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CASE OF TYPHUS FEVER,

FOLLOWED BY

RIGHT HEMIPLEGIA

AND

LOSS OF INTELLECTUAL LANGUAGE,

BOTH ARTICULATE AND WRITTEN,

(AMNESIC APHASIA).

BY

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CASE

OF

TYPHUS FEVER FOLLOWED BY APHASIA.

It would be simply a waste of time and space to repeat what has already been so ably written in the various journals respecting that condition of the body which is now commonly expressed by the word *Aphasia*. All that is at present known about it has been published, and what is now required for its further elucidation is a record of carefully-observed facts. In relating the following narrative, therefore, I shall not enter upon the consideration of its physiological or pathological bearings, but merely describe the facts as they occurred.

As a contribution to the subject, this case seems to be interesting chiefly from three circumstances,—namely, that it is that of a well-educated gentleman, and therefore the contrast between his former and subsequent condition is the more striking; that hemiplegia and loss of intellectual language occurred in connexion with typhus fever, in which respect, so far as I can learn, the case is unique; and that all the facts that are to be mentioned were carefully recorded in my note-book in presence of the patient, and therefore the narrative is not in any respect modified by tricks of memory.

Typhus Fever.

Mr A. B. X., age 21, etc.,[1] had been invited to meet a few friends at dinner at my house on Friday the 5th of January 1866, but an hour before dinner-time I received a note from him excusing

[1] Both the patient and his friends have kindly given their cordial permission to the publication of this narrative. They have done so in the interests of the profession, and it would be very unbecoming if I were to publish any facts which would lead to the discovery of the patient. With reference to the previous history of the case, therefore, I feel at liberty only to mention a few circumstances—which were communicated to me by Mr X.'s father subsequent to the hemiplegic attack—and these only very briefly. Mr X., when a child, was not strong; he had the common diseases of childhood; in October 1863 he had small-pox; in August 1864 he had typhoid fever. His moral character is irreproachable. His mother died of phthisis. His maternal grandmother

himself on the plea of a slight indisposition. On the 8th (Monday) I called upon him at his lodgings, and found him in bed. He told me that on the evening of Wednesday the 3d of January he had been seized with shivering and headache, but believing that these were merely the symptoms of a common cold, he had treated himself accordingly. He had been freely purged with Henry's solution of salts, and had taken one or more doses of James's powder. On examination, I told him that I believed he had contracted typhus fever, and that, reckoning from the date of the rigors, he had arrived at the close of the fifth day. From this date, at his own request, I set myself to watch him through the fever, and obtained, from the Sick Nurses' Institution, a nurse who proved to be in all respects a most desirable attendant.

On the following day (Tuesday 9th), the typhus eruption showed itself, and from that day, until the 20th, he gradually passed through the fever, without exhibiting any peculiar symptoms. A decided improvement occurred on Tuesday the 16th, when the pulse fell for the first time.

	Day of Fever.	Pulse at Morning.	Pulse at Mid-day.	Pulse at Evening.
Jan. 9. . .	6th,	93	...	93
„ 10. .	7th,	92	...	93
„ 11. . .	8th,	106	...	106
„ 12. . .	9th,	112	...	110
„ 13. . .	10th,	118	. .	118
„ 14. . .	11th,	118	...	120
„ 15. . .	12th,	122	120	120
„ 16. . .	13th,	116	116	114
„ 17. . .	14th,	90	...	84
„ 18. . .	15th,	74	...	...
„ 19. . .	16th,	65	...	...
„ 20. . .	17th,	64	...	...

When, at my first visit, he requested me to attend him, I asked the address of his friends, in order that I might communicate with them. This he gave me, but added, "Don't write to them; I don't wish them to know about it until it is over." I readily promised not to write to his parents, but I immediately wrote to Dr ——, physician to one of the largest provincial hospitals, their medical adviser, and corresponded with him afterwards. In a note to Dr ——, on the 13th of January, I wrote,—"Last night he was quite conscious, and I am altogether quite satisfied with his progress hitherto. I hope he will get well over the next three days, and if so, all immediate danger will probably be past; but he will have to be very cautious during convalescence, which, I apprehend, will be slow; and, of course, there is always the risk of developing latent constitutional disease."

On the 17th, I wrote,—"I sent you a telegram yesterday, which I hope would relieve you and Mr ——'s parents of some anxiety.

was also phthisical, but died hemiplegic (of which side is not remembered). Another near relative died of disease of the brain, at a little under 50 years of age. Another near relative (still living) has, since an accident in early life, been affected in his speech, his hearing, and his right side.

Mr —— is doing nicely. On Monday night, the pulse gradually fell from 122 to 114, and last night, from 114 to 90. I hope and believe he will make a good recovery. I need not write again unless something untoward should occur."

From Wednesday till Saturday (17th to 20th), Mr X. made a good recovery. The fever was at an end, and there seemed to be every prospect of a favourable convalescence. The tongue cleaned steadily after Tuesday the 16th; and on Saturday the 20th, it was clean, moist, and in all respects as well as could be desired. The bowels acted spontaneously twice between the 17th and 20th,—the motions, so the nurse said, being both copious and natural in appearance. On the 20th, he was still very weak, but could turn in bed with the smallest assistance. He had the free and full use of all his limbs, and spoke cheerfully.

I need not encroach upon the space of the Journal by publishing the routine of an ordinary case of typhus; but a sentence or two may be necessary to give an idea of the character of the fever. It was an average case,—neither so mild as to cause no apprehension, nor so severe as to cause much alarm. The typhus which prevailed at the time was generally mild, and the mortality comparatively low.[1]

During the early part of the fever, the headache was pretty severe, and he was sleepless and restless; but on the 11th, the headache disappeared, there was much less restlessness, and a tendency to sleep. Throughout the attack, however, there was neither marked vigilance nor somnolence. There was no delirium, neither violent nor muttering; but after the headache left him, his remarks were somewhat incoherent, and, although he was not deaf, he did not answer questions so promptly as he had previously done. He seemed to be confused, but still always answered my questions respecting his state in a tolerably distinct manner. He never professed to be better than he really was, and, on the other hand, he made no moaning complaints. There was no paralysis; his movements were generally slow; but he protruded his tongue, and moved the muscles of his face and limbs without difficulty; there was neither tremor nor twitching of the muscles; there was no involuntary action of the bowels or bladder, nor retention of urine. The urine was tested two or three times for albumen, but there was none. There was a tendency to constipation, which was a little troublesome,—causing some uneasiness of the bowels, which were

