

REVIEWS

Leprosy in India. Vol. XIII, No. 1, Jan. 1941.

A Study of the Lepromin Reaction in Children with Special Reference to Contact, by R. G. Cochrane, G. Rajagopalan, I. Santra and M. Paul Raj.

These workers have carried out lepromin tests in 276 children from the Silver Jubilee Children's Clinic, Saidapet, Madras. In addition 471 inmates of the Lady Willingdon Leprosy Sanatorium were tested for purposes of comparison. The results are given in a series of tables, from which the following conclusions are drawn. Reactions of less than 5 mm. in diameter are considered to be of little significance, and the appearances were noted once a week for six or more weeks. The results are in agreement with previous workers in showing negative results in 100 per cent of lepromatous cases in both groups. In the healthy children 14 per cent were negative against 20.5 per cent in the other group. Simple neural cases gave 40 per cent negative among the children against 56 per cent in the others. Children tuberculoids were all negative. Further analyses of the data indicated that, if lepromatous cases are excluded, lepromin reactions tend to be negative more frequently in children where the history of contact with other cases in houses or among families is maximal. On the other hand, hereditary predisposition does not influence the reaction significantly. It is therefore suggested that the most important factor in breaking down cellular resistance in leprosy is continuous contact with an open case. The necessity for repeated lepromin tests is stressed.

The Onset of Leprosy in the Lepromatous Type, by John Lowe and S. N. Chatterji. The authors have closely examined the histories and clinical findings in 249 lepromatous cases to ascertain what proportion commence in the more usual manner with neural symptoms, as opposed to being lepromatous in nature from the onset. They found that 65 to 68 per cent begin with some form of neural symptom. In over half of these nerve trunk involvement was the first noted symptom, nearly one-third commenced with anaesthetic patches with little or no erythema and thickening associated with marked tuberculoid lesions. As tuberculoid cases are very common in Calcutta these findings support the view that major tuberculoid lesions, and long standing neural cases, but rarely become lepromatous. The average duration of the nerve phase was 3.4 years.

Leprosy in the Fyzabad District, by P. J. Chandy. This paper is mainly of local interest, and is based on over 1,000 cases seen in 2½ years. On the assumption that there must be ten cases in the district for every one coming to the hospital, he guesses that there must be at least 7,000 cases in the Fyzabad District. An analysis of the caste incidence brings out a larger proportion of cases among the high caste Brahmins than among the lowest castes, and it is suggested that this may be due to the former travelling more. In 80 per cent of the patients hookworms were present but, as the Editor points out, infections in this region are very light.

The International Journal of Leprosy, Vol. I, No. 1, Jan-March, 1941.

The Use of Diphtheria Toxoid in the Treatment of Leprosy, by D. R. Collier. The following are the claims made in this paper.

“Treatment of over 600 leprosy patients with diphtheria toxoid or antitoxin, over periods varying from a few weeks to 10 months, have given results which far exceed any obtained by me with any other method or combination of methods. Fifty per cent of all early cases treated for six months or more have become symptom-free as judged from the bacteriological examination, the condition of the skin lesions and the areas of anaesthesia, and a general appraisal of the patient's physical condition. The more advanced cases show definite improvement in a high percentage of cases according to the same standards.”

(Unfortunately the reports so far reaching us regarding the tests of this treatment, arranged by Dr. E. Muir last year, have afforded no confirmation of the claims made by the workers in Siam. The unfavourable report by Dr. Moiser published in this issue is confirmed by Dr. Muir's early trials, as well as by letters from several other observers. Full reports of any received will be

recorded in due course. In the meantime judgment should be suspended. Editor.)

Removal of Solitary Lesions in Tuberculoid Leprosy, by Pedro Balina and Guillermo Basombrio: This is an interesting report on the removal by surgery of the primary lesions in fourteen cases of tuberculoid leprosy, including one in which only a nerve was involved. Twelve of them have been followed up for from one year and seven months up to eight years and eight months after the operation, and only one relapsed. In seven further cases the lesions were destroyed by the galvao-battery in three, by electrocoagulation in two and in a third combined with removal of a thickened nerve, and in the remaining case by carbonic-acid snow. None of these had relapsed after $2\frac{1}{2}$ to 9 months. Both groups were also treated regularly with chaulmoogra preparations parenterally and orally, for curative purposes and to help to keep in touch with the patients. The one relapse was in a patient who neglected to continue the chaulmoogra treatment. The authors have been favourably impressed with the results, but recognize that longer observation is necessary in coming to a final judgment in the matter. Illustrations before and after treatment of a few of the cases are included.

The Use of Urea in the Treatment of Perforating Ulcers, by Norman R. Sloan. After a brief discussion of other methods of treatment the writer states that he was led by the advocacy of urea in the treatment of purulent wounds by Robinson in the form of a 2 per cent solution or a 15 per cent ointment or jelly, to try urea in perforating ulcers in leprosy. He found the results most encouraging, with loosening and extrusion of necrotic bone when present. Crystals of urea are packed into the ulcers daily and covered with waxed paper, and a saturated solution instilled into deep sinuses. In 50 Negro cases 80 per cent healed, against 60 per cent by other methods.

