fingers, and of the inner half of the middle finger; the prick of a pin was not felt unless a deep thrust were made. The gentle friction of the arm with anything was not perceived by the patient. The anæsthesia extended up to the elbow, but it was less in degree in proportion to the nearness of the situation to the elbow: it was limited to the cubital half of the arm. In the right foot, the two outer toes and the external half of the third were similarly affected. In the left foot, the affection was limited to the great toe. The paralysis did not extend to the leg on either side. The motor power was modified in a similar manner to the sensation. The patient could neither flex nor extend the affected fingers and toes. The paralysed parts were the seat of an unpleasant formication. This case was under observation during only a part of its course. The history concludes with the statement that, when the patient left the Convalescent Home at his own request, he was more paralysed than on admission. In the other case, there was no loss of motor power; and the anæsthesia was limited to the distal half of the ring-finger and little finger of both hands.

Magendie, in his *Leçons sur le Choléra*, published at Paris in 1832, refers to paralysis as a sequel of cholera. He says that the way in which it begins to manifest itself is generally so gentle, that the patients seem to experience only extreme debility and a dislike for food. In about eight days, he says they pass into a state of profound prostration; the muscles of the face are paralysed, and those of the limbs become quite flaccid. The mental powers grow torpid, and at last death takes place, with a general destruction of all the vital powers.

The epidemics of 1849 and following years furnished numerous cases in which paralysis was secondary to cholera. Gubler refers to a series of lectures delivered in 1849 at the Bicêtre by Dr. Delasiauve, upon cases in which attacks of cholera had been followed by mental alienation and paralysis.

Dr. O. Landry, in his work *Sur les Causes et les Indications Curatives des Maladies Nerveuses*, states that, during the cholera epidemic of 1849, a man suffering from a formidable attack of the disease was admitted, under the care of Piedagnel, to the hospital of La Pitié at Paris. During convalescence, paralysis ere long invaded the superior and inferior extremities, without the occurrence of any symptoms of the nervous centres being involved. Micturition and defecation continued to be performed in a normal manner. The muscles became atrophied. Treatment having proved unavailing, the patient was transferred to the Bicêtre as an incurable.

Briguet and Mignot, in their *Traité du Choléra Morbus*, published at Paris in 1850, mention three cases which occurred during the epidemic of 1849, in which partial paralysis manifested itself in convalescence from cholera. In one of these cases, the paralysis was limited to the hands. In the two other cases, the superior and inferior extremities were affected: in both cases, the paralysis first showed itself in the superior extremities. In the three cases, recovery from the paralysis took place. As Gubler remarks, in referring to these cases, it is noteworthy that restoration of power commenced in the hands, and that the paralysis remained longest in the feet and legs—noteworthy, because the same order in recovery is observed in the paralysis consecutive upon diphtheria and other acute diseases.

Paralysis during and after Dysentery.

Dysentery has sequelæ similar to cholera in respect of sensation and motion.

