proceed to suppuration. The two grand causes of hepatitis and hepatic abscess in this country are, without doubt, dysentery and malarial fever.

(*To be continued.*)

MALARIOUS FEVERS ATTENDED WITH INDISTINCTNESS OF SPEECH, DIFFICULTY IN SWALLOWING, DEFECT OF CO-ORDINATION WITHOUT LOSS OF MUSCULAR POWER, DELIRIUM, AND OTHER NERVOUS SYMPTOMS.

By Assistant Surgeon J. KELLY, M.D., 1st P. N. I.

I VENTURE to lay before the profession a description of a train of peculiar symptoms which I have observed in some cases of remittent and intermittent fever.

I believe there is no allusion to this form of disease in any of the standard works on tropical diseases, and I am convinced that, when seen, its true nature is not always recognized, being confounded with apoplexy or paralysis, from which diseases it is totally distinct.

In its most marked form the following is the usual course of the disease.

A patient who has been suffering from remittent fever of the prevailing type, is found at one of the visits to have become quite unconscious; he lies on his back or side, and does not by word or gesture show any sign of consciousness. He cannot be roused, even though loudly addressed or roughly shaken; the breathing is easy; the pupils perhaps somewhat sluggish, but not strikingly altered; the pulse and skin are such as might be expected at that stage of the fever, or almost all traces of fever may have disappeared, and the skin and pulse have returned to their normal state.

In striking contrast to his general lethargy is the brilliancy of his eyes,—a brilliancy which is apt to mislead one into supposing that the patient possesses more intelligence than he really does; the eyes are not brighter than in other cases of remittent fever, but are by contrast more conspicuous now; the face is usually slightly suffused, sometimes pale; the conjunctivæ clear, muddy or yellowish, as in other cases of remittent fever: there is no marked heat of scalp or throbbing of the carotids.

If liquids are now poured into his mouth, even in small quantities, alarming symptoms of suffocation follow.

It is soon discovered that his fœces are passed in his bed, and that the urine is retained and must be drawn off by the catheter.

In bad cases, matters continue in this state for nearly a week with little alteration; but usually on the second or third day an unexpected change is observed. The silence of the first days is replaced by loquacity, and the patient now chatters incessantly; but he speaks so indistinctly that he is quite unintelligible. He can now swallow liquids, though very slowly; and he possesses a certain amount of intelligence.

An abatement of the feverish symptoms now takes place, if it has not occurred before. It is not unusual for the patient to relapse before many hours have passed, and at the next visit he is as silent and almost as unconscious as in the beginning; such alternations of silence and chattering delirium may take place three or four times.

After an interval of fluctuation in the symptoms, at last there is a well-established improvement; the pulse has fallen to the natural standard in the morning, though there is perhaps some acceleration in its rate towards evening. The skin follows the same course as the pulse; the patient is now able to understand what is said to him, and perceives the defect in his speech, but he cannot resist his tendency to garrulity; he keeps making remarks upon any observations he hears, such as orders about his food, medicine, &c.; he can now make himself intelligible; he can protrude his tongue quite straight; there is still some difficulty in swallowing, but the fauces look healthy.

Of late he has been making some attempts to get out of bed for purposes of nature, but was unable to stand. His comrades attribute this to general weakness, and say nothing about it; but, as his general condition improves, they call attention to the fact. It is now found that he cannot support himself on his legs,—they tremble and sink under him; sensation is perfect, and when he lies on his back, I am unable to bend or extend his legs against his will; in the same way his arms retain their muscular power, but he cannot perform the military salute with precision, for his arm trembles and jerks, and it is only after several attempts that he can touch his forehead with his hand. After this the patient gradually recovers the use of his legs and arms, but the defect of speech continues longer, and some degree of indistinctness may be permanent; occasionally the loss of controlling power in the limbs is persistent.

In this form of disease the special senses are unaffected, the muscles do not waste, and closing the eyes does not perceptibly affect the muscular movements.

The milder form of the disease is mostly seen in connection with intermittent fever; its most constant and striking feature is defect of speech, which may continue from a few hours to a few days.

