however, that not one of those who adopt this latter attitude has ever made any serious attempt to employ the method he condemns, and he reproves those who, with Ziehen, are content to exclaim "Nonsense!" when, since they refuse to attempt proof, they are only entitled to put forward the modest verdict, "unproven." Löwenfeld is unable to accept Freud's theory of the sexual origin of neurasthenia, but after long investigation he substantially agrees with Freud concerning the causation of the neurosis of anxiety, and also obsessional neurosis (which he believes may be successfully treated by Freud's method but not by hypnotism), though not as regards obsession in general. He maintains an attitude of reserve towards Freud's theory of hysteria, believing that many facts cannot be harmonised with it, and he points out that Jung, who is a follower of Freud, considers that there are types of hysteria not covered by the theory. Freud's great service, in Löwenfeld's opinion, lies in his conception of the part played by the unconscious in psychic life and his therapeutic method of removing morbid states by translating them from the unconscious to the conscious. The place assigned by Freud to the sexual element in the causation of morbid conditions is a comparatively unimportant matter.

HAVELOCK ELLIS.

---

4. Pathology of Insanity.

The Significance of Plasma-Cells in the Histopathology of Progressive Paralysis [*Über die Bedeutung der Plasmazellen für die Histopathologie der Progressiven Paralyse*]. (*Zeitschr. f. Psychiat., vol. lxvi, part* 34.) *Behr, H.*

Since Nissl and Alzheimer have drawn attention to the infiltration of cells into the vessel sheaths, to the regular finding of Marschalko's plasma-cells in the infiltrations, and further, to the appearance of peculiar cells described as rod-like in the cortex of paralytics, the microscopic diagnosis of the disease has advanced greatly in clearness and certainty.

Certainly in the remaining tissue of the cortex both ectodermal and mesodermal "Provenienz" changes have been noticed (especially in advanced cases), and other changes which go to confirm the diagnosis. To these the author adds disturbances of the normal cortex architecture, the displacement of, and subsequent changes in, the ganglion cells, which generally have very distinct growths like fibrous glia, the atrophy of the tangential vessels of the supraradial crust, and lastly, the various changes in the vessels (growth of cells in the vessel walls, building of germs, increase of capillaries).

The pathological changes generally found in the cerebral cortex are in no way typical of paralysis, while we have, after examination for plasma-cells, at least a very characteristic, and, by its easiness, an excellent means of separating paralysis histologically from other mental ailments, even if the finding of the rod-like cells has not helped to confirm our diagnosis.

Vogt holds the plasma-cells to be directly pathognomic for paralysis, and questioned whether they were to be found spread diffusely over the

cortex in other states. Havet and Alzheimer, on the contrary, are of opinion that this condition is to be found in certain cases of idiocy.

In the histo-pathological differentiation of paralysis and syphilitic meningo-encephalitis great difficulties often arise, especially when the syphilitic process does not confine itself to small portions of the meninges, but spreads itself over a larger or smaller portion of the pia and the brain substance thereunder. Here are also to be found infiltrations of cells into the cortical vessels. The infiltrations, as in paralysis, contain, besides lymphocytes, plasma-cells. In lues is noted the dependence of the encephalitic process on the infiltration into the meninges—a dependence which cannot be traced in paralysis, where the regular appearance of a larger or smaller purely pia infiltration and the changes in the cortex are expressions of an inflammatory process, which attacks equally the vessels of the pia and the brain substance. At the same time, there can be no question as to the difficulty of differentiating the two diseases by microscopical findings. There are cases in which paralysis cannot possibly exist, and in which plasma-cells have been found, generally in confined spaces in localised diseases, and mostly in small quantity.