On the 22nd April, 1872, I was telegraphed for to meet in consultation Dr. Bazard at Dijon, in the case of an English gentleman, who was laid up at an hotel in that town, unable to proceed on his homeward journey from Egypt to London. I reached the bedside of the patient between five and six o'clock on the afternoon of the 22nd. He had, I was told—excepting occasional remissions lasting for a day or two—been severely suffering for some weeks from dysentery. During the whole of that period, he had been travelling homewards by short stages, suiting his journeys as much as possible to his ebbing strength. His paramount idea had evidently been to get home to obtain efficient treatment; for he had only casually consulted physicians on the way, and had never placed himself under serious treatment till his arrival at Dijon, when it was too late. At the date of my visit, the sanguineous alvine flux had entirely ceased, there remaining, however, a very irritable state of the intestine, manifested by diarrhœal stools quickly following the reception of food into the stomach, if more than two or three tablespoonfuls of beef-tea, breadberry, or thin arrowroot gruel were taken. The cessation of the dysenteric flux had not, however, been followed by any restoration of strength or any other sign of real amendment. On the contrary, the debility had alarmingly increased during the preceding two days, and within that period there had also supervened, or at least there had been first observed, inertia of the bladder and partial paralysis, with anæsthesia of the lower extremities. When I arrived, there was anæsthesia and incomplete motor paralysis of both legs. There was no impairment of the motor or sensory power of the superior extremities, or of the muscles of the face, tongue, or œsophagus. The intelligence was not affected. The urine was scanty and slightly albuminous. The pulse was about 90, weak, and intermittent. My questions were answered fully and clearly. I passed the night in an adjoining room. The door between the two rooms being ajar, I heard all that passed. He spoke to the nurse at intervals in a distinct voice, and took beef-tea, arrowroot, and wine, when they were offered, at short intervals. I was twice summoned to his aid during the night, in consequence of his being attacked by dyspnœa. On both occasions, he obtained considerable relief from the application of large thin poultices of linseed-meal and mustard to the thoracic parietes. When I left early in the morning for Paris, he had just awoke from a short sleep. He concurred with me and Dr. Bazard in thinking that he was in a rather better state than on the previous day. On arriving at my house in Paris, I received a telegram, dated noon, requesting me to return to Dijon. I had made my arrangements to do so, when another telegram, dated 3 P.M., informed me that he had just expired. I afterwards learned that his death, till within an hour of its occurrence, did not appear imminent. It seemed (as I afterwards learned) to have been caused by profound general prostration and paralysis of the respiratory muscles. Death was not preceded by delirium.

Recently, I was consulted by a military officer passing through Paris, on his way home from India on sick leave. He had suffered severely from dysentery, followed by debility and a great loss of power in both inferior extremities, which, he said, at one time amounted to complete paralysis. When I saw him, he could walk with the aid of a staff. He had a very anæmic appearance, and was suffering much from constipation. He was taking citrate of iron and quinine, which I recommended him to continue, with the addition of a dinner aperient pill, containing a grain of the extract of nux vomica. I saw this patient only twice, and have had no opportunity of knowing anything of the course of his malady subsequently to my last interview with him.

Zimmermann says that, in some persons who have had severe attacks of dysentery, it is not unusual in convalescence to meet with paralysis of the mouth and tongue, and sometimes of the whole of the lower part of the body. Sometimes, he says, universal paralysis manifests itself simultaneously with the cessation of the dysentery. He does not describe any individual cases. (*Traité de la Dysentérie:* traduction Française, p. 13. Lausanne: 1794.)

I have had several patients under my care for paralysis of the rectum, who traced that affection back to severe dysenteric attacks of old date.

The frequent occurrence of intractable inertia and paralysis of the rectum after dysentery has led some authors to attribute this inertia and paralysis to dysenteric lesions of the intestinal canal. A fact of kindred character is noteworthy in the present inquiry; viz., that paralysis following dysentery attacks the inferior more frequently than the superior extremities. As a rule, in paralysis of cerebral origin, the superior extremities suffer most severely and far more frequently.

[*To be continued.*]

FOUR CASES OF A PECULIAR EPILEPTIFORM DISEASE.

WITH SYMPTOMS INDICATIVE OF SPECIAL IRRITATION OF THE NERVE-CENTRE OF ARTICULATE SPEECH.

By W. B. CHEADLE, M.D., F.R.C.P.,

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The cases here recorded exhibit epileptiform disease in one of its rarer and most curious forms. Trousseau has described seizures of an analogous kind in his *Clinique Médicale* as varieties of epileptic vertigo. As in Trousseau's cases, so in these, there is something more than the mere transient giddiness of the ordinary *petit mal;* something less than, and different in character from, the full epileptic fit. They have one distinct feature in common, although it is not equally prominent in all; viz., rapid muttering, the frequent hurried repetition of the same word or phrase during the convulsion; so that this special variety might, perhaps, be designated "eclampsia loquax", or "muttering epilepsy".

