

REVIEW

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Prof. A. Dubois presided over this colloquium, and the other participants were Drs. Ch. Dricot, S. G. Browne, M. Lechat, J. Cap, and A. Thys. The principal types and groups of leprosy were studied histologically and discussed. At the end, Prof. Dubois 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 histological 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 leprotic 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 banal character, (d) a tubercloid infiltration in the nerve fibers, (e) a chronic inflammatory infiltrate, quite banal, either outside or inside the nerve fibers, associated with a tubercloid infiltrate in other portions of the specimen.

The *probable* signs are (a) a banal chronic inflammatory infiltrate in the dermis, associated with a similar one either outside or inside the nerve fibers, (b) a tubercloid infiltration of the dermis without necrosis, not accompanied by an obvious hypertrophy of the dermis (the absence of necrosis generally excludes tuberculosis or tertiary trepanematoses). The histologic diagnosis between leprosy, certain tuberculids, and sarcoids 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 banal. The features of the different types of groups are:

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

(b) Tubercloid leprosy: The presence of a tubercloid infiltrate of epithelioid cells, with giant cells of Langhans type. Generally 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 tubercloid 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 banal infiltration localized around the vasculoneural 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 tubercloid types.

3. *Criteria of cure.*—A cured case should not show acid-fast bacilli, Virchow cells, epithelioid, or giant cells, nor a banal 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 banal 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 tubercloid 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.—J. ROSS INNES