56, 58.

In Calcutta, 1,671 house contacts of 507 'infectious' leprosy patients were examined. Typical leprosy lesions were found in 31 adults and suspicious skin lesions in 407 persons including 103 children. The suspicious skin lesions were scaly 'without complete anaesthesia' and did not itch. Forty-three people with such lesions were able to be examined 'completely', by slit-scrape skin smear in 'ten places, both arms, forearms, thighs, legs, chest, back and suspected lesion'; a biopsy specimen of the lesion was taken and the lepromin test performed. All but 2 of this group were under the age of 17 years. In one of the suspected patches bacilli were found by skin smear; and in a further 7 cases bacilli were found by a concentration method by chloroform extraction of the skin biopsy specimen. The lepromin reaction was positive in 26 subjects. Histologically, cellular infiltration with epineural infiltration was found in the 8 bacteriologically positive persons and in one further subject who was lepromin-negative. Forty-two contacts with no skin lesions were examined completely, all but 6 being aged less than 17 years. Skin smears revealed no acid-fast bacilli, but by the concentration method, a few acid-fast bacilli were found in 17 cases (40%). The lepromin reaction was positive in these 17 subject and also in a further 6. Skin biopsy specimens from the left arm revealed a variation from the normal histological picture in 13 persons, all lepromin-positive.

C. S. Goodwin.

14. **Pure Polyneuritic Leprosy of Tuberculoid Type,** by Dharmendra and K. Ramanujam. *Lepr. India*, 1966, **38**, 3, 152-8.

Full case reports including histological findings in nerves of 4 patients with polyneuritic tuberculoid leprosy with no skin lesions are presented. While admitting that the first published full description of a patient of pure neural tuberculoid leprosy was by Jopling and Morgan-Hughes (this *Bulletin*, 1966, v. 63, 166), the authors emphasize that pure polyneuritic leprosy has been recognized by Indian leprologists in their classification since 1953. Three of the 4 patients had nerve involvement both in the arms and the legs; the lateral popliteal, the ulnar, median and superficial radial nerves were most frequently affected. A history of anaesthesia or paralysis, together with thickening of the nerve was found (but in one patient with scars of nerve abscesses no sensory or motor loss is mentioned). It is concluded that histological confirmation of pure polyneuritic leprosy is unnecessary (although in the first case reported it was essential). The lepromin reaction is considered to indicate the classification when a clinical diagnosis is made (but clearer reporting of the reaction is desirable —namely, the exact days of reading and the diameter of the infiltration).

These instructive case reports are a welcome addition to the literature on pure neural leprosy.

C. S. Goodwin.

15. **A terramicina na lepra** (Terramycin in Leprosy, D. V. A. Opromolla, J. P. Mendes and L. de Souza Lima *Revta Bras. Leprol.*, 1965, **33**, 1/4, 3-21, 5 coloured figs. on 4 pls. English summary.

The authors report on oxytetracycline (Terramycin) in the treatment of lepromatous leprosy in Brazil. In addition to their case notes they give some excellent figures which are in effect colour photographs. They gave their 22 patients treatment by the intramuscular route of injections of 100 mgm. every 12 hours for about 12 months, and initial dermatological examination and histological examination of biopsies at regular intervals. The results were very good. Sixteen nasal smears were positive before treatment but only one was positive at the final examination. In nearly all the skin smears the bacillary index was reduced.

J. R. Innes.

16. **Tratamento sintomático da reação leprótica com o sulfato de hidroxicloroquina** (Symptomatic Treatment of Lepra Reaction by Hydroxychloroquine Sulphate), by N. Proença. *Revta Bras. Leprol.*, 1965, **33**, 1 4, 35-44. English summary.

The author investigated the action of hydroxychloroquine sulphate in the treatment of lepra reaction and in spite of numerous favourable references in the literature to the action of antimalarial drugs was unable to show positive results.

J. R. Innes.

The following 4 abstracts are reprinted with permission from *Trop. Dis. Bull.*, 1967, **64**, 6:

17. **Traitement de la maladie de Hansen par la sulforthomidine** (The treatment of Hansen's disease with sulphormethoxine), by J. LANGUILLON. *Méd. Trop.*, 1966, **26**, 4, 331-41.

The author treated 25 leprosy patients with sulphormethoxine (Fanasil, sulphorthomidine). All were untreated and suffering from active disease. Thirteen patients with bacillary positive lepromatous leprosy (of whom 2 were probably suffering from the borderline type, to judge from response to treatment) were given the drug for 36 months; of 12 with tuberculoid leprosy (6 major and 6 minor), 9 had treatment for 36 months and 3 for 24 months. A dose of 1.50 gm. weekly was found to be necessary to maintain a hypothetically desirable blood level of 30 mgm. per litre.

