In the light of the recent report of the Criminal Responsibility Committee of the Association it is worthy of note that this steady flow of acute cases occurs in an institution which has hitherto possessed neither the staff nor the accommodation of an asylum, whilst their numbers have apparently tended to support the now exploded fallacy that imprisonment is a cause of insanity.

---

*Mental Disease (not General Paralysis) associated with Tabes Dorsalis.** By P. W. MACDONALD, M.D., and A. DAVIDSON, M.B., Dorset County Asylum.

The object of this paper is not so much to relate anything that is new as to show that mental symptoms are not always easy of classification when associated with organic changes in nerve tracts outside the cerebral cavity.

We have had doubts as regards a heading to this contribution mainly because of the often accepted doctrine that general paralysis is, *per se*, the mental condition associated with tabes. Now while not questioning the general validity of this doctrine, we wish to take exception to its infallibility, and by the aid of a most interesting case will endeavour to show that you do meet with patients suffering from ataxy with mental symptoms amounting to insanity and yet not general paralysis.

W. C., æt. 39. Supposed to be a sailor; found wandering; was admitted on May 1st, 1896. The medical certificate was as follows:—Facts observed: Evidence of general paralysis of the insane—plus locomotor ataxy, viz., no patellar reflex—ataxy in gait; tremulous slurred speech, internal strabismus in left eye; pupils—right, Argyll Robertson; longitudinal tremor of tongue; flushed greasy skin, very feeble grasp, and strength small in all movement. Trying to give dates and places where he has been lately, gets confused and cannot give the dates.

Facts communicated: "At the station (police) sat hitting his face hard several minutes until the nose bled. Attempted to hit the constables."

Notes on admission: — Physical: Poorly nourished, eyes prominent, inequality of pupils, neither react to light but both to accommodation, internal strabismus of left, slight nystagmus, patellar tendon and plantar reflexes absent, no ankle clonus,

* Read at the Autumn Meeting of the South-Western Division, Salisbury, 1896.

tongue protruded to right side, no fibrillary tremors. Mental: Speaks in a slow drawling fashion, lost and wandering as regards dates, confused and broods over his "locomotor ataxy." When asked any question invariably answers "Locomotor ataxy." Irritable and emotional. He cannot carry on a conversation.

No previous or family history to be obtained. There is a suspicion of syphilis, but no definite facts.

During the months of May, June, and July the case attracted much notice and received exceptional attention. The symptoms did not vary to any marked degree. The visual symptoms were very constant, and at times there was well-marked hemianæsthesia. There was also diplopia. He was subject to fits of great irritability, followed by periods of emotion and absolute mental confusion. He suffered from auditory hallucinations. The physical condition improved and he was generally more satisfactory when on August 16th he was suddenly seized with an epileptiform attack. He was sitting on a chair and without any warning fell forward on the floor, bruising his nose. The attack was genuinely epileptiform. Eyes, face, and body drawn to right side, strong spasms of right side, of arm more than leg. Much froth and quite unconscious. He continued having seizures at short intervals during the night of the 16th and all next day. Chloral was administered, but though the seizures ceased for a few hours he did not show any signs of rallying, and after struggling in a semi-comatose condition for close upon 12 hours he died early on the morning of the 18th.

Section; 24 hours after death.—Body well nourished, post-mortem lividity and rigidity marked, limbs and chest elaborately tattooed.

Head:—Scalp of average thickness, skull thin, diploe marked, inner table congested. Dura mater: Average thickness, congested, not adherent to skull. Pia arachnoid markedly thickened and congested, more especially over left hemisphere; no milkiness; stripped readily from cortex. Cerebro-spinal fluid in great excess. Vessels at base healthy; lateral and longitudinal sinuses filled with red clot.

Convolutions:—Numerous localised areas of atrophy over both hemispheres, more especially over upper Rolandic regions. Areas of atrophy well marked by little lakes of cerebro-spinal fluid.

General consistence of brain firm. On section grey matter thinner than usual, and congested, left side more than right. White matter firm and congested. Vessels coarse. Lateral ventricles of normal size, no granulations, choroid plexus normal.

Basal ganglia congested; pons and medulla congested; fourth ventricle no granulations. Cerebellum: Pia uniformly congested, strips readily. Substance congested. Spinal cord: Membranes slightly congested, sclerosis of posterior columns. Other organs healthy.—Sections were made through the cord in cervical

dorsal and lumbar regions. In every case the postero-median columns were found to be completely sclerosed and the postero-external to a varying degree in the different regions. In the sclerosed tissue were numerous colloid bodies. The arteriole walls were considerably thickened, more especially the adventitia and outer coat.

The chief interest of this case centres in the mental condition, which to us is exceptional and rare. The tabetic symptoms are of the ordinary type and fully pathognomonic of the disease.

For this reason we were somewhat surprised with the certificate of the certifying medical attendant; for though in that certificate he makes use of the phrase "general paralysis," he did not record any of the prominent symptoms of that disease.