Case I.—Albert H., aged 18, draper's shopman, first came under the care of Dr. Cheadle at St. Mary's Hospital in March 1868, suffer-

* The cases are reported by Mr. G. C. A. Moir.

ing from a peculiar form of epileptiform attack, to which he had been subject since he was six or seven years of age. At that time, he had an attack of chorea, and, about the same period, he received a severe blow on the head with a heavy stick, about the centre of the coronal suture, which left a small well marked scar. He cou not state positively whether he had any fits between the time he had chorea and his surviving the blow, but thought there were none till after the chorea. At the time of his admission, he had sometimes two fits a day, and then was free for a time, and generally he had two or three at the first onset, followed by a week's freedom from them. The series decreased in strength gradually, the last being only a sensation. During a fit, he felt frightened; desired to lean against some support; he trembled; was unconscious, but never fell, having sufficient warning to enable him to place himself safely. The attacks commenced with a peculiar sensation in the head. He then lost the use of the left arm, not of the right, although he dropped anything he might have been holding with that hand at the time. His eyes were said to be open, and to roll about, and he talked incessantly while the attack lasted, repeating the same word or phrase very rapidly over and over again. He had never hurt himself or bitten his tongue, but had twice passed urine unconsciously during the fit; he thought his bladder was very full at the time. After the fit, he was very drowsy. There was no history of nervous disorder in any other member of the family. This patient remained under treatment, with some short intermissions, for upwards of three years, and on one occasion was seized with one of his attacks while in the consulting-room, when the phenomena were carefully observed and noted down by Dr. Cheadle. Whilst he was standing waiting for his turn to be seen, the boy's face became suddenly distorted; he trembled, and looked frightened; his eyes became fixed and turned upwards, and he fell gently back against the wall, close to which he was standing. As he stood leaning thus supported, with his head slightly drawn back and his face turned upwards, he kept muttering with extreme rapidity, over and over again, the same words: "Man of war", "man of war", "man of war", about a dozen times. Then his features relaxed, and he stood up quite himself again. He was clearly perfectly unconscious during the height of the seizure; but, when sharply spoken to as it was passing off, he made an effort to reply, and evidently heard what was said to him. The whole attack did not last more than a minute. He was conscious afterwards that he had had an attack, but could not recollect what he said or did while it lasted. During the time of his long attendance, he was treated with bromide of potassium, belladonna, and strychnia; and on one occasion with the bromide and iodide of potassium together; but he never seemed to obtain other than temporary benefit. The bromide was used in doses varying from twelve to twenty grains three times a day, and always controlled the fits so far as to reduce their frequency and severity. On the occasion when it was prescribed with the iodide, no increased benefit was apparent from the combination. Belladonna was prescribed in the form of extract, of which a pill, varying from half a grain to a grain as a dose, was ordered every night. This also gave relief, either when used alone, or taken in conjunction with the bromide of potassium. Strychnia was given in the form of liquor strychniæ in doses of five minims three times a day; it was tried for twenty-eight days, but the fits increased in number and severity, and it was abandoned. The patient felt so much relieved by the belladonna and bromide, that he continued his attendance for years, although he lived a considerable distance from the hospital.

CASE II.—Miss A. W., aged 13, came under the care of Dr. Cheadle on September 22nd, 1873, suffering since her fourth year from attacks of slight loss of consciousness, lasting a few seconds or even minutes. During the attack, her eyes were drawn, she moved her body and head to and fro slowly, and spoke incoherently, generally of Scriptural subjects, repeating the same word or phrase over and over again, such as the name Moses or Jacob. She had never been hysterical. The only severe attack she ever had took place in the February or March previous to her coming under observation, and was like one of her ordinary seizures, only prolonged; in it she muttered, but neither foamed at the mouth nor struggled much. She had one or more attacks daily, and had twelve attacks on the day previous to coming under observation. Her mother has one other child, who has become strange and imbecile. Her maternal aunt was insane. No further family history could be obtained. The patient was said to have ascarides. A vermifuge of santonin and calomel was ordered, together with a mixture containing bromide of potassium in scruple doses, and iodide of potassium in doses of two grains, with cinchona and quassia. She took the powder on the 23rd, and had twenty fits; on the 24th, twenty-two fits; but, on the 26th, she passed a round worm, and had only two fits. On the 29th, she again had santonin with compound scammony powder. On October 6th, the powder was reported to have acted freely, but no worms came away. She had two slight fits, which lasted just an instant, when she turned up her eyes and muttered a few words. From this time, the patient improved; had no more attacks, except once or twice very slight vertigo, the medicine being gradually reduced and left off altogether in December. From this time to May 1874, she had only three slight fits at long intervals. The bromide was resumed in twenty-grain doses, and no relapse has occurred up to the present time, December 1874.

