

ABSTRACTS*

Four Examples of Familial Leprosy in which Children were affected before the Parents. Rev. Coloniale de Méd. et Chir, 1954, Oct. 15, V. 26, No. 228, 182-4. By **E. Montestruc.**

In the four cases described the children showed the disease approximately 1, 6, 3 and 5 years respectively before the parents. The types of disease in the four children were respectively lepromatous, indeterminate, tuberculoid and lepromatous, and of the adults indeterminate in the first and lepromatous in the other three. Three possible explanations of these unusual occurrences are discussed: the adults might have been infected by the children; the children might have been infected by the adults in whom the disease might have been present in an infectious but unrecognised form; parents and children might have been infected by an unknown third party. The author is in favour of the last of the three hypotheses. (He does not mention what efforts were made to discover the third party.)

The Plasma Proteins in Leprosy. Rev. "Fontilles," Valencia, 1954, July, V. 3, No. 6, 467-478, 9 charts. By **F. Contreras, S. Miguel, A. Rodan, J. Guillen, J. Terencio and J. Tarabini.**

While considerable study of changes in blood cells has been made in pathological conditions, the study of the humoral parts of the blood has lagged behind because of its complexity. For the latter the co-operation of chemists and physicists with clinicians is necessary. In leprosy the changes in the plasma proteins are of great importance, and for study the electrophoretic method has been found the most convenient.

After recounting the various vital functions of the proteins the authors give in tabular form an analysis of the plasma proteins in 46 leprosy patients, comparing their percentage deviations with normal deviations. The results showed an increase of total proteins in 44.91 per cent., and a diminution in only 3 per cent. Albumin was diminished in 66.66 per cent, and increased in only 2.23 per cent. Globulin percentage changes were: *alpha* 1 increase 39.02, diminution 17.07; *alpha* 2 increase 69.76, diminution 9.30; *beta* increase 14.89, diminution 19.14; *gamma* increase 63.82, diminution

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4.25. During lepra reaction the proportion of globulins (chiefly *alpha* 2 and *gamma*) increased considerably, returning to normal at the end of reaction. When there are diffuse hepatic lesions *gamma* globulin increases most. In leprous conditions where there is a diminution of proteins the authors recommend the transfusion of blood and plasma, which they have found very efficacious.

The Chemotherapy of Rat Leprosy. J. Applied Bact., 1954, Oct., V. 17, No. 2, 181-4 (11 refs.). By **Betty Croshaw.**

After recounting various trials of drugs that have been made for their effects on *Myco. leprae murium* (see this *Bulletin*, 1954, V. 51, 944, 1168, 1258) the author discusses his own experiments. Five different methods of inoculation and treatment are described. A suspension of ground-up nodule containing acid-fast organisms was injected: (1) in developing chick embryo; (2) subcutaneously in rats; (3) intraperitoneally in rats; (4) subcutaneously in mice; (5) intraperitoneally in mice.

The following drugs were tested: Sulphetrone, DDS, TB1, TB3, PAS, INH (isoniazid), acetone *iso*-nicotinyl hydrazone. There were also controls without bacilli, and controls with dead bacilli.

Only isoniazid and *iso*-nicotinyl hydrazone had any marked effect. "The latter drug undoubtedly acts by virtue of its breakdown to INH as shown by paper strip chromatography." However, the effect of isoniazid against *Myco. leprae murium* infection in mice is not so great as in experimental *Myco. tuberculosis* infections. It is considered that the results of further clinical trials with isoniazid in human leprosy should be awaited before the final value of experimental *Myco. leprae murium* infections in selecting possible drugs can be assessed.

Lepromin prepared from Formolized Lymph Nodes. Rev. Ecuatoriana de Hig. y Med. Trop. Guayaquil., 1954, Jan.-June, V. 11, Nos. 1/2, 106-10. By **E. Blum Gutierrez.**

As the grosser forms of lepromatous leprosy have become more uncommon the author has found it increasingly difficult to obtain fresh leproma from which to prepare lepromin without causing mutilation of patients; especially as the prominent lesions are generally on the face. The same difficulty has also been experienced in other South American countries. In the pathological department of the Hygiene Institute in Guayaquil there were available lymph

nodes which had been excised from a child with lepromatous leprosy, and which were rich in acid-fast bacilli. As these nodes had been preserved for 2 years in formalin the author considered that their value for preparing lepromin would have been destroyed. But on preparing a suspension by the usual Mitsuda method and trying it out on leprosy patients of all types he obtained results comparable with those expected with antigen from fresh leproma. The advantage of using formalized leproma is that small pieces of tissue can be collected as occasion permits, and then suitable quantities of antigen prepared as required. A note is added mentioning that in Brazil lepromin antigen prepared from tuberculoid lesions had been found useless.