He mentioned several of the more common and special signs of locomotor ataxy. On admission and afterwards we failed to discover symptoms or signs of general paralysis, yet we are quite willing to admit that anyone inexperienced in mental diseases might have been misled, nor is this to be wondered at when on referring to the better known text-books on nervous diseases you find such statements as these. Dr. Bastian, in speaking of the association of locomotor ataxy with other nervous diseases, says: "Seeing that in locomotor ataxy itself there are no signs of mental disorder, the supervention of general paralysis of the insane is marked off by a well-defined change in the symptomatology." Again Marie says: "Psychical derangements vary considerably, and while the association with general paralysis is a real one, the intellectual disorders are not usually associated with ataxy." Gowers does not even refer to mental symptoms other than those of general paralysis.

After such a consensus of opinion it may perhaps seem rather bold on our part to raise a discordant note or a different opinion, but with the facts of a well-marked case fresh in our minds, we hope, not unprofitably, to ask you to consider (with us) whether many of the so-called cases of general paralysis supervening on true and simple tabes should not be received with reserve.

Not long ago Dr. Hyslop had the courage of his convictions to question the accuracy of the present day application of the term general paralysis, and we would venture to suggest that the case brought under your notice to-day is one of those in which there is much need for a better understanding and

clearer definition of mental symptoms simulating general paralysis.

We had in this case a true condition of mental enfeeblement and perversion mainly dependent on and of subsequent origin to the original disease in the spinal cord. There existed a state of irritability, low spirits, vague ideas of persecution, sensory disturbances amounting to actual delusions such as "that people were injuring him," "that his food was poisoned," etc.

Dr. Savage says: "The chief symptoms that have been described as occurring with locomotor ataxy are those of suspicion, and it is interesting to be able to trace a direct connection between the morbid sensations of a patient suffering from ataxy with delusions."

It is in the stage of partial dementia that a mistake in diagnosis is likely to be made. Dr. Handford records an interesting case in the January number of *Brain* for 1889, and in the course of his remarks says: "I have long been accustomed to associate some appreciable degree of mental change with the majority of cases of chronic cord degeneration." "The mental aspect in cases of cord degeneration has seemed to me to tend towards melancholia, with discontent and quarrelsome dissatisfaction." "It is reasonable therefore to infer that of the same, or similar character to the system degeneration in the cord, there is a degradation of that perfect state of nutrition of the cerebrum." According to Marie and others epileptiform attacks are not an unusual termination of locomotor ataxy, consequently the somewhat sudden termination of this case was in accordance with the above facts.

From the pathological standpoint the case is still more definite. On the post-mortem table, in the laboratory, and under the field of the microscope we had plain and unmistakable evidence of ataxy, but no evidence of general paralysis.

The cause of the epileptiform seizures is not without its interest, and in our opinion was due to the enormous excess of cerebro-spinal fluid.

From the above it is evident that in this case slow progressive degeneration was proceeding *pari passu* in cord and cerebrum, producing in the one case the progressive signs of locomotor ataxy, and in the other progressive clouding of the mental faculties, but which, contrary to the often accepted opinion, did not take the form of general paralysis of the insane.

What we wish more especially to point out is the great need for more thorough work and closer investigation of mental disease associated with organic lesions of the cord, and to point out that the octopus of mental disease, general paralysis, must not spread out one of its arms to include cases of primary organic lesion of the cord with symptoms of progressive mental deterioration such as the above.

Discussion.

The PRESIDENT said that he had seen a large number of cases of tabes without any symptoms of general paralysis; but with very distinct forms of mental disease. A most frequent form among the cases that were not general paralysis was the delusion of persecution. He had once seen melancholia with tabes; and also patients with that form of mental disease which went more properly under the heading of primary deterioration. Some cases had not the typical characteristics of tabes, and these were extremely difficult to decide on.

Dr. BRISCOE said he had seen at Guy's Hospital a man who was admitted with unmistakable symptoms of locomotor ataxy, who suddenly became unconscious and afterwards developed the delusion that he was going to be smothered. That patient was removed to Bethlem, where the mental trouble disappeared, although the ataxy remained.

Dr. MACDONALD said that his main object was to stimulate careful and thorough investigation in every case of general nerve break-down. It was possible that they had been induced to look upon the facts recorded in this communication as exceptional, because of the scanty and imperfect references to such cases in the majority of text-books. They did not, however, wish it to go forth that they held that locomotor ataxy and simple mental symptoms such as met with in the case under consideration were the general rule, but they did maintain that cases are recorded under the heading of general paralysis, following or preceding tabes, which are cases of tabetic insanity. In a recent number of the *Journal of Mental Science* such a case was reported, from an Irish asylum, minus pathological or microscopical facts. It would have been easy and convenient to have labelled our case one of general paralysis; but this we did not do. The subsequent history and pathological data clearly support our diagnosis. There was complete absence of fibrillar tremors, which he (the speaker) considered one of the most reliable symptoms of general paralysis.

---

*Note on Weigert's Theory regarding the Structure of the Neuroglia.** By W. FORD ROBERTSON, M.D., Pathologist to the Royal Edinburgh Asylum.

For some years past the leading authorities have been generally agreed that the neuroglia is a tissue composed exclusively of special cells and their processes. Ramon y Cajal, for example, describes it as consisting of small cells provided with very fine, wavy, and only slightly ramified processes, which, after a variable course, terminate freely or attach themselves to the surface of the capillaries. From observa-

* Abstract of Paper read at the meeting of the Scottish Division of the Medico-Psychological Association held in Edinburgh on the 12th November 1896, and illustrated by a microscopic demonstration.