[1] To give an idea of the mortality, I may mention that, from 1st October 1865, to 31st March 1866, inclusive of both days, there were admitted into the Infirmary under my care 326 cases of distinct typhus, of which 206 were males, and 120 were females. Of these, 32 died, or 1 in 10. The average age of all the cases was 23·7 years; the average of the ages of those who died was 36·7. Thus, over a period of six months, equally divided before and after the 5th of January, the day on which I first heard of Mr X's indisposition, the mortality was 10 per cent., which, considering that no deduction is made of those cases which died soon after entering the Infirmary, nor of others which were complicated with delirium tremens, or engrafted upon other diseases, is an evidence of a somewhat mild epidemic.

probably rendered more obstinate by the free purging which had been produced at the outset of the fever by means of Henry's solution of salts. The only other point that it is necessary to refer to is the muscular prostration, which was almost extreme. It was the symptom about which I was most anxious. On the 14th and 15th, the first sound of the heart was quite inaudible at the base. But he took his nourishment readily, and, although he disliked stimulants, he had about four ounces of sherry daily from the 13th. He took beef-tea and milk pretty freely, but what he most liked was cold tea. The eruption was neither scanty nor copious. I have no record of the temperature. There was no pulmonary complication.

At my visit on Saturday, everything promised well. There was not, if I except the muscular prostration, a single bad symptom, nor anything whatever to indicate the advent of an alarming change. He had been taking a little calves' feet jelly, the pulp of a few grapes, and a little toast, in addition to the diet already mentioned; but the next day he was to have something like a dinner. We spoke of fish and a chicken, and he chose the latter. When I asked him how he was at this visit, with a beaming, hopeful countenance, so expressive of convalescence from fever, which none can wear but one who, after a hard exhausting fight, is enjoying complete repose, he replied, with increasing emphasis, "*Oh! I feel charming.*" As I was leaving his room I said, "Well, you'll enjoy your dinner to-morrow?" He replied, "Oh! *shan't* I." He never spoke to me distinctly again.

Hemiplegia.

On Monday the 22d of January, I wrote to Dr ——: "It is with great regret that I have to announce to you a serious change in Mr ——'s state, which, although by no means rendering his case hopeless, makes his recovery a matter of the deepest anxiety. Day by day, he improved so steadily and satisfactorily, that on Saturday I requested the nurse to get a chicken, with the view of his having a little of it as a first dinner on Sunday. But when I visited him yesterday (Sunday) morning, I found a serious change. The tongue, from being moist and clean, had become dry and brown, and there was a very slight appearance of facial palsy of the right side, with a difficulty of articulation, evidently incipient aphasia. I saw him again at night, and thought him a little better, the bowels having been in the meantime freely opened by a dose of castor oil. This morning I was sorry to find him *hemiplegic*, the right being the affected side. No cause of an external kind can be given for the change in his state, and I have no doubt it has arisen either from embolism or from slight effusion, but probably the former."

To give the history of the case at this stage more fully, I will transcribe my notes taken at the bedside:—

"*Sunday, January 21st (eighteenth day of fever)*, 10.30 A.M.—Great change in his appearance; tongue dry and brown; pulse 60, of fair strength, and quite regular; speech affected, can scarcely

articulate; when the face is quiet there is no appearance of paralysis, but when he attempts to speak the left side of the mouth does most of the work, and when he smiles—which he does at his imperfect speech—it is the left side of the face that is lighted up, though the right side has some expression. He appears to be quite conscious, and understands the questions that are put to him, but cannot give a distinct reply; he can get two or three words out, which are indistinct, and then, after a short effort to complete the sentence, he fails, and the attempt to give utterance changes into a broad smile at his inability. He nods or shakes his head in reply to questions, and yawns a good deal. The nurse noticed the change at 8 P.M., but she thought it was due to sleepiness. The movements of the eyeballs are quite normal, there is no squint, and the eye follows the finger held before it in all directions, the same on both sides. The pupils are neither dilated nor contracted, they are both alike, and equally sensitive to light, that is, they both contract and dilate rapidly on alternately exposing and covering them. There is no loss of voluntary power, except on the right side of the face, where one feature is more remarkably altered than the rest, namely, his inability to completely close the right eyelids; the left eyelids close perfectly, but the right leave a chink of about one-eighth of an inch between them in the middle, through which is to be seen the sclerotic with a very small portion of the lower arc of the cornea, the pupil being quite covered. He moves the eyelids of both eyes in winking, and when aroused, but the upper eyelid of the right eye does not drop so smartly nor so far as that of the left eye. He has perfect control over the limbs of both sides, and moves them in obedience to my request in all directions; he grasps equally well with both hands, and protrudes the tongue evenly to the extent of three-quarters of an inch beyond the lips.

"His attempts at speaking are like those of a man who has something important to communicate in a language in which he has the command of but few words, with perhaps this exception, that he is amused and not irritated by his inability to proceed. The few words which he has the use of are indistinctly uttered, as, for example, when I ask him how he is to-day? with an effort he replies, 'Mo mush bessa,' for 'not much better.' When I repeat a question which he is unable to answer, he does not endeavour to make me understand by signs, but either closes his eyes or turns his head away. He does not care for food, takes what is offered, but has not the relish for it which he has evinced during the last few days."

After calmly reviewing the case, and carefully considering the symptoms which I had then noted down, I felt convinced that it was not one for active interference, and that whatever was done should be with the view of supporting the patient through this critical juncture. The only point about which I had any doubt was as to the propriety of making a direct counter-irritant application to the head or neck, and I concluded that it would be unwise,

both in consideration of his present condition, and in the view of future consequences, to make any application which would cause discomfort in these parts. The only derivative applications that were made consisted of two large mustard poultices which were wrapped round the calves of the legs, and the application of iodine liniment to the left side of the head. Enemata were offensive to him; and as I did not think it advisable to give him a severe purge, I gave him half-an-ounce of castor oil. I left strict injunctions that he should be kept perfectly quiet, with the room as airy but as dim as possible, so as to encourage sleep; that he was to be cautiously nourished with beef-tea, milk, and wine (the latter to the extent of between two and three glasses in the twenty-four hours), and that he was to be moved as little as possible, either in feeding or other circumstances.

"8.30 P.M.—Pulse 63; tongue dry and brown; still nearly speechless, but quite sensible; has taken about half a pint of beef-tea, wine, and a morsel of toast since morning. The bowels acted at one o'clock. He seems rather better. To be kept perfectly quiet."

