a severe fit, I asked the nurses, after the excessive muscular movements had subsided, to leave him alone so as to see what he would do. Whilst thus unconscious, he made an effort to get out of bed, but in doing so he slightly fell towards his left. With a little difficulty he pulled himself together and began to walk down the ward. It was all he could do to keep on his feet, owing to the drooping and want of power in his left arm and leg, and yet whilst thus unable to move his left leg easily, he at once set off half running, the gait being extremely awkward, from the causes that I have mentioned. He suddenly stopped at the foot of one of the beds in the long ward, knelt down and scanned closely the whole of the floor under the bed. With a little difficulty he got on to his feet again, walked to the other end of the ward, to the table where the wash-hand basin and jug were kept, and attempted to raise the jug to his mouth; the accomplishment of which was prevented by the marked feebleness of the left as compared with the right hand. On coming to himself, though quite aware of having had a fit, he knew nothing of all that I have described. He told me, however, that he had seen a cat, the image of which had lasted a long time in his memory.

On ophthalmoscopic examination, beyond perhaps the slightest hyperæmia, the discs presented nothing unusual; the lungs and heart were healthy; urine was quite normal before, after, and during the intervals between the fits; knee-jerk was generally more marked on the left than on the right side; no ankle-clonus was present, but it was noticed that the push of the left foot and the grasp of the left hand were much enfeebled compared to the same on the opposite side of the body.

Painting with iodine, and blisters were applied locally, bromide and iodide of potassium, liq. hydrarg. bichlor., tinct. bellad. were tried alone and in combination, and in increasing doses without the least benefit.

Failing thus to relieve the patient, a general survey of the history and symptoms of the case—namely, a healthy lad meeting with an injury to his head, this followed in a fortnight by a convulsive seizure, recurrence of fits, now accompanied by unconsciousness, and associated with an excess of movement on the left as compared with the right side of the body, lingering left-sided paresis and choreiform movements, these attended by a localised painful spot on the right temporal bone, pain at which was said to be more severe just before or after a fit—led me to entertain the belief that the epileptic seizures were due to a localised irritation, possibly in the membranes lying upon the motor areas in the convolutions of the right side of the brain. The absence of any break in the skin dissipated any feeling that I might have had of fracture of the inner table of the skull. I suggested trephining as the only likely method of dealing successfully with the fits. My surgical colleagues saw the case with me, and agreed as to the advisability of the operation, recommending, however, the application of the trephine over the painful spot, rather than upon that part of the skull lying upon those portions of the brain now recognised as concerned with the initiation of the movements of the arms and legs—I mean the ascending frontal and parietal convolutions. The painful spot, as I have already mentioned, lay anterior and somewhat inferior to these two convolutions. The operation was performed by Dr. Hume, under antiseptic precautions. A piece of bone, the size of a shilling, was without difficulty removed. The bone was quite healthy, and was easily lifted from its bed, being in no way adherent to the underlying membranes. The dura mater was healthy, in no wise thickened. As the dura mater was healthy it was debated for a few seconds as to the advisability of opening it. By degrees, however, it was noticed that the dura mater was becoming tense, and shortly after this membrane was shot out through the opening beyond the level of the bone, the tension now being very great. Accordingly a crucial incision was made into it, and in a few seconds there escaped from the wound several teaspoonsful of serum, containing a few flakes of lymph. The arachnoid and pia mater seemed healthy, as did also the surface of the brain and the small blood vessels which lay upon it. A very small drainage-tube was inserted, the cut ends of the dura mater were drawn together with delicate catgut, the skin flaps were gently drawn together, a sponge applied, and the ordinary antiseptic dressings placed over all. That evening the dressings were found to be soaking, and on removal a few teaspoonsful of serous fluid were squeezed out of the sponge. More than two ounces of serous fluid escaped that day. The dressings were renewed, and never afterwards required to be changed on account of the escape of fluid. The patient had one or two minor fits on coming out of the

chloroform, and also for two or three days after the operation, but after this they became separated from each other by the interval of a day, then two days, a week, a fortnight, and so on, until no fit occurred during a period of six months. The wound had healed kindly and quickly, without even the least rise of temperature. The patient having long left the infirmary, feeling quite well, no longer having any localised pain in his head, followed for a time the occupation of a telegraph boy, but latterly became the cash boy in a confined counting house. Here he was much harassed by the push of business, the one monotonous call which was made upon him, and by the long hours spent in a wretched atmosphere, and the result was that after being free of fits for six months, he had again to be admitted into the infirmary, where he was placed under my care. The fits were now quite changed in character, the muscular movements were slight, and were never attended by loss of consciousness; the visual aura of the cat was no longer present. The fits were rather those of hysteria, and with rest in bed, iodide of potassium and iron, his general health soon improved, the fits disappeared, and for several months have ceased to trouble him.