The defect of speech, in its worst form, may be well imitated, by pressing the tip of the tongue against the hard palate, far back, and then endeavouring to speak; the milder form, or the changes in the worst form, may be represented by moving the tip forwards and making the same attempt.

The histories of the following cases, abridged from the original descriptions, will serve to illustrate most points in this form of disease.

CASE I.—A recruit was admitted to hospital, suffering from remittent fever accompanied by delirium; the fever continued high for three days, and then, as was usual at the time, abated, but the delirium continued. Without having much fever, he still continued to rave for two days longer; on the sixth day from the first onset of the fever, he was found lying on his back, quite unconscious; he could not be roused; at the same time, his face looked intelligent and his eyes were bright; he passed urine and fæces in his bed; breathing easy; pulse weak, and only slightly accelerated; skin moderately warm; face slightly suffused; pupils normal, or nearly so; breathing calm and easy; no spasms; he was unable to swallow, and the smallest quantity of fluid produced alarming symptoms of suffocation. He was fed afterwards by enemas of milk and soup.

After continuing in this state for nearly a week, he recovered some degree of consciousness and tried to speak, but failed to make himself intelligible; he could swallow, though with difficulty; he now emptied his bladder and bowels into the bed-pan.

All this time there was slight remittent fever present; it was most perceptible in the evenings.

As he began to feel better, he endeavoured to get out of bed, but found that his legs sank under him, and yet, as he lay on his back, I was unable to bend to extend them against his will; his arms, too, were so shaky that he could not salute properly, nor could he grasp an object directly; his hand was jerked at either side of it, but having seized it his grasp was strong and firm; his arms retained their muscular power; common sensation and the special senses seemed unaffected; the movements of the tongue were normal, apparently.

It is unnecessary to follow step by step the progress of this man's case; let it suffice to say that at the end of two months he was able to move about the ward with the aid of a stick, but that even after four months his gait was still unsteady, and his speech very indistinct; he was discharged from the service.

There was no wasting of the muscles; closing the eyes did not perceptibly influence the muscular movements.

Case II.—A fine young Sikh was in hospital for a week, on account of an abscess (small) in the heel of left foot; he was attacked by fever on the 10th January, but there was nothing in the symptoms to direct special attention to them until next morning.

11*th January, morning.*—He lay in a very prostrate and apathetic state, and, when addressed, replied in a careless, listless way; but his answers were rational. Skin slightly warm, but the pulse was very rapid and weak.

12th, *morning.*—Delirious during last night, and complaining of headache; the skin was very hot, but the pulse continued weak and rapid; and about 4 a.m., the native doctor, alarmed by his weakness, gave him a few ounces of rum.

Now, he is very dull and lethargic, and can with difficulty be roused to answer questions, which he does in a few almost unintelligible words, and then relapses into silence; breathing easy; eyes bright, and give his face a look up intelligence.

13th, *morning.*—Inclined to be very talkative now, and makes remarks upon subjects that are mentioned in his hearing; when spoken to, he restrains his loquacity for a short time; to simple questions he returns rational answers, but his speech is very indistinct; eyes bright and intelligent; he can swallow without difficulty; pulse, 110—not as weak as yesterday; skin moderately warm. From the first he passed his motions into a bed-pan.

20*th* —Since the 13th the fever has been daily becoming less, and has now disappeared altogether; speech only slightly affected; complains of pain and weakness of thighs, but he walks well. Placed on the convalescent list, and after a week returned to duty.

Case III.—A young Pathan was admitted on 24th October; he had been suffering from fever for a few days in the lines. When admitted he had not high fever nor defect of speech, the native doctor stated.

25*th October.*—Little fever, but he is dull and languid, and speaks very indistinctly. From this date he became more dull, and his speech more thick; his fever was a mild remittent.

29*th.*—It is only by being loudly addressed that he can be roused to speak a few most indistinct words, but he faintly comprehends what is said to him, and his answers to simple questions are rational; eyes bright, as before described; he has the greatest difficulty in swallowing, even small quantities of liquids; breathing easy; no determination to head; passes motions into a bed-pan.