At my early visit on Monday morning (22d), I found him hemiplegic, the right being the affected side. The following notes were taken at the time:—"His face when quiet is not remarkably altered, but when he smiles in recognition of me, it is done by the left side, the right half remaining completely placid. He winks with both eyes, but cannot quite close the right eyelids. The right arm and right leg are utterly powerless; when raised they drop like lead, and when he is asked to move them he has no power to do so in the least degree. The tongue can scarcely be protruded beyond the lips; it is flat, is not drawn to one side, and is a little cleaner and moister than last night; but still brownish and dryish. The bowels acted copiously once during the night. He is quite speechless, but nods and shakes his head feebly when interrogated. When he smiles, it is with the left side of the face; but when he moves the jaw, as in mastication, both sides of the face seem to act, at least there does not appear to be any loss of fulness of the muscles of the right side, nor anything to indicate that the right side is not working, although no muscular contraction is visible. But he slobbers out of the right side of the mouth when offered a drink. He is still intelligent; but it is more difficult to arrest his attention than heretofore, and he sooner becomes abstracted. He has no difficulty in the act of deglutition; but it is performed by a series of gulps. He breathes calmly; there is no snoring, no stertor, and no puffing out of the cheeks or lips. He yawns frequently, but seems more to stretch his mouth as in the act of yawning than to take a deep inspiration; it reminds me at this moment of the yawning of a cat more than of a human being—a wide gaping without inspiration; this he repeats every two or three minutes. Pulse 55. Has slept a good deal during the night; has had beef-tea and wine occasionally, and for breakfast a lightly boiled egg, tea, and half-a-slice of toast."

At mid-day I asked my friend and colleague Dr Sanders, senior ordinary physician to the Royal Infirmary, to see the case with me. We made the visit at 1.45 P.M. Dr Sanders carefully examined the patient, and the result of our deliberations was that Mr X. was to be kept quiet, to be suitably nourished, and that we were to wait patiently, and without any meddlesome interference.

It would be tedious to transcribe my notes in full respecting this part of the case; I shall merely give a few extracts to show the progress of the hemiplegia. But before doing so, there is one incident of importance which I must allude to. I called again at 4.30 P.M. (22d), when the nurse mentioned to me that he had not passed water since morning. The bladder was not distended, and in all other respects he was precisely in the same state as when I had seen him with Dr Sanders three hours before. At my evening visit I took a catheter with me, and, as he had still not passed any urine since morning, I introduced it into the bladder. Not more than an ounce of urine flowed through it, and as the bed was quite dry none had passed involuntarily. I ordered hot linseed-meal poultices to the region of the kidneys. In all other respects he was the same as before; there was no aggravation of any of the symptoms. At my morning visit on the 23d, the nurse told me that he had involuntarily passed water in the bed once during the early part of the night, but that at 6 A.M. he had passed about ten ounces into the vessel. This was muddy-looking, and when examined at the Infirmary at noon, presented these characters: acid; sp. gr. 1025; became transparent on the application of heat; contained no albumen; chlorides slightly diminished. With this exception, there was neither suppression nor retention of urine throughout the case.

Dr Sanders visited frequently with me from this date, and occasionally Professor Christison also saw the case with me. The progress of the hemiplegia will be seen from the following brief extracts:—

"*23d.*—Right side completely paralyzed. . . . . *24th.*—Closure of right eyelids still a little less perfect than left. . . . . Still smiles with face distorted to left side. . . . . Speechless. . . . . Moves right leg a little, and gives a very feeble squeeze with the right hand, but cannot move it nor the arm. . . . . *25th.*—Can protrude tongue further; can move right arm a little; and can grasp my hand with his right hand so firmly that when I raise my hand his arm clings to it, and does not fall. . . . . When the fore-arm is raised it does not fall so suddenly as before, but gradually droops. . . . . Moves both legs equally well when told to do so. . . . . *26th.*—He can now lift his right fore-arm a very little, and can grasp pretty firmly with the right hand, and can also offer considerable resistance to movements which I make with the hand, wrist, and fore-arm; the elbow rests always on the bed; right eyelids scarcely meet; protrudes tongue well; moves the right leg freely and forcibly; nods or shakes his head in reply to questions. . . . . *27th.*—Cannot raise the right arm fully off the bed, but when it is raised for him he can hold the fore-arm up for a moment or two, and then it gradually

droops; firm grip with right hand, and considerable power in fore-arm. . . . . 28*th.*—Can raise his right fore-arm, and can give a firm grip with right hand. . . . . 29*th.*—Moves fore-arm much more readily, but cannot raise elbow from bed; closes both eyes completely; moves legs well and strongly; smiles with left side only." And so on, gradually gaining muscular power; on the 4th of February he sat up in bed for a little while, and also rose to the night-stool; on the 7th he walked to his bedroom door and back to bed again (about twelve feet). "18*th.*—This morning he dried his face with the towel in his right hand for the first time. . . . . 22*d.*—Walked about the room for about five or six minutes this morning whilst the bed was making. . . . . 27*th.*—He is in the sitting-room in his ordinary walking attire."

On the 10th of March he walked outside, and from that time he went about freely, walking without assistance, firmly, and without catching the ground, or otherwise showing symptoms of paralysis in the right limbs, except in the handling of small objects, which he continued for some time to do in a *fumbling* manner. The face also continued to be distorted to the left side in smiling.

The following is a record of the pulse noted at each visit during the hemiplegic state; at one time it was very slow and feeble, but always regular:—

	Morning.	2 P.M.	Evening.
January 21. . . .	60	...	63
„ 22. . . .	55	55	57
„ 23. . . .	54	50	45
„ 24. . . .	53	53	50
„ 25. . . .	54	52	50
„ 26. . . .	55	52	56
„ 27. . . .	55	54	52
„ 28. . . .	53	...	57
„ 29. . . .	52	52	54
„ 30. . . .	58	...	62
„ 31. . . .	55	...	63
February 1. . . .	66	64	64
„ 2. . . .	60	...	61
„ 3. . . .	55	...	57
„ 4. . . .	56	...	60
„ 5. . . .	62	...	56
„ 6. . . .	59	68	...
„ 7. . . .	65	...	66
„ 8. . . .	57	78	...
„ 9. . . .	60	...	60
„ 10. . . .	68	70	...
„ 11. . . .	66	...	68
„ 12. . . .	63	...	70
„ 13. . . .	70	...	70

From that date the pulse went on improving both in strength and frequency, until it became normal. The excited state of the circulation in the afternoon of the 8th was partly due to the arrival of his mother (his father and an aunt having previously been with him), and partly to his being in the sitting posture when the pulse was felt.