CASE III.—Miss K. F., aged 11, came under Dr. Cheadle's care on June 3rd, 1874, on account of slight vertiginous attacks, to which she had been subject for nine years. She was a quick excitable child; has never had rheumatism, chorea, or worms. She had an attack of convulsions when teething. There was no epilepsy or insanity known in the family. She was the youngest of eleven children, who were all alive and healthy. The attacks of vertigo were always ushered in by severe pain in the abdomen, about the umbilical region. She then put her hands up to her head, pulled down her hair, and held her ears, evidently in a state of confused half-consciousness, and repeated with great rapidity many times a phrase or sentence; often "Shut the door, shut the door, shut the door", many times over. Her face then became very blue, and she made a choking sound in her throat. The pupils of her eyes dilated, and a dreamy look passed over her face. Then she cried out, "All right, all right; I shall be better directly", as consciousness returned. She did not fall down, but she knew when an attack was coming on, and took care. She muttered and called out in this rapid incoherent way wherever she was. Attacks had taken place in church, and she cried out in this way. After the attack, she was very drowsy, and often went to sleep. The fits occurred sometimes three or four times a day; sometimes she was free for weeks. Excitement of any kind was very liable to bring on an attack. On examination, the chest was found normal, the heart's sounds clear, except slight prolongation of the systole at the apex. The abdomen was natural in appearance; no tumour of any kind could be detected, and there was not the least tenderness at any point. She was ordered five grains of santonin at night, followed by ten grains of compound scammony powder the next morning, and fifteen grains of bromide of potassium three times a day. For two days after taking the powders, she suffered great pain in the abdomen, so severe as to make her cry out and roll about, and also repeated attacks of the talking convulsion, five or six during the day and several during the night. The bromide of potassium was now increased to twenty-three grains, with three grains of iodide of potassium and one-eighth of a grain of extract of belladonna. The following week, the mother reported that the child had a bilious attack and diarrhœa, and the medicine was suspended. The attacks have continued, but no opportunity has occurred for the resumption of regular treatment.

CASE IV.—Louisa G. came under Dr. Cheadle's care in March 1872, having suffered for twelve months from attacks of convulsion of a curious character. The attacks were described as follows. She turned dark in the face; her eyes became fixed, and she seemed unconscious; her arms and legs "worked", and sometimes she fell; but the most constant feature was the pulling of her clothes up to her neck, crouching on the floor with her hands up to her chin; sometimes kicking, scratching, and laying hold of things; sometimes she talked rapidly, repeating the same phrase, often counting one, two, three, over and over again. She had no sobbing or crying after the fits; was drowsy and stupid, but did not sleep. She was conscious of having had an attack, but had no recollection of what she said or did during it. During the last week, she had had three or four of these fits daily, with one day's intermission. They were becoming more frequent and more severe than they used to be. She had several convulsions in infancy when teething. A careful physical examination disclosed nothing abnormal. She was not known to have worms. Her tongue was clean, the bowels reported regular, and appetite good. Four grains of santonine were ordered at night, and ten grains of compound scammony powder the next morning. Twenty grains of bromide of potassium in two drachms of steel wine were given three times a day. When seen a week later, she had had a fit every other day, and four on one day. The bromide was increased to thirty grains three times a day, and from this time she remained absolutely free from all attacks, except slight "warnings", in the shape of giddiness, speedily passing off. The medicine was gradually reduced, with the apparent effect of leading to a recurrence of the "warning" symptoms, but no decided attack. Thus she continued until March 26th, 1874, *i.e.*, two years after the commencement of systematic treatment, never having an attack of talking and struggling convulsion, but occasionally slight vertigo. She had left off medicine for long intervals—weeks at a time—resuming it only when threatened by a return of the warning symptoms.