From this state he gradually recovered, and on the 4th November was able to leave his bed; but his legs were so shaky that he would not dare to stand unless a comrade was near to support him. The arms were little affected, but speech was very indistinct; no difficulty in swallowing; I was unable to bend or extend his legs against his will.

He never exhibited any tendency to chattering delirium; unless addressed, he lay quiet and silent.

A fortnight later he had nearly quite recovered.

Case IV.—A sepoy, who was attacked by quotidian fever, became gradually very weak and restless, and in the afternoon of the 25th September,—the eleventh paroxysm,—while the feverish symptoms were still high, became delirious and violent —tore his own and his comrade's clothes, and kept shouting out loudly. Next morning, the 26th September, he was free from fever, and quiet, but his speech was very indistinct; the movements of the tongue seemed natural; no difficulty in swallowing; no affection of the limbs.

The fever returned, but was not accompanied by delirium.

27*th and* 28*th September.*—Severe vomiting and diarrhœa accompanied the fever to-day and rendered him very weak, but he had no delirium; speech very indistinct.

29*th September.*—Diarrhœa less; speech as yesterday; fever came on later.

30*th.*—A little fever to-day; four stools; speech better.

1*st October.*—No fever; a few stools; speech almost normal.

A few days later he recovered his speech. He was sent home on sick leave.

In ignorance of how far a more complete illustration of this form of disease, by histories of cases, and comments, may be deemed necessary or acceptable, and omitting many points of interest, from a reluctance to obtrude further, I conclude this sketch with a short summary.

1st.—Malarious fevers are sometimes accompanied by a train of nervous disorders, altogether distinct from apoplexy, inflammation of the brain or its membranes, and paralysis.

2nd.—These disorders may occur, or, if they have appeared before, may become aggravated at the time that the feverish symptoms are abating.

3rd.—The tongue is the organ most constantly affected, and is the last to recover.

4th.—The defect of speech and loss of co-ordinating power are the most conspicuous features in the disease, but the tendency to failure of the circulation is the most important.

REPORT ON THE EPIDEMIC OF CHOLERA PREVAILING IN THE PERTABGURH DISTRICT.*

By J. Hart, M.R.C.S., *Civil Surgeon.*

In my report regarding the prevalence of this disease in 1871, I stated that it had disappeared at the sudder and Ateha thannahs on the 11th and 18th of January, 1872, respectively. It had then existed in different parts of the district from the 16th May, 1871, and I remarked that its ravages were not very great in proportion to the population, *viz.* 1,345, or 1·71 per 1,000.

From the 18th January, 1872, to the 6th February, 1872, there were no cases of cholera reported; but on the 7th February, the chowkeedar of two hamlets, called Bunsee Putti, in the tehsil of Putti, reported the occurrence of cholera in his beat; that six cases had occurred, and all had ended fatally; and that it then appeared in adjoining hamlets.

In cholera enquiries, as it is of primary importance to ascertain the dates and localities when and where the first case and first death occurred, I visited Bunsee Putti on the 1st of April, 1872, and this is the history of the outbreak which I gleaned there. I was very fortunate in getting hold of the first man who was attacked, and who, though reported as having died, was living.

Bunsee Putti consists of two hamlets, as shown in the following plan. The groups of houses are situated on high ground; the soil consists of an upper layer of sand, with a sub-soil of concrete. There are a few trees scattered over the place; a nullah with dirty water stands on its north and west aspect. One house only is built of mud walls, with a tiled roof; the others are of mat walls, and light straw thatching. In the first hamlet I found the tiled house forming its south face, the doors opening to the south; the other three sides formed a square, having the back of this house for one side; the other three sides consisted of sheds—roofs supported on props with imperfect mat walls: a courtyard existed in this square. The huts were promiscuously occupied by men and cattle, and a strong smell of ammonia, from decomposing urine, pervaded the atmosphere. Fifty yards in a south-west direction is the second hamlet, consisting of a few huts with mat walls and thatch roof. The people drink from the one well, the water of which appeared and tasted good. The dates are never to be relied on as received from ignorant natives. The first case

* This report has been placed at our disposal by the Inspector-General of Hospitals, Indian Medical Department.