another person might in the same way perpetrate homicide or become an incendiary, not knowing what he was doing at the time, and not remembering, after the attack had passed off, what he had done.

The resemblance between the sergeant's abnormal states and those transitory attacks of epileptic unconsciousness, during which the patient, unconscious of surrounding objects, continues automatically the act which he was engaged in at the time of his seizure, will be apparent to our readers. In this relation it is interesting to note that Dr. Darwin, the distinguished author of the *Zoonomia*, called attention long ago to the affinity between epilepsy and somnambulism.

CLINICAL NOTES AND CASES.

Aphasia and Chorea in General Paralysis. By T. S. Clouston, M.D.

The general progressive disease in the structure of the nervous centres, and the steady deterioration of their functions, that constitute by far the chief part of general paralysis, are attended in their course in some cases by various nervous symptoms that closely imitate many of the neuroses of sensibility and motion; such as neuralgia, amaurosis, locomotor ataxy, glosso-pharyngeal paralysis, hemiplegia, apoplexy and epilepsy. Indeed, it is not uncommon for cases of the disease to be diagnosed as epilepsy and glosso-pharyngeal paralysis. I have lately had three cases of the disease under my care, in two of which the ordinary symptoms of aphasia were present for a short period in one stage of the disease, and in the third the symptoms of unilateral chorea were well marked.

In the first case, that of a man, the aphasic symptoms came on at two periods of the disease, once soon after its commencement, when the motor and mental symptoms were very mild indeed. He was not excited or exalted at the time they came on, and had not had any congestive or epileptiform fits. He had been a hard working, anxious man who had suffered much from bleeding piles, was married, and the first signs of the disease were headache, dulness, depression, stupidity, causeless fear and suspicion, with easily excited emotionalism. About eight weeks after the

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commencement of the attack it was noticed one day that he could not speak properly when asked a question; he clearly understood what was said to him, and tried to answer, but could not do so. When he tried very hard he would sometimes get out the first word, or first syllable of the first word of the answer but no more, *e.g.* in answer to "How are you?" he would say "Qui" for "Quite well." He would nod his head and look pleased when the sentence was finished for him. When asked the name of any common article he either could not name it at all, or called it by a wrong name, *e.g.*, called a chair a hat. At the same time there was much tremor of his lips and tongue when attempting to speak. Next day he was quite free from these symptoms, but about a fortnight after, he had another attack of a similar character and duration, after which he became silly and foolish in his conversation, and soon very excited, with exalted delusions as to having millions of money, seeing the Queen, &c. At the same time his right side became more paralysed than his left. The disease is running the usual course, the right side being still more affected by the motor paralysis than the other, no doubt indicating that the convolutions on the left side are most affected.

In the second case the aphasia was complete, and occurred after an epileptiform attack in the beginning of the disease. He has since had many such convulsive attacks of the most severe kind. They are the most striking feature of his case. When aphasic he knew what was said to him quite well; nodded his head and looked pleased when the proper answer was given for him, but could not say a word. This lasted for a few days, and then passed off. The motor paralysis is not in any way unilateral, but he has the "insane ear" on the left side.

The case of unilateral chorea happened in a lady with slowly advancing, very mild symptoms. The motor paralysis had gone the length that it was with extreme difficulty she could mount or go down a stair, and could not articulate long words, and the mental state was one of happy enfeeblement. She took a congestive attack, beginning with stupor, going on to convulsions of the right leg, arm, and face, with a high temperature, always over 100°. The unilateral convulsions came and went for a few days, leaving the side paralysed when they were not present; a temperature over 100° always going with the convulsion, and a

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normal temperature with the paralysis. When they finally disappeared the paralysis was complete, but in a few days, the power of voluntary movement came back, first in the legs and then in the arms. Whenever she attempted to move her left arm it jerked about with the characteristic want of muscular co-ordination of chorea, and when she attempted to speak the muscles of her face and tongue on the left side were started into choreic twitchings, while her articulation was characteristically that of a bad case of chorea. When she ceased to exert voluntary power over face or arm the twitchings ceased. The choreic movements of the face have persisted, and, at present, are most marked. Muscles supplied by the seventh nerve are most markedly affected, all the facial muscles and the masseter muscles twitching; then the sixth nerve seems to be almost as strongly affected, the left eye turning outwards and upwards most markedly, producing conjugated deviation of the eyes; the right eye following it by inward movements, so that the axes of both eyes are not divergent. The third nerve is clearly affected, for the eyes twitch about at times in all directions. I could not make out that the fourth was at all affected. The glosso-pharyngeal and spinal accessory branches of the eighth and the ninth are affected, for she has much difficulty in swallowing portions of the liquids which alone she can swallow, squirting out on the left side of the mouth; the tongue cannot be put out properly, and moves in all directions when she attempts to put it out. Her speech is almost inarticulate, and her voice is excessively quavering; the muscles between the larynx and jaw twitch, and the left sterno-mastoid, and also the muscles supplied by the spinal accessory; the shoulder twitching up and back. The orbicularis palpebrarum to a very slight extent indeed, and the eye more so, are the only parts of the right side of the face that twitch. The pneumogastric is not affected.

The sensory nerves do not seem to be at all affected. She complains of intense pain in her teeth, but this I attribute to the sudden snapping of the jaws and grinding of the teeth, caused by the action of the masseter muscles.

This case is chiefly interesting as exhibiting in a very exaggerated degree, and unilaterally, the tendency to tremor and want of co-ordination of the muscles supplied by the cranial nerves that is always present in general paralysis, for in reality the impaired movement in this disease is closely allied to chorea. I have a woman now under my care where

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the diagnosis is most difficult between chorea and general paralysis. The special lesion which causes them in this case must be high up, and I have no doubt it is in a special region of the convolutions that preside over the motions of the face.

An unprecedentedly high temperature during a Congestive Attack in General Paralysis.

A gentleman in the end of the second stage of general paralysis, whose symptoms, mental and bodily, had all along been mild, and who had had two or three slight congestive attacks, without convulsion, in an earlier period of his disease, with a temperature in each attack of 102°, was noticed to be very stupid; to be more than usually hemiplegic (he had been so on the left side to a slight extent during most of the disease), and on the following day twitchings of his face commenced, with increasing stupor. The convulsions increased, being more marked on the hemiplegic side, his temperature gradually rose from 101° 24 hours before death to 105° 12 hours before, until on the second evening of the convulsions, five hours before death, it reached 107·4°. He died comatose next morning, the convulsions continuing almost until he died.

At the post-mortem examination, in addition to the usual thickening of the membranes, a gelatinous false membrane, granular ventricles, and intense congestion of the brain everywhere, there were found apoplexies in the right hemispheres, from the size of a pin's head up to one or two inches, by one-and-a-half, in the middle lobe, where the brain substance was very much softened. Growing from the right corpus striatum, and projecting into the ventricles, was a small pearl-like glioma.

This case is interesting, not only in regard to the high temperature, but as showing, in an extreme degree, the tendency to blood stasis and apoplectic effusion in the brain during a congestive attack in general paralysis. I have never seen so large a clot in this disease. General paralytics are often seen to be more paralysed on one side than the other, especially after congestive attacks, but we do not always find any appreciable extra disease on the opposite side of the brain after death. In this case, however, this was most marked. The side that was most paralysed was most convulsed, and after death the congestion and the apoplectic tendency were far more evident in the opposite hemisphere of the brain.

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