Two New Cases of Infant Leprosy in Martinique. Bull. Soc. Path. Exot., 1954, V. 47, No. 6, 781-3. By **E. Montestruc** and **R. Berdonneau**.

Two former instances of leprosy in infants were published by Montestruc (see this *Bulletin*, V. 51, 803).

The first of the two children in the present instance had an achromic macule surrounding the umbilicus at the beginning of its third week. At the time of examination when the child was 17 months old there were similar patches on the face and other parts of the body. Isolated acid-fast bacilli were found in serum taken from the chin. The source of infection had not yet been traced.

The second child was two months old when seen. From the third week of life there were numerous macules on the face. Bacteriological examination showed fairly numerous acid-fast bacilli.

The appearance of these very early cases of leprosy is considered as a sign of the tenacity and virulence of the local leprosy endemicity.

Perspectives in Pathology of Leprosy. Indian J. Med. Sci., 1955, V. 9, Suppl. 1, 44 pp., 27 figs. (22 coloured) on 10 pls. (75 refs.). By **V. R. Khanolkar**.

This is a series of four lectures which the author delivered in various countries, and which it was suggested "deserved publication, as they embodied some unorthodox ideas." The first gives the history of the pathology of leprosy from the time of Danielssen and Boeck up to the present time. The second deals with leprosy reaction and the concentration of bacilli in skin biopsies, with

special reference to children born in leprosy homes and in highly endemic areas.

The third lecture deals with the nature and distribution of cutaneous nerves, and the changes which take place in them in the various types of leprosy. The question of nerve trunks as pathways for infection is discussed. The quotation from Payling Wright that "the semi-solid, or at least highly viscous, consistence of the (axonal) protoplasm discourages any belief that foreign material can be carried for long distances in relatively short times by streaming or circulation of the axoplasm" is contested by the author's statement: "We have recently been fortunate in obtaining transverse sections of fine cutaneous nerve twigs with the bacilli lying in situ and cut transversely. A study of these sections leaves no doubt in one's mind that bacilli are located and travel within the axons. This is illustrated in a few of the 27 illustrations which accompany the lectures. The last lecture describes the classification of leprosy and the changes which may take place in types.

Is the Rendering Positive of the Mitsuda Test by a Primary Tuberculous Infection accompanied by a Relative Anti-Leprosy Immunity?

Bull. Soc. Path. Exot., 1954, V. 47, No. 6, 771-5. By H. Floch.

It has been noticed that in French Guiana the form of leprosy among the Europeans is more of the severe lepromatous type than among the indigenous Creoles. Comparing Creole with European prisoners, who come to French Guiana in adult life, it was found that among the lepromin-positive patients of the Creole group 73 were tuberculin positive as compared with 100 per cent in the European group; whereas among the lepromin-negative (chiefly lepromatous) patients the Creoles showed 40 per cent tuberculin positive as compared with only 33 tuberculin positive among the Europeans. This is accounted for by the fact that the Creoles had acquired some slight resistance to leprosy by contact with it during their earlier years, while among the Europeans such contact had not been possible. From this it is argued in reverse that a negative tuberculin reaction augurs worse for a European than for a Creole as he is more likely to acquire the negative lepromin (chiefly severe lepromatous) form of leprosy. It is further argued that a previous mild infection with tuberculosis gives para-immunity to leprosy, and that BCG vaccination gives a certain amount of resistance to leprosy.

Ocular Leprosy, with reference to certain cases shown. Proc. Roy. Soc. Med., 1955, Feb., V. 48, No. 2, 108-12 (Sect. Ophthalm. 2-6). By **P. D. Choyce**.

This lecture is part of a symposium at which ocular leprosy was discussed and six cases of leprosy of the eye were demonstrated.

The results of involvement of the VII and of the V nerves are described, the former causing myo-atrophy of the superior part of the orbicularis oculi muscle, and the latter causing corneal anaesthesia and sometimes ulceration of the cornea. Various theories of the modes of infection of the eyeball are discussed, the author favouring the opinion that "in view of the known predilection of the leprosy bacillus for peripheral nervous tissue . . . (it is a reasonable) theory that they migrate to these regions along the ciliary nerves." The pannus of leprosy is distinguished from that of trachoma by the absence of involvement of the tarsal plates, abundant anastomoses between the vessels, and a lesser degree of infiltration of the substantia propria. A statement is made that "secondary glaucoma is frequent and of great danger to the patient, as it is this complication which is, in part, responsible for the high incidence of blindness in ocular leprosy."

The claims of Elliott (this *Bulletin*, 1951, V. 48, 75) to have diagnosed six cases of leprous choroidoretinal lesions is questioned, leprosy being considered as confined to the anterior segment. Provided the disease is in the quiescent phase, ocular leprosy responds surprisingly well to surgical procedures.