Experience with the Naphthalan Oil Bath Treatment of Leprosy, by V. D. Kufnezov. This oil, which only occurs in Russia, has for long been used medicinally at Aznept in the Trans-Caucasian railroad. It adheres firmly to the skin and cannot be washed off with water. Fourteen leprosy patients have been treated by immersion up to the breast in the oil in the sun at a temperature of 40° (presumably centegrade) for 10 to 15 minutes, after which the oil was scrubbed off with a small wooden stick. Usually 10 to 15 baths are given and the patient is not washed during the course. Profuse sweating results, and the first few local and general baths "cause rise of temperature, the general

baths 1 to 20 degrees and the local baths 0.5 to 10 degrees, but it returns to normal after three hours. It is claimed that the writers had not seen such rapid improvement with any other method used in their southern leprosaria.

The Mitsuda Reaction by Vaccines Treated with the Ultra-Supersonic Wave, by Hiroichi Kitano and Takeo Inoué. These workers have found that the "ultra-supersonic wave" apparatus is ideal for dissolving bacilli, so they used it to obtain the complete dissolution of lepra bacilli in an emulsion of a nodule to make perfect emulsions of the tissue particles and bacilli. The Mitsuda reaction was then carried out with this emulsion, with controls by the ordinary bacillary and tissue emulsions. The new vaccines retained their antigenic capacity, but in a much weakened form, and gave very similar results in the different types of leprosy. Filtrates gave no positive reactions, which are therefore not due to soluble substances. The fine bacillary particles in the emulsion are not acid-fast. Rat leprosy bacilli are influenced in the same way by the waves.

The Lepromin Reaction in Normal Dogs; Preliminary Report, by H. W. Wade. In view of the finding of Rodriguez that dogs react positively to intracutaneous injections of lepromin the author has studied these with a view to throwing theoretical light on the nature of the reaction. He concludes that it is allergic in nature, but is not a test of allergic hypersensitiveness. The specific feature in leprosy is the loss of that capability in lepromatous cases.

Serum Phosphates in Leprosy, by Sister Hilary Ross. The serum from 102 leprosy cases of varying types has been examined for inorganic phosphorus and phosphatase activity with a view to throwing light on the bone atrophy of the disease. The serum phosphatase was found to be within the normal limits in 89 of the 102 cases, 3 were slightly above and 10 below the normal.

Infection of the Hamster (Cricetus Cricetus) with Human Leprosy, with Bacillemia, by H. C. de Souza-Araujo. Ten of these animals were inoculated with a fresh emulsion of lepromata subcutaneously in the axilla. Bleedings enabled bacillemia to be demonstrated in three of the animals. Two of the animals examined later after death showed a few acid-fast bacilli in the internal organs, but no leprous nodules.

Contribution a l'Etude de la Lèpre. I. Essais de Culture du Bacille de Hansen, by R. Chaussinand. This laborious investigation occupied seven years and included the use of very numerous culture media inoculated with lepromata from 87 cases of leprosy.

Three cultures of acid-fast bacilli were obtained, one was identified as a human tubercle bacillus of feeble virulence, and the other two as chromogenic paratuberculous bacilli avirulent to guinea-pigs, rabbits and monkeys. They gave negative Mitsuda reactions in nerve leprosy. Further a bacillus was obtained on a special medium after eleven months which is believed to be that of Hansen, but sub-cultures did not yield visible colonies, although slides showed bacilli. Further work is in hand.

A Repeated Leprosy Survey in Southeastern Nigeria. The Progress of Untreated Cases of Leprosy, by T. F. Davey. This is an instructive account of the progress of a number of cases of leprosy during an interval of two years between house to house surveys of a large and very insanitary leper village in Nigeria, during which no treatment had been carried out. Attached to the village was a leper one, built ten years before by the people themselves for the isolation of the more advanced cases of the disease. At the first survey in 1937 6 per cent of the population were found to be affected, a figure that was raised to 6.7 per cent by the addition of some patients absent at the first survey. In 1939 the percentage of cases was only 5.7 apparently as the result of the partial village segregation mentioned, as no treatment had been possible. The records of careful clinical notes and bacteriological examinations made in 1937 were compared with those of 1939 to ascertain the progress of the disease during two years without treatment, classified according to the Cairo nomenclature. A table shows the results in 118 cases, 18 of which had died, 6 from smallpox. Of the remainder 33 were worse, 39 stationary and 28 had improved, or 67 per cent stationary or improved. All but three of the improved cases were tuberculoid or simple macular neural ones, and the three improved lepromatous were in the early macular stage.

All the infectious cases have now been placed in a model leper village, built by the inmates under supervision, where they live quite happily. Regular treatment is being supplied at a newly established clinic, and it is intended to make a further survey in two years time to ascertain the progress. It is on such lines as this that the difficult problem of gradually extending prophylactic measures throughout the provinces around the main settlements is likely in time to be solved.