The treatment of the case in the way of medicine was very little indeed. At first he got nothing; after some time he took mild vegetable tonics, then small doses of *liquor strychniæ* for a time, and at a much later period he had occasional applications of galvanism. At first he passed his time almost entirely in sleeping, being aroused only for his meals. His diet was gradually increased until he took almost a double portion at each meal, his appetite becoming ravenous, until, after the lapse of a few weeks, he fell into his old habits. In these respects he resembled all typhus convalescents.

Loss of Intellectual Language.

As this part of the case will be regarded with greater interest than the others, I will transcribe my notes more fully; but as it would require far more space than I can reasonably ask in order to publish them without abbreviation, I must endeavour to make such a selection as will convey something more than a mere sketch of the case without entering into complete details.

I have already described the patient's condition on the 21st and 22d of January, and I find that until the 28th the chief records are that he was utterly speechless, and that he nodded or shook his head in reply to questions.

28*th*.—"Still no utterance whatever. . . . . I asked him if he could write his name in my note-book, and gave him the pencil; he took the book, but was too feeble in the right hand to hold the pencil up to the book, and as he appeared to wish not to be troubled, I did not press him."

29*th*.—"No utterance . . . . answers by nodding or shaking his head. . . . . I observe that when I request him to do something which does not task his judgment he responds promptly, as when I tell him to put out his tongue, shut his eyes, move his legs, etc.; but when I ask him a question which involves an opinion, he is slow to answer, and if he does not reply at once, he shuts his eyes and gives up. To-day I notice that his port wine is nearly done. . . . . I ask him, 'Do you like your wine?' Nods promptly. 'Do you like your port wine?' Nods promptly. 'Would you like the next bottle to be *port* or *sherry?*' No answer. 'Port?' 'Sherry?' No answer. I repeat the questions; no answer, looks confused and shuts his eyes. I ask, 'Would you like more port wine?' Nods promptly. . . . . His father tells me that he thinks him much better, and quite intelligent; 'For,' he says, 'although he cannot speak, I who know him can converse with him by the expressions of his countenance.' . . . . Tried to get him to write his name in my note-book. He managed to raise up both arms (forearm on right side), to hold the book in the left, and the pencil, with a pretty firm grip, in the right hand, and to bring the book and pencil together; but after an effort, sustained for about half a minute, he gave it up having made only one or two scratches.[1] When he dropped his hands he

[1] This and subsequent numbers refer to the illustrations.

laughed at his inability to do what was asked, and this laugh was the nearest approach to utterance that has been heard since he became speechless; it was simply a short hollow sound very like the sound emitted by persons with cleft palate."

30*th*.—"*Note*—I have frequently recorded that he answers some questions by prompt movements of the head or limbs according to the nature of the request, but I have never (nor has any one) seen him make any spontaneous sign, or give any indication of a desire for anything whatever. When Dr Christison was at the bedside this morning, I asked Mr X. if he knew who it was, and he nodded assent; but when I asked, 'Is it Dr Sanders?' he still nodded assent; and when I asked him, 'Is it Professor Christison?' he appeared a little confused, shut his eyes and gave up, although he had known Dr Christison before his illness. Another thing I have remarked, that whilst his assent is a sharp, short, decisive nod, his negation is a heavy, slow, and complete roll of the head, touching the pillow with each cheek alternately, when lying on his back, and even when lying on one side of his face, the roll extends from that position to one with the face directly upwards: it is not a sharp shake so much as a roll."

31*st*.—"Tried to write his name in my note-book; but the pencil, held in the right hand, was stationary, whilst the book, in the left, made the necessary movements."[2] (I think I may venture to publish this attempt, for it is not likely to be deciphered; but he very soon recovered the power of writing his own name with facility, and quite legibly.)

1*st February*.—"During the visit, when Dr Sanders was at the bedside, I asked, 'Do you know who this is?' Nods assent. 'Is it Professor Christison?' Nods assent. 'Is it Dr Sanders?' Turns his head away and shuts his eyes, as if tired of trying to identify Dr Sanders. He does not tire in this way when asked to perform any movements with his limbs, which he does promptly and pretty vigorously; indeed he seems rather proud of, or grateful for, his accomplishments, and would continue the movements longer than is necessary. When I sit down by his bedside and take out my watch, he at once extends his left arm to me without my making request either by sign or word for it. The left pulse is the one I have always used since I discovered an abnormality (high division) in the right radial artery."

3*d February*.—"I asked him to write my name in my note-book—I said, 'Write Dr Jackson.' He held the book and pencil pretty well, and moved his right hand in making the characters. After he had done it, and had examined it, he uttered a loud and prolonged laugh, and I thought he was going to speak; the noise was exactly like what would be made, and such as I have heard made, by a man with his jaw dislocated, and when I put a question to him he made a feeble attempt to speak, which was also like what a man with a dislocated jaw would utter. The laughter continued for about two minutes in occasional fits. The first attempt

to write Dr Jackson is apparently '*O Janes*,'[3] the second '*Dr Jarens.*'"[4]

3d (evening).—"I asked him this evening, 'Did you enjoy your roast-beef?' Nods. 'Was it roast-beef that you had to dinner to-day?' Nods. 'Was it roast-mutton?' Nods again. It is curious to observe that he generally nods his head when his memory is taxed on a point of discrimination such as this, whilst he instantly fulfils any request made to him to move a limb, protrude his tongue, shut his eyes, or the like. When I ask him, 'Can you speak?' or 'Can you say, Yes?' he always shakes his head and smiles."

4th February.—"I asked him to write my name in my note-book, and pronounced twice or three times very slowly, 'Dr Jackson.' I then walked to the window, in order that he might not be disturbed. When I returned, the book was on the bed, and I found that he had written 'Dr Panbens.'[5] I then sat down beside him and spelled my name, and pronounced it deliberately four times; he wrote 'Dr Panbkens.'[6] As he wrote he stopped from time to time and looked to the ceiling, like a person trying to recall something to mind."

5th February.—"I asked him to write my name in my note-book. I pronounced my name very deliberately, the upper one[7] of these is the result. I then asked him to write it again, in which he seems to have repeated the last syllable.[8] I then asked him to write the word 'better,' and spelled it for him. He wrote '*Bitte.*'[9] I asked him to write the word 'better' again: he wrote what appears to be '*The H.*'[10] Thinking that perhaps although he could not write my name from memory, even when slowly and frequently repeated to him, he might be able to copy it if it were written for him, I wrote my name plainly,[11] and asked him to copy it; the results are these.[12] [13] I rather think, however, that from the manner in which he pointed to what he had written, and followed it with his finger, that he intended it to be a spontaneous communication, and not a copy of my name, although I urged him to copy what I had written."