The author gives results of microscopical examination in 115 cases. Thionin was used very successfully for staining. In 59 of the cases paralysis was diagnosed clinically, and was confirmed histopathologically in 55. In each of these 55 cases the plasma-cell infiltration was traced to the sheath of the vessels of the cortex and of the medulla. Sometimes the cells were isolated and scarce, being with difficulty discovered among numerous lymphocytes; at other times they were found in large quantities among lymphocytes, mast cells and other forms of cells, forming the broad cell rings which often surrounded the narrow vessel lumina, and gave to the microscopic picture in many cases a very characteristic appearance. They were generally confined to the larger vessels on the adventitial lymph-sheaths, but, in cases where the inflammatory infiltration reached the media and the intima, they were found in other layers of the vessel wall, and in the lumen. They were also to be traced to the smaller capillaries, and often by their quantity covered the vessel wall. They were sometimes found in the brain substance, at some distance from the vessels; cells thus found were isolated and retrogressively changed. It appears from this, that in relatively rare cases the plasma-cells, which are doubtless of hæmatogenous origin, can over-reach the biological boundary between mesodermal and ectodermal tissue. According to a lately published work by Ranke, in young, and especially in fœtal organisms, the tendency is, when there is an infiltrative inflammatory process, to a diffuse spreading of the hæmatogenous elements through the nervous substance. This he confirmed more successfully in a few cases of diffuse, although not purulent, fœtal encephalitis, than in cases of lues congenita. At all events, this is not frequently observed in paralysis, and in each case the examination must be most careful, as the delicate capillaries, which are often only recognised by isolated endo-cells, can easily be overlooked.

Vogt's opinion that the plasma-cells are most plentiful in cases where the disease progresses quickly is confirmed, although this was not found in every case.

The plasma-cell infiltrations were spread diffusely over the whole cortex in paralysis, although their quantity differed in the several regions. They were most numerous in the frontal region. Examination of the plasma-cells showed degenerative and other changes. They were also found in the central ganglia, in the cerebellum, and spinal cord. They were richest in the optic thalami.

The conclusions reached by the author are that stress must be laid on all sides on the importance of plasma-cell infiltrations into the vessel sheaths of the brain for the histopathology of progressive paralysis. There is no true paralysis without this, and its absence denotes that paralysis is not present. The diffuse spreading of plasma infiltration is the most characteristic sign of paralysis. At the same time, the finding of isolated plasma-cells can in no way lead to the conclusion that a paralysis was present. The cells are also found, isolated and in circumscribed areas, in other diseases of the nervous system, as phenomena of an inflammatory process, which runs its course subacutely in the vessel walls. The only certain characteristic as yet is the diffuse entry of the plasma-cells into the central nervous system. This, it has long been confirmed, is not found in any other disease, as we have, up to the present time, found a diffuse inflammatory process of the vessel walls only in paralysis. HAMILTON C. MARR.

A Contribution to the Study of the Pathological Anatomy of Progressive Paralysis; Visceral Alterations; Some Considerations Regarding Plasma-Cells [*Contributo allo Studio dell'Anatomia Patologica della Paralisi Progressiva; Alterazioni Viscerali; qualche Considerazione sulle Plasmacellule*]. (*Riv. di Patol. Nerv. e Ment., vol. xv, Fasc.* 1.) *Catola, G.*

Dr. Catola has examined the liver, kidneys, spleen, muscles, peripheral arteries, and in a few cases the optic nerves, in progressive paralysis, and has reached the following conclusions:

(1) In the viscera of general paralytics a series of vascular and perivascular alterations are found, lymphocytic infiltration, and plasma-cells. Alterations are also present in the parenchyma, especially of the nature of a cloudy swelling and degenerations. These changes are comparable in great part to what obtains in the nervous centres. They cannot be considered as lesions essentially specific in regard to progressive paralysis, especially when they are found in the nervous centres, as such changes are found in other dyscrasias and toxic states. Lymphocytosis and the presence of plasma-cells are phenomena giving evidence, more or less, of connective-tissue hyperplasia.

(2) The presence of lymphocytes and plasma-cells, especially in the liver, are characteristic enough of general paralysis when the infiltration of such elements is diffuse and more or less uniform throughout the liver, and more particularly when focal lesions, such as tumours, parasites, abscesses, etc., and other diffuse but recognisable lesions, such as tubercle, syphilis, cirrhosis, etc., are wanting. Normally the liver and kidneys do not contain plasma-cells and lymphocytes; when they are rich in such elements, and more or less recent cirrhosis is not present, the liver and kidneys are probably those of paralytics.

(3) In none of the paralytics examined have the histo-pathological