

incapable of healthy action; and while the great variety of morbid changes which have been observed in hysteria, chorea, epilepsy, and cretinism might leave it doubtful whether any are constant, the congenital nature of these affections, along with the gradual and increasing development of the morbid symptoms, under various exciting causes, give great probability to the view that alterations of structure originally existing have only been increased and made more manifest by various excitants of the nervous system.

The observations of Drs. Howe and Kneeland in the *American Journal of Medical Science*, contain abundant evidence confirmatory of these views, and bearing more immediately on the following points:—

1. The hereditary transmission of insanity.
2. The birth of imbecile children from imbecile parents, and from parents in whom the size of the brain is deficient.
3. The prevalence of hysteria, chorea, and epilepsy among imbeciles, and among children born of imbecile or dissipated parents.
4. The general coincidence of organic change of the brain and cranium with the affections of idiocy and cretinism.

The history of this case of chorea, as given by Dr. Weir, shows that the treatment to which the patient had been subjected, particularly in early life, was calculated to induce disturbance of the nervous system, and to foster a predisposition to imbecility, while the following conclusions, derived from a comparison of some of the morbid conditions with well ascertained facts, tend to connect the organic changes with an imperfect condition of the functions of the brain.

The weight of the brain (46 ounces avoird.) is above the average weight of the female brain, as given by Dr. Reid, at the age of 17 years. The average circumference of the female head is ascertained to be 21·5 inches, and while the greatest circumference obtained from idiotic crania gives only 20·7 inches, it is evident that when we compare the size (46 ounces) with the dimensions given in the case before us, and also take into account the difference of specific gravity of the central parts of the brain on the two sides, it shows a disproportion between the weight of the brain and the capacity of the cranium—an observation which coincides with measurements made in a certain class of idiots: and if to the above mentioned changes of the specific gravity we add the increase of vascularity, we see more and more reason to conclude that some physical change has taken place in the texture of the brain, and more especially in the central parts.

A change of a morbid kind may exist in a single part, and may therefore be readily appreciated, or it may exist more generally diffused throughout the whole mass, and be only capable of detection by observation on large quantities. This is more particularly the case with vascular congestion of the brain, and more widely diffused changes in the vesicular elements of the nervous system. Of all the morbid changes associated with insanity, epilepsy, and chorea, there are none which occur with greater frequency than congestions in the nervous centres, either of a local or of a general character; while it is also the opinion of the most experienced physiologists, that congestions of a local kind may occur during life, without leaving any marked evidence after death of their previous existence. Other changes are of frequent occurrence, giving rise to symptoms similar in kind, although the morbid conditions of the textures may be different; and Dr. Bennett has the merit of clearly pointing out “that death may be occasioned by structural changes in the brain, which are altogether imperceptible to ordinary vision.”* We must not, therefore, at once conclude that organic lesions are altogether absent, because appearances do not indicate any of those which have hitherto been familiar to us. Other methods of research may be in store, and among them observations to determine the specific gravity of parts not yet examined.

While anatomical and physiological observations assign to cerebral congestion a very prominent place in the pathology of insanity and convulsive

* Inflammation of the Nervous Centres, 1840