6th February (morning).—"He made a strong effort to speak, and tried to get the lips into the right position, but just when I thought the word was coming the mouth broke away into a laugh, and he did not succeed. I then asked him to write my name in the note-book. He took the pencil more readily, and has not the same difficulty in getting it fitted into the right hand as he had; but still he always takes it first in the left, and carefully puts it into position in the right. This is his attempt at my name,[14] which I spelled to him. I then asked him to write the word 'better,' which I pronounced slowly, and spelled several times to him. I only mentioned the single word 'better,' but he wrote *is a betters.*[15] I then asked him to write whatever he pleased, when he wrote the following, which I cannot make out."[16] [17]

6th, 1.50 P.M.—"Visit with Dr Sanders. I ask Dr Sanders

(who has not seen him since the 1st) to mention what improvement he observes: I write to his dictation—'I notice a great improvement in the right arm; he has all the movements of it, though they are not so strong as the left, and he prefers to use the left. He still has the face drawn to the left side when he smiles, but at other times the paralysis is not noticeable. General appearance much improved; he still makes no utterance; considerable improvement in the strength of the pulse.' We then asked him to write Dr Sanders' name in the note-book. I mentioned the name to him and spelled it several times, and Dr Sanders also mentioned his name to him slowly. This[18] is the result of his attempt to write the name and title, which he first began as Mr."

7th February.—"Writing: I first tried him with pen and ink, but the pen stuck in the paper and he could not get on, so I gave him the note-book and pencil again, and asked him distinctly to write 'Dr Jackson,' but he wrote *Dr Arnes.*[19] I then told him to write whatever he pleased, when he wrote these sentences, the first of which is evidently intended for *This is Better;*[20] and the second, I think, has reference to his right arm, and possibly may be intended for *This arm cured.*[21] The next word was also written of his own accord. It is either *Felbow* or *Fellow,*[22] but I rather think he was referring to his right elbow. I next asked him to try to say something, and after a little consideration and a strong effort he repeated in a stammering manner the initial *st-st-st-st.* I then suggested the word 'strong,' when by another effort he got out *st-st-st-st-rrr-rrr-rrr-ong*, the first part with a hissing sound, the second with a loudish roll, and the last in a whisper. I then asked him to say 'better,' which he tried to do but failed; but on asking him to say 'strong' again, in presence of his aunt, he repeated it in the same way as before."

7th (evening).—"His aunt and the nurse tell me that he said *No* distinctly this afternoon, that he seemed to be startled at the sound of his voice, and then laughed."

8th February.—"Writing: I gave him my note-book and pencil, and asked him to write my name. He took the book, and immediately, and quite alertly, sat up in bed. He then took the pencil in the left hand, and fitted it between the thumb and index finger of the right: this he now does much more readily than formerly. I asked him to write 'Dr Jackson,' and repeated it very distinctly; he wrote *A. Jacksons.*[23] I said, 'I asked you to write Dr not A., try again:' he wrote *A. Jaksons,*[24] omitting the c. I then said, 'Never mind, write whatever you please,' and repeated this three times: after the first request he wrote *a very brilliant*[25] (the r of the last word he added after examining the sentence); after the second, *Yes, I have none;*[26] and after the third, *Mother she keeps, Mother cheeps.*[27] I had no clue to the meaning of the two first sentences, and at the time he wrote the third sentence I did not understand it, but I was afterwards told that his mother arrived this morning (I did not expect her until evening), and it was supposed that he was

endeavouring to tell me of her arrival. During the whole of this visit his attempts to speak were almost unceasing; the efforts were of a straining kind, as if he could not get the words thrust out, and at last they died in the utterance without being sounded. After each effort he looked as if he had forgotten something, or what he would say, and looked to the ceiling as if trying to recall his ideas, and then made a fresh attempt to speak. Each attempt began with the letter d: thus, *d-d-d-d*, but he could not get beyond it. I suggested to him 'say don't,' when, after one or two attempts, he uttered *d-d-d-d-d-d-on-st-st-st-st-st.* Afterwards, he said *strong* in the same manner as yesterday."

8th (evening).—"His mother tells me that he mentioned my name to her in a manner that she distinctly understood. I asked him to say 'Dr,' which he did in this way *D—octa*, dwelling long and straining over the *d*, when the rest suddenly followed; there was no repetition of the *d* or any other part of the word. When he strains at speaking, he slowly moves his head from side to side as if to help in the expulsion of the words."

To save the space of the Journal, I now pass over a few days.

20th February.—"I offered him my note-book to write, but as he did not seem to be able to originate anything to write about, I said to him, 'Suppose you write this,—This is a very fine day, it is very like a spring day.' This he attempted,[28] but he required frequent promptings after the first few words. I afterwards asked him to write my name, which he did."[29]

February 23d.—"When I gave him my note-book he wrote promptly and without bidding, *Dr Sanders*,[30] *Dr Jackson*."[31]

February 24th (evening visit).—"Some days ago his mother spoke about buying a draught-board, and said that he was fond of backgammon and draughts. It was agreed that I should be present at the first trial. This evening the board was given to him, wrapped in paper just as it had been purchased. I was anxious to see how he would deal with it, and expected to see the same inability to fix the attention and to play the game as I had seen in the writing. To my surprise, however, he not only recognised the board, but at once selected the white draughtsmen and put them correctly into position. I sat by his bedside and played a game with him. To my great delight he played a very good game, and made several very clever moves; it was, in short, quite as much as I could do to beat him, which I fairly endeavoured to do in order to test his powers. The game was very equal until by an unfortunate move he lost three men at once. At one time the contest lay between six kings on my side and four on his. The game lasted about twenty minutes, and he was quite as lively at the end as at the beginning of it. The only utterances that he made during the game were well-modulated interjections, *ah!* and *oh!* which spoke all that was necessary. At the outset of the game, I 'huffed' him for declining to take a man, but he playfully seized the draughtsman, put it back again, reversed the move he had made,

and apparently tried to say, 'I had forgotten that I must take you,' or 'I did not observe that.' But later in the game, when I overlooked an opportunity of taking a man, he 'huffed' me with great glee."

26*th*.—"I asked him to write the numerals up to ten, this he did twice, readily, and without prompting. I then said, 'Write 100,' this he did; 'Now, write 300,' for this he wrote 3000; 'Now, write 2718,' this he tried twice, but failed, he wrote first 27717, and then 277717.[32] He had a solitaire-board on the bed beside him. I asked him to play the game; he did so, and accomplished it in a very ingenious manner, without a single false move."