Trephining, as a method of treating epilepsy, is only applicable to those cases where there is the history of an injury to the head followed by localising symptoms or by convulsions, either unilateral or more pronounced on one side of the body than the other, or where an injury to the head has been followed by a depressed fracture or separation of a portion of the inner table of the skull. Macewen, of Glasgow, has operated successfully on cases of epilepsy due to injury of bone, and in one case of Dr. Ralfe's—a patient who had been trephined for depressed fracture, and who years afterwards was found suffering from epilepsy—an absolute cure was only effected by the cicatrix due to the trephining operation being again opened up and allowing of the removal of a small portion of necrosed bone evidently belonging to the inner table. As soon as this was done the fits ceased. Gowers speaks of having seen or heard of 65 cases of epilepsy owing to a traumatic cause, and of trephining as the only line of treatment likely to be successful, and that, be it remarked, as in my own case, where neither disease of bone, membrane, or surface of the brain was found at the time of the operation. Relief comes either from the operation acting as a strong counter-irritant lasting all through the period of healing, or from the reduction of tension consequent upon the escape of pent-up serum.

It is several months since this paper was written and read, but the last account that I had of this patient from his mother was that he was still keeping free from fits.

ON PUERPERAL APHASIA.*

By F. BATEMAN, M.D., F.R.C.P.,

Physician to the Norfolk and Norwich Hospital; Corresponding Member of the Academy of Medicine of Paris, etc.

APHASIA, as a complication of the puerperal condition, does not find a place in our classical treatises on midwifery, and the literature of the subject is so scant that, in the course of my reading, I have only met with one observation recorded in this country, although it has been made the subject of a most elaborate essay by a continental observer, to which I shall have occasion to refer after the detailing of my own case, which I desire to head as follows:

CASE OF LOSS OF SPEECH OCCURRING AS A PUERPERAL SYMPTOM; LACTEAL DERANGEMENT; RIGHT HEMIPLEGIA; FATAL TERMINATION.

On September 7th, 1886, I was requested to see, in consultation with Dr. Watson, of Norwich, Mrs. S., aged 23, who had given birth to her second child eight days previous to my visit. Upon inquiry I ascertained she had never been the subject of any cardiac or rheumatic affection, that she had never suffered from any nervous disorder, and, in fact, that she had always enjoyed good health during her single life, with the exception of a disposition to occasional headaches. Her mother was insane, and died in the Norwich City Asylum, but beyond this fact there was no neurotic tendency in the family.

She was delivered of her first child in July, 1885, and at the

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association held at Dublin, August, 1887.

seventh month of her first pregnancy she had some obscure symptoms with some embarrassment of speech, which lasted about a month. Her first confinement passed off quite naturally, and she nursed her child for nine months, at first with both breasts, but in one breast (it is believed to have been the left) there was galactorrhœa for some weeks, and then the supply ceased entirely in this mamma.

Mrs. S. continued quite well till three months before her second confinement, when a gradual loss of power occurred in the right arm and leg, but principally in the arm. A month before her confinement embarrassment of speech was noticed, which culminated in complete aphasia six days after delivery, which was quite natural, and unattended by any straining or unusual effort; there was no hæmorrhage, and the lochia were quite natural. The total loss of speech was sudden, for on the evening of the fifth day, although her speech was embarrassed, she could converse and make herself understood; but on the morning of the sixth day it was observed that she was completely aphasic; there was no loss of consciousness, and her general appearance was as usual, the only difference being the total suspension of articulate language. This sudden exacerbation of her symptoms could be attributed to no apparent cause; she had not been exposed to any mental shock or disturbance of any kind, but a thunderstorm of very unusual severity occurred the evening before.

On the second day after her delivery there was a sudden turgescence of the breasts, with an unusual quantity of milk, the lacteal secretion being so abundant that, although the child sucked vigorously, the milk had to be removed artificially; the supply was equal on both sides. This lacteal overflow was but of short duration, for the next day the quantity diminished perceptibly, and on the fifth day the child had to be weaned because the supply was gone.

At my visit on the eighth day after parturition, I found her with right hemiplegia and aphasia, and I observed that she was unable to protrude the tongue. There was no pyrexia; the temperature was normal; the pulse was 74, and there was no cardiac trouble of any kind; there was no pain or swelling of the body, and no abdominal or pelvic complication whatever; there was, however, retention of urine, but nothing abnormal in the secretion itself.

Although unable to speak she evidently understood all that was said, and seemed annoyed, and became angry when too many questions were put to her, and to every question, whatever it might be, she invariably said, "The other day." I asked her how many children she had, she replied, "The other day." I asked her what she had taken for her breakfast, she replied, "The other day." She could say nothing else, and this recurring utterance, whether appropriate or not, she repeated on all occasions; it was a stock phrase, and, of course, had no intellectual value.

Without developing any fresh symptom Mrs. S. gradually became weaker, and sank from exhaustion six weeks after her confinement; and within an hour of her death, in answer to an inquiry as to how she felt, she replied, "The other day," which was the only phrase she had uttered since the commencement of her attack.

