by the size of the testis and spleen, and by the bacterial index of tissue suspension of lung, liver and spleen.

No. of bacilli per cc. testis homogenate control group

No. of bacilli per cc. testis homogenate test groups

of the control group of rats, infected with living bacilli but untreated, as zero, the ratio of the DDS-treated group was 65 and that of the Vadrine-treated group was 900, showing that both substances have a therapeutic effect, but that Vadrine is more efficient than DDS. The test results obtained in animals infected with bacilli treated with heat gave a ratio of 58, this giving rise to the suspicion that the technique for heat treatment (5 min, at 100 °C) was incorrect or insufficient. [From abstract in Trop. Dis. Bull. 55 (1958) 1237.]


It having been found that 3-amino-4-hydroxybenzoic acid hydrazide (ABH) and α-amino-undecenoic acid have some effects on the tubercle bacilli and are effective in experimental tuberculosis in mice, the effects of these agents in the prevention of murine leprosy have been investigated. It was found that ABH has some infection-suppressing action. Application of this agent in human leprosy is being studied. [From abstract.]


Mice inoculated with the murine leprosy bacilli were treated with a light sensitive dye, Neocyanor 12. Short-term treatment showed a suppressive effect on leprosy development, but long-term treatment had an enhancing effect, as shown by excessive and accurate measurement of the leepromas. Histologic examination of the leepromas by fluorescence microscopy showed that the form of many of the bacilli in the treated group was altered, and that disrupted forms increased parallel with treatment. This shows that there was no relationship between the therapeutic progress and appearance of abnormal forms. There was no significant difference between the treated and control groups in the numbers of bacilli present in the leepromas. [From abstract.]

REVIEW


Prof. A. Dubeis presided over this colloquium, and the other participants were Dr. Ch. Driect, S. G. Broacce, M. Lechat, J. Cap, and A. Thys. The principal types and groups of leprosy were studied histologically and discussed. At the end, Prof. Dubeis summed up as follows:

The colloquium led to the conclusion that clinical and bacteriologic examinations usually suffice for the diagnosis of leprosy and its type, and that the histologic examination can only assist in a very small degree if these other examinations are well done. Because of the great numbers of cases, the histologic examination should not be demanded as a matter of routine, but reserved for (1) cases in which the diagnosis remains in doubt even after the full resources of clinical and bacteriologic methods have been employed, (2) for cases in which classification is of particular interest, when the clinical and bacteriologic examinations do not afford a clear answer, (3) in special circumstances, in the control of cure of bacillus-positive lepromatous or dimorphous types, for occasion-
ally this examination permits the demonstration of bacilli in nerve fibers in apparently clinically cured cases, and (4) in scientific studies.

Histology should be able to give a reply to the following three questions: (1) Is there leprosy? (2) If there is leprosy, of what type? (3) Are there signs of activity of the leprous process?

We have tried to define the criteria which will enable a histopathologist to reply to these questions by biopsy of skin lesions.

1. Diagnosis of leprosy.—The criteria for this may be sure, or probable. The sure signs are: (a) a lepromatous structure with typical cells and bacilli; (b) the presence of acid-fast bacilli, even isolated, in the nerve fibers; (c) the presence of numerous acid-fast bacilli in packets or in globi in an infiltration of band character; (d) a tuberculoid infiltration in the nerve fibers; (e) a chronic inflammatory infiltrate, quite basal, either outside or inside the nerve fibers, associated with a tuberculoid infiltrate in other portions of the specimen.

The probable signs are: (a) a basal chronic inflammatory infiltrate in the dermis, associated with a similar one either outside or inside the nerve fibers; (b) a tuberculoid infiltration of the dermis without necrosis, not accompanied by an obvious hypertrophy of the dermis (the absence of necrosis generally excludes tuberculosis or tertiary treponematoses). The histologic diagnosis between leprosy, certain tuberculids, and sarcoïds may be impossible. (c) An obvious hypertrophy of the epidermis is opposed to a diagnosis of leprosy.

When the changes mentioned under (a) are associated clinically with macules the diagnosis is almost certainly leprosy.

2. Classification.—In general the histologic examination cannot furnish evidence for the classification of a case unless it has not yet been treated. Under the influence of treatment the histologic structure alters more or less rapidly, loses its polar features, and becomes basal. The features of the different types of cases are:

(a) Lepromatous leprosy: Presence of Virchow cells in strands, fasci, or patches, containing numerous acid-fast bacilli, separate or in bundles. The nerve fibers are generally not invaded. The Uana or Grenzstrefen band is not constant, but its presence favors the recognition of the lepromatous type.

(b) Tuberculoid leprosy: The presence of a tuberculoid infiltrate of epithelioid cells, with giant cells of Langhans type, thence the nerve fibers are invaded. The infiltration does not always reach the epidermis, but if it does so extensively, and elevates it, favors the recognition of the active tuberculoid type. Acid-fast bacilli are very rare or absent. The reactional state modifies the structure by edema and the occurrence of small round cells (lymphocytes and plasma cells) and tends to elevate the epidermis.

(c) Dimorphous or borderline leprosy: The picture has features common to the two preceding types.

(d) Indeterminate leprosy: There is a basal infiltration localized around the vacuolated plexuses. Acid-fast bacilli are sometimes absent, sometimes relatively numerous. The presence of cells of the polar characters (either Virchow cells or epithelioid and Langhans giant cells) would indicate a tendency to evolve to the lepromatous or tuberculoid types.

3. Criteria of cure.—A cured case should not show acid-fast bacilli, Virchow cells, epithelioid, or giant cells, nor a basal infiltrate of any importance. The disappearance of these features does not prove cure, but only means that the histologic picture does not contradict the clinician's opinion of cure. Some basal infiltration may persist and be consistent with cure. On the other hand, the persistence of acid-fast bacilli, or of the least degree of lepromatous or tuberculoid infiltrate, means that cure has not been attained. In short, the evidence afforded by histopathology against the diagnosis of cure is decisive, whereas that in favor of cure is not.

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