28*th February*.—"He wrote in ink to-day for the first time; he once attempted it before but failed. I showed him my watch, and asked him to write the name of it, but he could not. I then asked, 'Have you got one?' He took out his watch. 'Now write what it is.' He could not. I then said, 'It is a watch, write watch;' he wrote *a match*.[33] I did the same with the inkstand, but had to tell him the name of it, when he wrote *a inkspank;*[34] and for snowdrops, some of which were on the table, when told the name, he wrote *a spinhant*.[35] He then wrote the alphabet,[36] transposing h and g and omitting several letters; but his great difficulty was with the letter x, which he could not manage. After considerable effort, he left a space for it and went on to y and z; he then returned to the space and looked beseechingly at me for help. I did not speak, but crossed my index fingers, which he at once understood and filled up the gap. I then offered him a simple addition sum of two rows, which he did correctly.[37]

9*th March*.—"The nurse tells me, on inquiry, that he occasionally goes to the book-case and takes a book, or lifts a book or newspaper from the table, and looks at it for a few minutes, but, she adds, 'It's hard to say whether he reads any or not.' He is a most amiable patient; he never loses his temper when in difficulty either of speaking or writing, but generally smiles at his mistakes, and endeavours to correct himself or explain. When he is asked to repeat a word or sentence, he always emits a sound for each syllable; as, for example, when asked to say 'The Duke of Wellington,' he replies, *De—De—De—De-de-de*. His 'How dy'e do' has not improved, and he can scarcely be said to be able to articulate a single word, although his *home* and *Doctor* (in a singing tone) are intelligible to me. He frequently repeats the word 'Durner,' which sometimes seems to be intended for Doctor, but at other times it is unintelligible."

10*th March*.—"When Professor Christison entered the room, I asked, 'Do you know this gentleman?' Nods his head, and attempts to reply, but it is only *nn*. 'Write his name;' he writes his own initials well and correctly; 'Not your own name, this gentleman's; *Oh!* he says, and then writes *christison*.[38] 'Very good,' I said, 'but not very polite, should there not be some-

thing before the name?' meaning Dr or Professor; he looked at the word, and then, after exclaiming *Oh!* he increased the size of the initial letter."

12*th March.*—"I took with me the volume of the *Dublin Journal of Medical and Chemical Science*, for Nov. 1833, which contains a paper by Dr Osborne, 'On the Loss of the Faculty of Speech,' in order to test Mr X. by the sentence which Dr Osborne put to his patient, 'The Scholar of Trinity College.' The sentence is this:—'It shall be in the power of the College to examine or not examine any Licentiate, previously to his admission to a Fellowship, as they shall think fit.' I said to him, 'Now, I wish you to write a sentence which I will read to you from this book: I will first read it to you without interruption so that you may understand the tenor of it, and then slowly word by word as you write it.' This I did, and after pronouncing a word slowly and distinctly, I waited until he looked towards me inquiringly for another. I sat at a little distance from him, and did not interfere at all with his writing. When finished, he handed the paper to me, when I found that he had written as follows:[39]—*It shall be in the power of the college to examine organe not examine any the Licentiate, but to previously to high by admissionly to a Fellow to sopha as they those think fit.* I afterwards took him for half-an-hour's drive; the motion of the carriage did not inconvenience him; he looked about him with much interest as we went along the streets, and would fain have told me many things which were lost in a babble of unintelligible sounds."

13*th March.*—"At 1 P.M. I called for Mr X. and his mother, and drove them to my house to luncheon. When we arrived, I ran up before them towards the drawing-room, and when I turned at the top of the stair, I found that X. was smiling at a very slight difficulty he had in lifting his right leg at each step. It required but little effort, but still it was quite perceptible. There were no stairs at his lodgings. Dr Sanders called at two, and when we went to the drawing-room again we tried Mr X. at the piano. He sat down quite readily, put himself into the attitude for playing, and placed his fingers upon the keys so naturally that I expected to hear him play without difficulty, excepting such as might arise from the disuse of the piano for nearly three months; but, having come smartly to the starting point, the rest was a blank; he could not play a single bar, even when a piece of music with which he had been quite familiar before his illness was placed before him. Thinking it might be due to a defect in the right arm from the palsy, I asked him to try with the left hand alone; he then managed a bar or two very slowly, but transposed several notes. I then asked him to hum the tune, which he did pretty well. I should mention that he had had a piano at his lodgings up to the time of his illness, and I understand that he could play very fairly. At luncheon—and this is, I hope, a pardonable breach of the laws of hospitality—he behaved with the utmost propriety; there

was nothing in the least degree childish in his manner, nor was there any necessity for assisting him in any of the proceedings. He did not appear to be at all embarrassed, and, although he could not speak, he appeared perfectly to understand the conversation. Afterwards, I wrote on a slip of paper, 'Would you like to take a walk with me?' and he wrote in reply, '*Very much.*'" [40]

14*th March.*—"I wrote, 'Where did you take luncheon yesterday?' He wrote in reply, *I take at Dr Jackson.*[41] I then dictated to him slowly and distinctly the following passage from 'The Crescent and the Cross':—'The view from thence is very striking, commanding a wide range of the European and Asiatic shores, and of that gloomy and turbulent sea, so celebrated in the songs of the sunny Archipelago.' He wrote as follows[42]:—'*The view fiew thence is t very the, is commanding a wide and dangre a of range of wide and it asiatic aside, and a of a afore the gloffy*'—here he broke down, not being able to pass the word gloomy. (Compare this with the same passage written on 16th of April."[109])

17*th March.*—"I wrote on a slip of paper as follows:—'I am going to touch the right side of your tongue with one or two different articles, and I wish you to write the name of each after you have tasted it; do you understand?' He nodded assent. I then told him to shut his eyes, and put out his tongue; and when he had done so I rubbed the right side of the tongue with a stick of barley-sugar. I then requested him to write what it was: he wrote promptly, *To keefshage.*[43] I said, 'I don't understand, write it again,' and he wrote, *To sheefsage.*[44] I then repeated the experiment with a little table salt, for which he wrote, *To alumen.*[45] I repeated the experiment with a glass rod previously dipped in dilute sulphuric acid, to which he wrote, *To albuminate.*[46] He did not seem to be satisfied with his written answers, and endeavoured to explain himself by articulation, but was not intelligible. I then wrote the words barley-sugar, salt, dilute sulphuric acid, and told him to point to the one which I applied to his tongue. I then repeated the experiment in a variety of ways, often repeating the same substance two or three times in succession, but he never failed to give a prompt and correct answer by pointing to the name of the substance used.