In all these cases, the subjects were young. I have not met with an

example of epilepsy of this form in adults, although many of Trousseau's cases of an analogous disorder occurred in grown persons. In the present group, the disease commenced in every instance in childhood; in the first case, at 6 or 7 years of age; in the second, at the fourth year; in the third, at 2 years old; in the fourth, at 7.

In two cases, the children had suffered from convulsions in infancy; and in one, which recovered, there was a history of insanity and imbecility in the family. In the first case, the seizures were attributed to a severe blow on the head; in the second, they were no doubt aggravated, but probably not originally caused, by the presence of a round worm, the symptoms abating after its expulsion, but not ceasing entirely for many months. In the remaining cases, no cause could be assigned. In one of them, the existence of an aura, or at least of a premonitory paroxysm of pain in the abdominal region, seemed to point to some local irritation there as the starting-point. The rapid repetition of the same word or phrase, evidently a mere automatic discharge of language not springing from ideas, points to the morbid stimulation of that portion of the brain which has been shown to be intimately connected with the translation of ideas into articulate speech; viz., the third left frontal convolution. The morbid anatomy of aphasia, and the striking experiments made by Dr. Ferrier, who says that he has succeeded by the electrical stimulation of this same third left frontal convolution in producing cries in animals while in a state of unconsciousness, give special interest to the cases here recorded. The phenomena of phonation produced during the epileptiform convulsion are so closely analogous to those produced in the experiments on animals, as to lead to the belief that the same portion of the cerebrum was irritated by morbid influences in the one case as by the electric stimulus in the other. Against this there is, however, the fact, that in Case I the convulsion was accompanied by loss of power in the *left* arm; yet on the other hand, cases of left hemiplegia with aphasia have been recorded, and the active organ of speech is probably not invariably on the left side of the cerebrum. In these instances of disease, the stimulus may have been applied directly to the centre, or, as was probably the condition in Cases II and III, reflected from some distant organ.

In Cases II and IV, continued use of the bromide of potassium resulted in the complete disappearance of the symptoms, which there is every reason to hope will be permanent. In one of these, the disease had existed for nine years. In Case I, the symptoms were mitigated by the use of the same drug; but complete relief was not obtained. It should be remarked, however, that in this instance the largest dose administered was twenty grains—an amount which subsequent experience has taught me is quite inadequate for the complete control of epileptiform attacks at the age of the patient in question; viz., 18. In Case IV, the occurrence of an intercurrent affection has prevented the proper trial of the bromide of potassium, and it has not yet been resumed.

PUERPERAL FEVER IN PRIVATE PRACTICE.

By WILLIAM HINDS, M.D., etc.,
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THE editor of this JOURNAL invites a contribution from the individual experience of its readers, otherwise a very limited experience would scarcely justify any such contribution from me. Besides some recent cases, of which I will speak, my previous experience is confined to one fatal case. This was the 103rd case of midwifery which I attended, and I had no more puerperal fever until I had attended some 550 cases in addition. This first case occurred in 1847, and was followed by death in seven days. My last case occurred in January last in a primipara. I will give some account of both these cases, and do what I can to trace the etiology in each. The first case stands alone in my experience, and, as the last one is typical of some others, none of which proved fatal, I will give a few notes of that case only.