All the 12 patients suffering from tuberculoid leprosy were assessed as clinically cured at the end of the treatment. All 13 with lepromatous leprosy were greatly improved, both clinically and bacteriologically. In 11 patients, the nasal mucosa became bacteriologically negative, and in 7 the skin. The disease in 7 patients was considered to be 'arrested'.

Acute exacerbation taking the form of erythema nodosum leprosum or acute ulnar neuritis occurred in 5 patients, but in each instance the condition was rapidly controlled without interruption of treatment. The drug was well tolerated.

The author concludes that this product given orally at a weekly dose of 1.50 gm. is suitable for mass treatment.

S. G. Browne.

18. **Studies on sulfone resistance in leprosy,** by J. H. S. PETTIT, R. J. W. REES and D. S. RIDLEY. **1. Detection of cases** (PETTIT, REES and RIDLEY), *Inter. J. Lepr.*, 1966, **34**, 4, 375-90. **2. Treatment with a riminophenazine derivative** (B663) (PETTIT and REES). *Ibid.*, 391-7.

1. The authors made an extensive search in one of the biggest leprosaria in the world, namely Sungei Buloh, and discovered evidence of 9 patients with lepromatous leprosy who displayed resistance to sulphone treatment, shown by an absence of a satisfactory fall in the bacterial index and in the morphological index. The patients were studied in an investigation unit at which special attention was given to an injectable form of sulphone (300 mgm. twice a week) and also to tests of sensitivity to DDS by the mouse footpaid method. The period of the tests was 6 months. Only 4 of the patients failed to respond satisfactorily. It was found that only the strains of *Mycobacterium leprae* in the 4 patients who failed to improve were insensitive to DDS and that the histological picture in patients with drug resistance was essentially that of relapsing leprosy or very acute leprosy.

2. In the second part of the paper the authors report that when 3 of the patients with proved DDS-resistant leprosy infections were treated for one year with the riminophenazine derivative B663 (300 mgm. daily for 6 days a week) all slowed clinical, bacteriological and histological improvement which has been maintained for 28 months. The results show that active leprosy resulting from resistance to one drug can still respond satisfactorily to a different type of drug as is the case with drug resistance in other bacterial infections. In this limited study B663 showed no toxicity but the degree of skin discoloration was disconcerting in Chinese patients.

These papers are of great interest and value and should be studied in the original.

J. R. Innes.

19. **Sur la chimiorésistance du bacille de Hansen et le traitement de la lèpre par des associations médicamenteuses** (Chemoresistance of Hansen's bacillus and treatment of leprosy with combinations of drugs), by H. A. FLOCH. *Bull. Soc. Path. Exot.*, 1966, **59**, 2, 188-92.

The author repeats the opinion that he, in common with other workers, reached some years ago that on clinical grounds resistance to drugs used in leprosy was by no means uncommon. Without referring to the recent conclusive demonstration of dapsone-resistance by means of the mouse foot-pad inoculation technique (this *Bulletin*. 1965, v. 62, 108), he suggests that—on analogy with therapy in other conditions—combinations of drugs should be used wherever possible against multibacillary leprosy in order to prevent the emergence of drug-resistant strains. He suggests that excellent results are obtainable by giving, in addition to dapsone, such drugs as thiambutosine, long-acting sulphonamides, thiacetazone or an antibiotic (cycloserine, streptomycin or rifamycin). (No supporting evidence is adduced for the conclusions reached, but the author's practical advice should be heeded.)

S. G. Browne.

20. **Use of corticosteroids in persistent 'lepra reaction',** by S. KUNDU and S. GHOSH. *Bull. Calcutta Sch. Trop. Med.*, 1966, **14**, 1, 16-17.

Eighteen highly bacilliferous patients with 'persistent' leprosy reactional episodes which were uncontrolled by intravenous antimonials were treated with betamethasone, 2 mgm. daily, in divided doses, for the first week, 1.5 mgm. daily for the second, 1.0 mgm. for the third week and then 0.5 mgm. daily 'till the reaction was well controlled in about 4-6 weeks'. In all the patients there was remission of fever, subsidence of skin lesions and limb swelling, and marked symptomatic relief. The 'reaction was controlled within 7-10 days', at which time 50% aqueous sulphetrone injections, 0.25 ml., were started bi-weekly 'till 6 such'. The sulphetrone was increased by 0.25 ml. every second week to a final dose of 2.5 ml. or 4 ml. When the final dose of sulphetrone was achieved 'the dosage of prednisolone was gradually reduced and ultimately the drug was discontinued'. (There is no previous mention of prednisolone, and the dosage schemes described are contradictory.) The only side-effect of betamethasone was 'heaviness of the body', and it is stated that complete adrenal suppression was not produced. It is concluded that betamethasone effectively controls lepra reaction and allows the re-introduction of sulphone therapy.

C. S. Goodwin.