

functional the disease is, the more surely is it preceded by a melancholic stage. In the same chapter we have his "theory of mental diseases."

The work concludes with a chapter on therapeutics, which contains nothing new.

We have thought fit to devote so much space to this work, as it is the volume of Ziemssen's great encyclopædia belonging to our branch, and as it bears the name of the Superintendent of the Illenau Asylum. But the text-book can scarcely be regarded as a success. In the first place the style is quite enough to frighten away the most enthusiastic student, it is so "high-flown" and obscure. He translates the simplest remarks into psycho-physical and molecular language, and introduces such terms as "co-efficient of expansion" for a psychological process, till one begins to think the book is written by an imaginative psychologist, and not by a medical man. As will be seen from the analysis we have given, his classification rests on a very theoretical basis, and many groups are distinguished by the merest hair-splitting. It is not a volume that should be placed beside Kussmaul's "Pathology of the Speech," or Bartel's "Disease of the Kidneys."

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*Cyclopædia of the Practice of Medicine.* Edited by Dr. H. VON ZIEMSEN. Vol. xii.: *Diseases of the Brain and its Membranes.* By Professors NOTHNAGEL, HITZIG, OBERNIE, HEUBNER, and HUGUENIN.

Nothnagel begins this volume with an exhaustive article or treatise on anæmia, hyperæmia, hemorrhage, thrombosis, and embolism of the brain, extending to 228 pages. This is well worthy of study by those engaged in psychiatric practice. As a matter of fact we believe that in no class of diseases is cerebral (convolutional) hyperæmia more common than in maniacal conditions. Whatever may be the result of further studies into the *vasomotor* innervation of the brain itself, no one can doubt that the supply of blood to the various parts of the brain is regulated by different vasomotor nerves, and no one who has carefully studied even the naked eye appearances in sections of the brain of those who have died during recent acute insanity can doubt that the blood supply of the various portions of the brain had been most seriously deranged during life in

those cases. The great characteristic of the blood supply in these cases seems to be its irregularity. Sections of such brains look marbled, some portions being perfectly anæmic, while others are intensely congested; those anæmic and congested portions respectively being in *areas* often very clearly defined from each other. There is no doubt also that in many cases dying insane, while the anterior lobes or portions of them may be intensely hyperæmic, the posterior lobes may be very pale and bloodless. Then the different layers of grey substance may contain very different quantities of blood. We have seen the outer layer quite pale and bloodless, while the inner layers and the white substance next them was most intensely congested. In those patients who have died after many hours of convulsions in general paralysis or epilepsy the congestion of the whole brain is such as we have never witnessed in any other disease. Nothnagel points out that the psychical symptoms of cerebral anæmia are nearly always of an excited type, often with hallucinations of sight and hearing and delusions of persecution, the collective symptoms being, therefore, those of *melancholia agitata*. This is instructive to the student of the psychoses, for if there is any pathogenetic fact that he is accustomed to hold, it is that melancholic states or those of mental pain are connected with and probably result from deficient nourishment of the convolutions of the brain. One is apt to be puzzled at first by the occurrence of excitement or motor restlessness in such cases, not remembering that this may occur equally in melancholia as in mania. We believe that there may be hyperæmia by stasis in a very ill-nourished brain indeed, especially if there is some atrophy of the organ. The author gives a needed warning, which he puts indeed in an exaggerated form when he warns his readers "against the fashion of referring permanent states of mental excitement or depression of every kind to anæmia and hyperæmia of the brain." He means of course that the *ordinary* anæmias and hyperæmias don't cause typical insanity. The transitory psychical conditions that result from such states have scarcely been sufficiently studied.

In treating of hemorrhage he does not notice the fact that such hemorrhages, microscopic and naked eye, occur with far greater frequency in the pia mater and outside the brain in those who have suffered from insanity before death than in ordinary cases. It is not true, for instance, among the insane that hemorrhages in the brain are most common in the *capsula*

*interna* of the left corpus striatum. They are far more frequent in the pia mater. He omits to mention as a psychical symptom of the softenings that follow hemorrhages, especially if they are situated near the pons, the emotionalism or loss of inhibitory power over the muscles that express the affective states.

Obernier, in his chapter on Tumours of the Brain, makes special mention of the disturbances of its psychical functions, rightly pointing out that in many cases where they seemed to be absent this was merely because they were not carefully looked for, and no pains taken to compare the former mental condition of the patient with the present. He thinks that the patients with tumour are, as a general rule, depressed, their power of mental application is diminished, their memory impaired, and frequently there is aphasia. He scarcely alludes to a very marked symptom indeed in most cases of tumour, and that is the mental irritability of the patient.