CASE I.—Mrs. P., aged 38, of active sanguine temperament, began to experience labour-pains about 5 o'clock on February 12th, 1847, which gradually increased in strength and frequency until 9 the same evening, when I was summoned to attend her. The pains on my arrival were active, and belonged to the first stage of labour. The os uteri was not dilated or disposed to dilate. It was marked by firm cicatrices, most likely the result of injuries at former labours. After several hours, the os somewhat improved; but the pains all at once ceased, and not a single pain came on for an hour or two. There was neither exhaustion nor fever, and the patient was perfectly calm. After an hour or two, the pains recurred, and were as active as before, and the os uteri became more dilated and its edges soft and elastic; but the pains in a few hours again ceased entirely. There was, however, not the least exhaustion, and nothing to induce active interference. The same thing had occurred in her labours previously, she said; and her medical attendant had to leave her three successive times, and she had never required any instrumental aid. A third time I was compelled to witness a cessation of pains, and this time there was some disturbance of the circulation. The pulse was 120, the tongue was coated, and some thirst and considerable exhaustion. Ergot had been previously administered, and the head, which presented in the first position, rested on the perinæum. This was about twenty-four hours from the commencement of labour, and near six from the commencement of the second stage. I ordered an enema to be administered, and left to fetch my forceps and summon a medical friend near. Returning very soon, I found she had been delivered immediately after my departure. The placenta had also been removed by a woman of some experience, who had been in attendance. The placenta, on examination, appeared to be perfect, and the uterus well contracted. During the first night, she had not much sleep; was restless and thirsty, and the tongue still coated when seen on the 13th.—February 14th. Pulse, 120; skin hot and perspiring; thirst and restlessness. A pill, with one grain and a half of opium, was ordered to be taken at bedtime.—February 15th. She had an excellent night's sleep, but the thirst was still great and the tongue coated; pulse, 120. The patient expressed herself much better. There was no milk at present. She made no complaint, except of thirst. A brisk aperient and nutritious diet were ordered.—February 16th. She had been restless during the whole of the previous night; the bowels were well open yesterday. There were thirst and coated tongue, and occasional delirium. She now complained of erratic pains in the limbs, which she considered rheumatic. There was some milk. The pulse was 120 at least, and more feeble. The skin was dry, not moist as before. There was not the slightest tenderness of the abdomen. I ordered a diaphoretic mixture, with ammonia and opium, to procure sleep.—February 18th. She had little or no sleep during the last three nights, although an opiate was administered. She was delirious at intervals, and last night she was with difficulty restrained from getting out of bed. There was no pain of head, and no abdominal tenderness. Nausea occurred occasionally; the tongue was furred and brown near the tip. Pulse, 135, weaker. She was ordered to have wine; to take castor-oil immediately, and two grains of opium at bedtime.—February 19th. She had eight hours' sleep, which was, however, much disturbed. She complained of pain in the arms. On the outer part of each forearm, there was a slight blush of redness and some œdema. The lower extremities seemed free from redness. There was some nausea; no tenderness of the abdomen. The bowels were relaxed five or six times; the tongue was brown, the pulse weaker, and the breathing had become hurried and laborious. There was no milk, and the breasts had become quite flaccid. The lochia were scanty, and somewhat offensive. Wine was ordered to the extent of two ounces every two hours, and quinine every four hours. In the evening, the red blush on the forearms occupied the whole outside space from wrist to elbow, and had become deeper, and the œdema had somewhat increased. The breathing was still laboured, and the pulse was 140 and tremulous. She had diarrhœa. The tongue was brown and dry. She was ordered wine and egg-flip *ad libitum*. The patient died early on the following morning. No *post mortem* examination was obtained.

REMARKS.—Here was a case of undoubted blood-poisoning; but what was its advent, what its etiology? At that period, there was an almost universal belief in contagion or zymotic infection. In this direction, I made most careful inquiry, and I certainly found that the female who was left with my patient, who removed the placenta in my absence, and who was employed by various medical men to give injections, etc., had, according to her own statement afterwards, been in attendance within a few days previously upon cases of both erysipelas and scarlatina. Did she communicate to my patient any zymotic poison? With the light I then had, I supposed this rather probable. I do not think so now. I am decidedly of opinion that it was a case of septic infection. Small escapes of blood, intrauterine, and confined during many hours of a protracted labour, will certainly suffice to produce a septic poison; and, in this case, the cracks in the hardened cicatrices of the os uteri would easily facilitate the process of septic infection. In this way, I have come to regard this case as one of primary sepsis, caused by breach of surface.

My second case, which I shall give very briefly, belongs to a totally different category. Here the uterus alone, and secondarily the abdominal parts in its immediate vicinity, were first affected.

CASE II.—Mrs. W., primipara, was confined on January 27th last, after a labour of about ten hours' duration. She progressed favourably for four days at least; for, when seen on February 1st, there was no complaint, except of restlessness and insufficient sleep. On the fifth day, on entering the room, an extremely unpleasant earthy odour was