

hemispheres of the brain; (b) a marked difference in specific gravity of the corpora striata and thalami optici of the opposite sides; (c) an increased vascular condition of the grey matter, and anæmic condition of the white.

The previous state of our knowledge of the nervous diseases now under consideration has inclined pathologists to arrange them into three sets, namely:—(1.) Those in which anatomical lesions of the nervous substance have been ascertained to exist; (2.) Those in which no organic change of the nervous structures has yet been detected; (3.) Those chiefly of a mental kind, in some of which organic lesions have been observed, in others not. But a more complete examination by extended methods of research, may ultimately lead to considerable modifications of an arrangement which seems in a great measure founded on imperfect knowledge.

There is perhaps no class of diseases, the history of which abounds with more conclusive evidence of the advantages to be gained by extended and varied instruments of pathological research, than affections of the nervous system. If we compare the state of our knowledge of these diseases with that possessed by physicians a hundred years ago, it will appear that by improved methods of research and examination, diseases which were before unknown, or classified amongst those of the second and third order referred to above, come to find a place in the first, so as to increase the number of those in which an appreciable change of texture is apparent after death. It is a commonly received opinion, that fundamental derangement may exist without organic change; but when fundamental disorder is prolonged, as in the case of the heart, the structure of its substance becomes in some part or other organically changed. But although, in many instances, our means of observation are not as yet such as make it apparent whether a change of an organic kind, hitherto incapable of detection, may or may not precede a functional change, we are not, therefore, warranted in assuming that in cases of functional disturbance, organic change is always of secondary origin.

It is by no means intended here to assert that all diseases are essentially the result of structural alterations. But although in many instances these may be of a kind inappreciable by our present means of observation; and although hysteria, chorea, epilepsy, and insanity, for the most part leave behind them no pathological change of a constant or characteristic nature, yet we are still so little conversant with the changes to which the organs involved are liable, that it is reasonable to believe that the delicate texture of the nervous system may be organically changed in some parts of its substance, although it may further be remarked, that the congenial nature of some of these affections, and the permanence of the functional derangement, add probability to the view of a coincident organic lesion. This remark applies particularly to mental diseases; and in reference to them it may further be stated that although marked organic changes often appear to be absent, yet even in the obscurer cases a morbid condition of the brain may be indicated by various observations of the following kind: namely, change of colour of the nervous texture; altered consistencies; abnormal vascularity; softening; increase or deficiency of size, or of specific gravity, congenital malformation. And although, also, it may be urged, that such morbid conditions of the grey matter of the brain, as well as other changes of the fibrous substance, are not significant of any fixed or particular form of mental or nervous derangement, yet it has been clearly shown that every variety of lesion has been associated with one distinct functional change, viz. *insanity*.* Our knowledge of the physiology of the brain is not yet sufficiently far advanced, to state with certainty the varied conditions under which the different parts of the encephalon may be modified in their operations, by an alteration of structure in other parts of the nervous centres, more especially when such alterations are of congenital origin, and of gradual development. The compensating and vicarious powers of different organs and textures of the body, are also now so fully recognized, that every allowance must be made for the natural performance of function, although a part of the organ may be in a condition

*Hitchman, Pathology of Insanity. Psychological Journal, vol. iii. p. 519.