

REVIEWS

Leprosy in India. Vol. XV, No. 2, April, 1943.

Dharmendra and S. S. Jaikaria, p. 40, report tests of the various antigens made in the leprosy laboratory of the Calcutta School of Tropical Medicine, on persons who have not been in contact with leprosy cases, with a view to finding a diagnostic agent which will give uniformly negative results in such non-contacts and positive ones in early neural cases which are most in need of early diagnosis. For this purpose the tests on healthy non-contacts were carried out in the Punjab plains, where the incidence of the disease is extremely low. None of the antigens tested proved to be completely specific for leprosy, but nucleo-protein extracted from the bacilli by the phosphate-buffer method gave only 5 per cent of reactions in Punjab people when the dose injected did not exceed 0.002 mgm., which dose gives positive reactions in most neural leprosy patients.

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Dharmendra and J. Lowe (pp. 82-90) summarise the practical points that have emerged from their prolonged studies of the lepro-min reaction thus—:

- (1) Of the lepromatous cases, 90% gave negative results, 10% weak positive, and none strong positive. The positive results were commoner in cases which showed clinical and/or histological abnormality, but were not confined to them.
- (2) Of 'doubtful' cases, 40% gave positive results, four-fifths of these being weak positive. A correlation of the results with the histological findings in these cases which were either definitely tuberculoid or else showed a tuberculoid element in histology. No 'doubtful' cases which on histological examination showed only lepromatous changes gave more than a weak lepromin reaction, and even such reactions were very few.
- (3) In cases classified as 'neuro-anaesthetic' the incidence and the degree of positive results were high.
- (4) In the 'neuro-macular' cases there was a high incidence of positive results, the incidence and degree of positive reaction increasing from 'simple' through 'tuberculoid not major' to 'major tuberculoid.' Of 'simple' cases, 20% gave negative results, 34% weak positive, and 44% moderate or strong positive; whereas of the 'major tuberculoid' cases none gave negative results, 16% weak positive, and 84% moderate or strong positive. In cases classified as 'tuberculoid not major,' the figures were intermediate.

D. N. Bose (p. 91) deals in a short note with six cases of severe joint pains not amenable to the usual remedies, including potassium antimony tartrate. Calcium gluconate, 3 to 5 c.c. of a 10% solution, was then mixed with 1 to 2 c.c. of a 2% solution of potassium antimony tartrate, and the combination injected intravenously with remarkable effects in relieving the pains in all the patients after three injections had been given at intervals of two days. The doses of the two solutions may be varied according to the age and condition of the patient.

The International Journal of Leprosy, 1942. December, Vol. 10.

G. M. Saunders (pp. 1-19) records *An Account of Leprosy in the Virgin Islands of the United States*. The inhabitants are mostly poor negroes, among whom a survey added considerably to the 930 cases reported in 1941-1930. The incidence was 4.9 in males and 5.2 per mille in females, and about 70% of the cases at present are of the neural type. The disease appears to be on the decrease with improvement in economic conditions.

G. M. Saunders and R. S. Guinto (pp. 20-37) report on *A Field Study of Leprosy in the Virgin Islands of the United States*. As a result of this more detailed inquiry it was found that the rate in St. Thomas Island of 1-1.5 per mille is ten times lower than that of St. Croix with 10-14 per mille. This is attributed to the better diet, health and sanitation of St. Thomas Island. A comparatively high incidence in persons over 50 years of age indicates a decline of the disease. The Negroes suffer most and the two sexes are attacked about equally. In nearly 70% of patients under 20 years of age a history of contact with another case was obtained.

G. M. Saunders and H. K. U. Giffin report on *The Skin Lesions of Neural Leprosy in the Virgin Islands of the United States* (pp. 38-50). Microscopical examinations were made in 30 cases of neural leprosy in 23 of which definite tuberculoid lesions were found; an unusually large proportion. In none of them were lepra bacilli found and 5 of 7 cases first seen in 1934 showed no visible signs of leprosy in 1940; this is in accordance with the tendency of such mild cases to recover spontaneously.

P. H. Kean and M. E. Childress record *A Summary of 103 Autopsies on Leprosy Patients on the Isthmus of Panama* (pp. 51-59). These post-mortems were carried out in 1904-41 and in most of them microscopical examinations were also performed. An analysis showed 24 to be attributable to tuberculosis, 22 to nephritis, 15 to leprosy, 10 to heart disease, 4 to cancer and 2 to 3 of them to eight other diseases. There was also a high incidence of cirrhosis of the liver and gallstones. The naso-pharynx was most affected as compared with the larynx and trachea in tuberculosis.

J. A. Doull and E. E. Bryan (pp. 60) have estimated the *Natural Antitoxin in the Blood of Leprosy patients in Puerto Rico*. They found such substantial amounts in 22 cases at various stages of the disease as to indicate no such deficiency as would point to the value of diphtheria antitoxin treatment.