"I then took a pair of compasses, and, showing them to him, explained that I was going to apply the points to various parts of the right hand, and the right side of the face; that when he felt two points he was to hold up two fingers of the left hand, and when he only felt one point he was to hold up one finger. I applied this test to various parts of the right hand, including the back and front of all the fingers and thumb, and all over the back of the hand, and also to various parts of the right side of the face, from the neck to the temple and forehead, comparing also the same points on both sides of the face. The result was that he never made a mistake when the points of the compasses were half an inch or more apart, but when they were within half an inch of each other he generally

made a mistake,—in fact, almost always held up only one finger; but the same result followed the application on both sides of the face. He seemed to be fully as sensitive on the right as on the left side, and the reply in every instance, by holding up either one or two fingers, was instantaneous. His eyes were shut the whole time."

I find that, even by omitting the reports of several days together, I cannot, by merely transcribing my notes, bring them within a reasonable limit. I must, therefore, sum up the remainder of the narrative more briefly. At this time, he was staying at Portobello, whither he had gone with Mrs X., his mother, for a change. On the 5th of April, he came to my house on a visit, and remained with me until the 16th, when he left Edinburgh for his own home. From the 10th of March he was out every day, walked a good deal, and conducted his mother (a stranger to Edinburgh) about the city and neighbourhood, explaining, in a very intelligible manner, the various objects of interest. Physically, he was, in all respects, save one, better than he was previous to his illness. The exception was the remains of the paralysis, which exhibited itself only in the distortion of the face when smiling. On the 17th of March he weighed 10 stones 4 pounds; on the 6th of April he weighed 10 stones 11 pounds. Before he left me, I made a careful examination of the various organs, and found nothing wrong. It is unnecessary to give the report, but it is satisfactory to know that Dr Sanders read it, and verified it also by a careful examination. The urine was never albuminous. After he had regained his strength, in addition to the treatment already mentioned, he had a small blister occasionally, either behind the left ear, or on the left temple, and once, a larger one, to the nape of the neck. He had also twice half-a-dozen leeches applied, once behind the left ear, and once to the nape of the neck. After the application of the leeches, there was a decided improvement in the face,—the right side of it acquiring much more expression.

During his stay with me he was scrupulously neat and tidy, both in his person and arrangements. He gave no trouble whatever, and required no assistance; in short, except that he did not speak, he was, in all respects, an ordinary and very agreeable guest. He played draughts, and, what was more, he taught me, who knew nothing of the game before, backgammon. I find this note recorded, whilst he was at Portobello:—"Mrs X. tells me that he arranges the things in his room as orderly as ever, and never forgets where he has put a thing. In his old lodgings he remembered quite well where each article was to be found, just as he had left it before he took the fever." His playing on the piano improved a little, but he did not care to practise much. He often sat before the piano, however, with the music before him, and hummed the tunes quite correctly and loudly. He frequently took long walks alone, and often called at the house of a very kind lady, who had shown him

great attention during his illness, and who understood his gestures. He occasionally received notes of invitation to this lady's house; and when he had read them, he carefully put them in his pocket, and, without much difficulty, explained to me the nature and time of the engagement.

The following is from my notes of the 13th of April:—"When he came to stay with me, I placed a packet of paper and a pencil in a drawer, and told him that whenever he wanted to tell me anything he might write it. He has done so a great many times, but although I have generally made out his meaning, he always wrote a jumble of words, which, without an interpretation by signs, were incomprehensible. The odd thing is, that after writing a long sentence of this kind, he would carefully read it over, correct an error or two in spelling perhaps, and then seriously hand it to me, evidently expecting that I should understand him. His eye did not tell him that he had written nonsense. I generally made out what he would be at, however, and answered accordingly; but occasionally I said, 'Just let me read to you what you have written,' and when I had done so gravely, he invariably burst into laughter at the jargon."

From my notes of the 16th of April:—"Yesterday, Mr X. accompanied me twice to church, in the morning and in the afternoon. I noticed that he quickly turned to all the places in the prayer-book, and found the hymns readily enough. In the morning he did not turn up the text, he did not try; but when we got home, without any reference to the subject previously, I asked him if he could show me the text, when he took his Bible and found the place at once. In the afternoon he endeavoured to turn up the text in church, but I think he failed to find it; but, on arrival at home, he turned it up in his own Bible, though not so promptly as in the morning. Before going to bed at night, I asked him to turn up both texts again, and he did so readily. I should mention that in the afternoon it was as much as I could do to catch the text, so he must have been very alert. I asked him if he had understood the sermons, and he nodded assent."

"He has now several words which he can utter when they are previously spoken to him, but, except yes and no, he never utters them spontaneously. He can repeat after me, *better*, *bed*, *home*, *do*, *don't*, and a few others; and I have no doubt that there are many words which he could utter if first spoken to him. For negation he always says, *No!* with a shake of his head; but when very positive he says, *Oh, no!* For 'yes,' he says either *Det*, *Net*, or *Et*; and I think he sometimes replies *det-ta* for 'yes, sir.' I remarked previously that he often wrote an incoherent sentence without being apparently aware of the fact by looking at it. This is also the case in his attempts to speak; he utters a number of sounds without being at first apparently aware that he is conveying no meaning; but this is not so much so as in writing, for he quickly perceives that he is not conveying any information, and he then resorts to

paper. He always utters a sound corresponding to each syllable which he intends to speak; this I have ascertained by requesting him to repeat sentences which I first spoke to him. He never repeats a single word, making it do duty for a sentence or part of a sentence; the only approach to that was the frequent repetition, for a short period, of the word 'Durner;' but he has not employed it for some time.

"With the view of catching the sounds of the names of the letters of the alphabet, I asked him first to run over the alphabet quickly; in doing so he made twenty-six distinct sounds, one for each letter. I then asked him to name the letters slowly; in several instances he could not come near the right sound; of some of the letters he could make nothing until he had examined the arrangement of my mouth when I uttered them, and then he endeavoured to get his own mouth into the same shape, and more or less succeeded in uttering the name of the letter. The following will give an idea of his pronunciation:—a, b, correctly; c, *tee;* d, correctly; e, correctly, or more like *a;* f, correctly occasionally, but sometimes only *ph;* g, sometimes nearly correctly, but more frequently *dee;* h, *ait* or *eight;* i, *ah;* j, *day;* k, sometimes *day*, sometimes *tay;* l, *en;* m, n, o, correctly; p, correctly, sometimes *b;* q, *too*, or *oo;* r, *ah;* s, *et;* t, correctly; u, cannot come near it; v, *phan* (several times repeated); w, laughs, as much as to say, 'that is quite beyond me,' cannot get near it; x, cannot get near it, *epba*, or *etta* were the nearest; y, *ban-na*, cannot get near it; z, *ed-da*."