The above case is interesting from the association of aphasia with the puerperal condition. Hemiplegia is not an uncommon symptom connected with pregnancy and childbirth. Churchill has recorded twenty-two cases of paralysis during pregnancy collected by him from various sources, but although difficulty of articulation may have been noticed in some of these cases, it was simply due to paralysis of the tongue and the muscles which are concerned in the articulation of words, without any real disturbance of the faculty of language.

Aphasia as a complication directly connected with the puerperal condition seems to be rare, at all events, it has escaped the observation of the writers on obstetrics, for, amongst 8,000 cases of midwifery recorded by a French authority, M. Sireday, not a single instance of the coincidence of aphasia is mentioned. The only case that I have met with in my reading is one recorded by Dr. Leith Napier, the subject of which was a lady who, seventeen days after her confinement, on being subjected to considerable vexation, suddenly became speechless; this was followed in three days by partial paralysis, which culminated in complete hemiplegia two days later. Dr. Napier attributed the above symptoms to occlusion of the left middle cerebral artery from embolism. The patient slowly improved, and eventually recovered.

It is only quite recently that prominent attention has been called to the association of aphasia with the puerperal condition by a most interesting and exhaustive article by M. Poupon in

L'Encéphale for July, 1885, entitled "Des Aphasies Puerpérales," under which name he comprises the divers varieties of disturbance of speech which occur either during pregnancy or during the period of lactation, observing, however, that the occurrence of aphasia under the above condition is extremely rare, although he says that the traumatic and moral shock which recently delivered women may experience cannot but seriously influence the nervous system. This important communication is based upon a case observed by the author at La Charité, in the ward of Professor Laboulbène. The subject of it was a woman, aged 24, J. M., who, on the second day after a perfectly natural delivery, was seized with right hemiplegia and aphasia, her vocabulary (as in my own case) being limited to three or four words in answer to all questions, the expressions used being, "*Eh bien*," "*Oui, oui*," "*Mais jamais*." She was also the subject of word-blindness, but not of word-deafness.

This patient is described as having had an attack of articular rheumatism some years before, and as there was hypertrophy of the heart with mitral disease, the author makes the diagnosis of embolism of the left middle cerebral artery, due to a mitral constriction, upon which was superadded an endocarditis, caused by her puerperal condition; he explains the fact of the sudden occurrence of the symptoms of embolism on the third day, by the hypothesis that the embolus might have been nearly detached during the labour, but that a fresh effort was necessary to complete its separation, and as she was suddenly taken speechless whilst at a meal, he thinks the change from the recumbent to the sitting posture may have been sufficient to complete the detachment of the embolus. M. Poupon enters at considerable length into the pathology of the above case, and also gives a short analysis of others that have fallen under his notice, in two of which he says there was an evident relation between the lacteal secretion and the appearance of the aphasia; in one instance, however, the lacteal disturbance preceded the cerebral accidents, and in the other it followed them; in the latter case (which was one of exceptional interest, from the fact of the subject being left-handed, and the paralysis being on the left side) it is stated that from the moment the left hemiplegia and aphasia were observed, the lacteal secretion ceased in the right breast, whilst in the left (the paralysed side) it appeared to increase, and was much more abundant than usual. According to the statement of the patient, the temperature of the left or paralysed side, as well as that of the corresponding breast, was higher than on the right side; the perspiration was also much more copious on the left than on the right side.

In commenting upon this last observation, M. Poupon calls attention to the increase of the lacteal secretion, under the influence of the paralysis, and he considers the pathological condition was probably vasomotor paralysis of the breast, resulting in dilatation of the vessels, and a more abundant secretion of milk. He adds that women who have experienced a first attack of aphasia as a sequel of delivery should avoid a second pregnancy, and he quotes a case occurring in the practice of M. Gignoux, of Lyons, in which aphasia occurred in two consecutive pregnancies. It will be remembered that this was the case in the history of the lady who formed the subject of my own observation. We know but little of the effect of lacteal disturbance on the nervous system; and in a recent interesting discussion at the Obstetrical Society of London, Dr. Matthews Duncan commented upon the neglect of the scientific investigation of the process of lactation, and the deficiency of literature connected with this important department of practice.

On reviewing the symptoms manifested by the patient whose clinical history I have described, it will be noted that Mrs. S. never had any rheumatic affection, or cardiac complication of any kind; the labour was quite natural, and there was no feature in her condition to suggest the idea of septicæmia, or of blood dyscrasia. The only unusual symptom was anomalous lactation, for it will be remembered there was great turgescence of the mammae, and an excessive flow of milk—quite a galactorrhœa for twenty-four hours—and then a somewhat sudden disappearance of the secretion. From the comparative rarity of the association of loss of speech with the puerperal state, I hesitate to venture upon any decided opinion as to the pathology of the above case. The symptoms could scarcely be due to any merely transient cause, for they had existed in a modified form for three months before parturition, and became intensified a few days after labour; the absence of any cardiac lesion, and the gradual development of the nervous symptoms, would rather point to cerebral thrombosis than to embolism.