S. Schujman and R. Mercau report (pp. 61-67) on *Treatment of Leprosy with Diphtheria Toxoid* in 10 lepromatous and 1 tuberculoid cases with frequent clinical and bacteriological examinations over a period of five months. No case showed any improvement and 8 of them became evidently worse, with the appearance of new lesions and increased number of lepra bacilli.

G. H. Faget and F. A. Johansen (pp. 68-78) also report on *The Diphtheria Toxoid Treatment of Leprosy*. This is a detailed report of a carefully controlled trial at the Carville Leprosarium, U.S.A. They could obtain no evidence that the diphtheria toxoid neutralised the toxins of leprosy and the control cases did better than those treated with diphtheria toxoid. The staff of this great institution unanimously concluded that "diphtheria toxoid is productive of no good and is fraught with danger to the patient."

C. M. Carpenter, H. Ackerman and N. J. Ashenburg also write on *The Failure of Diphtheria Toxoid to Influence the Course of Experimental Murine Leprosy* (pp. 79-82). White mice were infected by the injection of murine leprosy bacilli, but neither early nor late injections of diphtheria toxoid had the slightest effect on the course of the disease. All recent work therefore clearly indicates that the diphtheria toxoid treatment has no pathological or clinical basis and does more harm than good.

The Histamine Test. V. Pardo-Cestello and F. R. Tiant (*Arch. Dermat. & Syph.* 1943, Vol. 47, p. 826) point out that the normal reaction of the skin to the histamine test is negative when applied to anaesthetic areas of the skin in nerve leprosy. The intradermal injection of a 1 in 1000 solution of histamine phosphate is followed by the immediate appearance at the site of injection of a purpuric spot, followed by an erythematous areola several centimetres in diameter and these appearances persist for 20 to 45 minutes. On injecting an anaesthetic patch a wheel appears but no erythema, so that with the injection of 0.1 c.c. on the border of an anaesthetic patch the erythema stops abruptly at its margin. On the other hand in such sensory paralysis as syringo-myelia the reaction is normal. They therefore found the histamine test of diagnostic value in nerve leprosy cases.

Report on Leprosy and its Control in India. A committee of the Government of India Central Advisory Board of Health, which included Drs. Cochrane, Lowe and Dharmendra, have issued a long report with the following conclusions after considering the agencies at present at work in India, including in-patient institutions and out-patient clinics. They recognise the great advances that have resulted during the last two decades from the improved treatment worked out in Calcutta, but find that the large-scale out-patient treatment at numerous clinics is not able to solve the

leprosy problem, although it has greatly assisted the valuable surveys and epidemiological inquiries of recent years, without, however, removing the necessity for isolating the more infective cases. Only one Indian province as yet possesses a modern institution for the isolation of such cases, and at least one such should be provided for each of the nine provinces of India, with a staff allowing for teaching and for epidemiological and treatment research. Home isolation of infective cases has not as yet proved to be of much value. The necessity of protecting children from infection is now generally recognised. In addition to the leprosy research at the Calcutta School of Tropical Medicine a rural in-patient institution is required, and also a new leprosy act.

Sulfanilamide in the Treatment of Leprosy. By G. H. Faget F. A. Johansen and H. Ross. *Public Health Report*, 1942. Vol. 57, p. 1892. This is a carefully controlled trial of this potent drug in lepromatous cases chiefly. The doses used produced an average blood concentration of the remedy of 9 mg. with the production of febrile reactions in 7 of 8 cases. With blood concentrations of 5 mg. 6 of 11 cases also showed high fever necessitating stopping the drug; two were seriously ill but recovered. Some anaemia was produced in all and leucocytosis in many of the cases; so they conclude that the drug is not a curative remedy for leprosy, but it is useful for complicating secondary infections.

The Fate of Culsion Patients Presented to the Local Negative Examining Committee from 1922 to 1938. By J. Manalang. *Jl. Philippine Med. Assoc.*, 1940, Vol. 20, p. 193. This is a report on leprosy patients who have become bacteriologically negative at the great Culsion leprosy settlement of the Philippine Islands. The psychological condition of the patients during the period of up to two years of repeated bacteriological examinations before they are released is first dealt with. In the last three earlier periods of such releases the relapses and readmissions varied between 9.2 and 8.2 per cent. In the present long series no less than 4,627 patients were under observation, or 17 per cent of the total Culsion admissions; of these 2,457 or 53.1 per cent, were discharged or released under parole as negative and 28 more had been transferred or escaped observation. The deaths among them numbered 513, or 11.9 per cent, and the remaining 1,625, or 35.2 per cent, are still under observation by the release committee. One-third of the released patients were set free after from six months to two years

of observation, and the remainder only after longer periods. Considering the advanced conditions of so many of the Culion cases these results are encouraging.