portion of the central nervous system. According to the situation of the cells primarily discharging, we get various kinds of seizures which Jackson has designated as lowest level fits, middle level fits, and highest level fits,—the lowest level including roughly the cord, medulla and pons, the middle level, the "motor regions," and the highest level, the praefontal lobes. These several classes of fits differ very materially from one another in many particulars, but all agree in possessing as a most prominent symptom badly co-ordinated and bizarre movements of some or other muscle groups. It is only in the fits originating in the "highest level" of Jackson, that we regularly get unconsciousness, and it is these fits alone that are properly termed epileptic.

Save for the researches of Bevan Lewis and those of his bent, practically nothing definite has been done towards the demonstration of any morbid anatomical condition in connection with epilepsy. Lewis, however, claims that, by adopting certain simple staining methods for fresh sections of tissue, a fairly well defined and nearly constant vacuolation of the nuclei of the second layer of cortical cells can be made out. By no means the majority of microscopists in the pathologic field are able to make the same findings as Lewis, and some competent men declare that they are frequently able to detect very similar tho' perhaps not identical—conditions in the normal cerebral cortex after excessive fatiguing exercise. Although the claims of Lewis, therefore, are not absolutely disallowed, it is considered—by many at least—that the changes in the cells are consequent upon rather than causative of the epileptic discharge.

In a great many instances we can look back into the family history of epileptic patients and find evidence of a neurotic strain, and it is ordinarily assumed that many come into this world with an excitable tendency of nerve cells. This may to an extent be true, but I feel that too much weight is attached to heredity as a cause of peculiarities of constitution which might with more reason, be attributed to association and environment. And I am loth to believe that an individual becomes a subject of epilepsy because a progenitor happened to be afflicted with that disease. I incline however to the conviction that epilepsy develops *de novo* in every person who is so unfortunate as to become its subject, and that what is ordinarily signified by the term epilepsy, instead of being a disease in itself, is a group of symptoms indicative of systemic disorder—that the lack of inhibitory power which we believe to exist in the motor cells is (in the "idiopathic" affection) the result of mal-nourishment consequent upon the insufficient removal of some waste product (*i. e.*, toxic material) which, as a mild but constantly acting irritant, tends to make unstable the cerebral cells—and that it is towards the discovery of such toxic material that we must direct our attention if we are to find the cause of the trouble. Perhaps instead of there being merely a defect in the elimination of the poison, there may actually be an excessive production of it. The convulsion may be determined either by the accumulation of the poison to an unbearable extent, or it may result from some slight external stimulus (as a sudden flash of light, or a loud noise) which ordinarily would have no effect, but which is nevertheless sufficient to cause the discharge of cells rendered highly unstable. It is, of course, necessary to assume that the seizure is effective in inducing an extra elimination of the poison. This I think is reasonable from the fact (definitely ascertained by Horsley) that the brain is hyperaemic during a convulsion—a