Heubner treats of syphilis of the brain. This is a subject he has made his own by original observation, and his now well-known work on the arteries of the brain. He thinks that syphilis of the nervous system "almost invariably appears at a late period—in fact, when the syphilis has lasted for several or often many years." He considers that hereditary predisposition to nervous disease and psychical influences, such as severe mental labour and fright, are important predisposing causes. He describes that form of syphilitic disease of the brain which is similar to general paralysis in its symptoms, but gives no diagnostic signs. A practised eye can usually detect the difference, but it is difficult to put it down. In the first place the expression of the face is different, and especially the expression of the eyes, as well as the state of the pupils. The paralysis is always more localised in the syphilitic diseases, and its course is not so uniform.

Huguenin gives an admirable description of *Pachymeningitis Interna Hæmorrhagica*, or false membranes under the dura mater. This is more commonly found in certain of the varieties of insanity, notoriously general paralysis, than in any other class of nervous diseases. The weak point in Huguenin's account is the pathogenesis of this affection. This has always seemed to us most interesting and suggestive. The mere description of the pathological appearances, naked eye and microscopic, is easy though important. The explanation of how this cross between an inflammation, a hemorrhage, and

an œdema should take place where it does, is very difficult indeed. Its name is a misnomer. It has almost nothing in common with a meningitis proper. We believe its great interest lies in what it indicates as to the state of circulation and malnutritions of the pia mater and the convolutions, and not in what it is itself. Its existence we believe to be an accident of the physical conditions under which the brain is supplied with blood. That organ lying in a shut box, when its blood supply suddenly changes, in amount from intense hyperæmia of the pia mater—this being the result of morbid calls for blood in malnutritions of the convolutions—is yet almost loose as it were in its case, with a space filled with the cerebro-spinal fluid round it. We think that when the conditions of the blood-supply alter, which means that the bulk of the organ changes, and there are sudden shrinkages and expansions from the causes we have mentioned, and especially if, with this there is degeneration of the arterioles, then we may have these false membranes forming under the dura mater. An imperfect analogy uniting some of the physical conditions, but not the congested pia mater, is found when we put a cupping glass on a delicate skin and cause œdema, irritation, and capillary ecchymoses; and when a false membrane is once begun, we have a condition of matters that makes its advance and recurrence certain, for we have a multitude of small vessels with badly formed walls and no compact surroundings, which are ready to burst whenever there is a suction-pressure on them. The first layer of membrane formed is a new pia mater, with all its vessels fragile, and on fibrous matrix to support them.

Concerning the other affections of the brain which Huguenin so exhaustively treats of in the 400 pages which he fills, we have no time to speak. We can only refer our readers to the volume for the accounts of the diseases of the pia mater, the tubercular, and other meningitis, encephalitis, abscess of brain, and chronic affections of the internal ear.

Hitzig concludes the volume by articles on Hypertrophy and Atrophy of the Brain and General Paralysis of the insane. The last thirty pages are devoted to general paralysis, and we must say at once that its treatment disappoints us exceedingly. The article on this most interesting of all cerebral disease is not worthy of the reputation of the rest of the work. He professes at the beginning that the article is not intended for alienists, and his experience of the disease would need to be

small indeed who could learn anything from it. Hitzig very clearly wrote his article from book knowledge rather than from observation in the wards and dead-house. He strings together lists of symptoms and post-mortem appearances of monstrous length, making no attempt to tell which are the essential and the important, and which are infrequent and of no real consequence. We, on the whole, agree with the following "formulation of the view which at present seems the most probable, viz., that general paralysis in the more restricted sense, and, so far as concerns the brain, is a chronic, or sometimes, rather, a subacute interstitial (peri) encephalitis, which in course of time leads to the destruction of the ganglion-cells and to atrophy of the brain." We accept "peri-encephalitis," as expressing a pathological process more like a subacute inflammation than anything else. In reality we believe the pathological process in this disease to be one *per se*, one conditioned by the unique conditions of the blood supply in the brain, together with the extraordinarily delicate and highly organised parenchyma of the brain convolutions. We know enough even now of the constitution of the "workshop of the mind" to enable us to say that its complexity and delicacy as far transcends any other organised substance in nature as mental energy exceeds all other forms of energy in importance; and we believe general paralysis is one of the special diseases of this marvellous structure, peculiar to it, and unlike any morbid process to be found elsewhere. We have a sense of keen disappointment when an able man like Hitzig seems to have no real notion of the interest and importance of the disease he is describing, nor any feeling of enthusiasm in thinking that here at last we have a mental disease where the organism is always disorganised, and where every true idea of the disorganisation we get helps us to understand better the mysterious connection between "mind and matter."