Such are a few of the leading features of this very interesting case. I could have given much more, for my notes are certainly not half exhausted, but perhaps the selection I have made will be acceptable and useful. I shall close this part of the case with a few illustrations of the writing, and thereby also of the loss of the power of communication by means of intellectual language. I should explain that the questions which follow were not put verbally but in writing, so that he had as much time as he chose to take for the answers; the questions were also put singly, that is, he did not see the second until he had answered the first, nor the third until he had answered the second, and so on; therefore, there could be no confusion of ideas, such as might have been the case if several questions had been proposed at the same time. When simple arithmetical questions are put, the figures in the questions are mine, the answers only his. When he wrote to dictation I read the passage very slowly, pausing after each word until he looked towards me for the next.

He wrote the alphabet on the following, besides other days:—28th February,[36] 6th March,[47] 16th March,[48] 7th April,[49] 16th April.[50]

He attempted simple arithmetical questions on the following, besides other days:—28th February,[37] 3d March,[51] 14th March,[52] 31st March,[53] 7th April,[54] 12th April,[55] 13th April.[56]

On 1st March he copied (correctly)[57] from a printed book the verse, "It were well to be a sunbeam," etc. I then immediately

took the book myself, gave him a fresh slip of paper, and dictated the verse.[58]

He wrote the following verse to dictation on 5th March[59] and 13th April:[60]—

"The shades of eve came slowly down,
The woods are wrapt in deeper brown,
The owl awakens from her dell,
The fox is heard upon the fell."

In answer to the questions, "What o'clock is it?" "Tell me the time," or "Write the time of day," he replied:—9th March (at nineteen minutes to four);[61] 16th March (at six minutes to three);[62] 22d March (at half-past two);[63] 24th March (at twenty minutes to three);[64] 30th March (at twenty minutes to three).[65] "What is that?" (pointing successively to inkstand,[66] draughtsmen,[67] hat,[68] penknife,[69])—9th March. "Name these articles?" (placing before him inkstand,[70] pocket-knife,[71] book,[72] draughtsman,[73] poker,[74] pair of scissors,[75])—13th April.

He wrote to dictation,—"It shall be in the power of the College to examine or not examine any Licentiate, previously to his admission to a Fellowship, as they shall think fit."—12th March,[39] 22d March,[76] 11th April.[77] "How did you sleep last night?"—16th March,[78] 6th April.[79] "What had you for breakfast to-day?"—16th March,[80] 27th March.[81]

"Where were you yesterday?"—17th March (means that he was at Portobello).[82]

"Write the months in their order."[83] "Write the days of the week in their order."[84]—19th March.

23d March.—"In what year was the battle of Waterloo fought?[85] Who conducted the battle on the part of England?[86] Who was the French General?[87] Who commanded the Prussian army?[88] In what country was the battle fought?[89] Where was the battle fought?[90] In what country is Waterloo?[91] Of what country is Brussels the capital?[92] In which of the following countries was the battle of Waterloo fought, France, Holland, Switzerland, Prussia, Belgium, Spain, Turkey?"[93]

17th March.—"What illness are you recovering from?[94] How long have you been ill?"[95]

6th April.—"Are you aware that you are not in the same state that you formerly were; what is the deficiency?[96] Write something of your own accord (tried, but could not). Tell me about the weather."[97]

7th April.—"Write the months, with the number of days in each.[98] Tell me what you saw at the Botanic Garden yesterday."[99] (He was alone at the gardens.)

9th April.—"Tell me what you saw at Rolands' *Assault of Arms* (Messrs Rolands' annual school competition for prizes in fencing, gymnastics, etc.)."[100]

11th April.—"Tell me how you are, and what progress you think you are making?[101] Tell me what kind of a day it is?"[102]

12*th April.*—"Write a verse of 'The Arrow'?" (a song which he used to sing before his illness).[103]

13*th April.*—"Who came with me to see you yesterday?[104] Did he say he thought you better?[105] And do you think so yourself?[106] Do you think that you will soon be quite well?"[107]

14*th April.*—"Tell me how you enjoyed the country yesterday?"[108] (I understand him to mean that he enjoyed the afternoon, that we were entertained in the house, that we walked by the river, that we gathered primroses in the woods, and saw rabbits in the parks, and that we drove to the station in the pony carriage in the evening, all of which is correct; but I do not understand the *two-legged* matter.)

On the same day, I wrote the first and third lines of the first verse of the "Busy Bee," and asked him to supply the second and fourth lines, but he could not write a single word. I asked him if he had ever known it, and he nodded assent. I then wrote another verse more fully, omitting only one word in each line, which I asked him to supply. The italics are the words which he placed in the vacant spaces.

"Let dogs delight to *Back* and bite,
For God hath *taught* them so;
Let bears and lions *bear* and fight,
For 'tis their *let them* to."

On the 16th this was repeated, the ultimate words of the lines being omitted, which he supplied as in the following italics:—

"Let dogs delight to *bite and bite*,
For God hath *sight*;
Let bears and lions *growly seemly*,
For 'tis *their natures feely*."

I felt sure that he must have been familiar with the verse before his illness; but, as a still more certain test, I tried him with the Lord's Prayer, and found that he could not write the first dozen words correctly.

Mr X. left me on the 16th of April and travelled home by railway, in company with his mother. He was then placed under the care of Dr ——, with whom I at first corresponded. His father, who had not seen him for more than two months, wrote me on the 18th, —"Dear —— is much better than I expected to find him; his intelligence and manner of expressing his meaning being far beyond my anticipation. I have no difficulty in holding a small conversation with him. Activity and thought appear to be fast returning, and with careful tuition, we may hope, speech will also."

On the 20th of May, Dr —— wrote to me, "—— is improving certainly, though very slowly. He walks well, and looks in robust health; but the angle of the mouth is much 'drawn,' and his progress in speaking is but slow, though, I dare say, quite as rapid as you might expect. He can manage the labial and dental sounds pretty well, but has most difficulty with the gutturals. Improve-

ment is also perceptible in the way in which he answers questions on paper." In the early part of the month of August, I accepted a kind invitation to visit at Mr X.'s, and spent a most delightful week with them. I need not enter into details of improvement, suffice it to say that he was much improved in all the respects in which he was formerly deficient. There was scarcely a trace of facial palsy left; he was in robust health, he enjoyed daily pic-nics or sight-seeing without fatigue, climbed over ruins where nobody else cared to follow, and had but little difficulty in making me understand all that he wished to explain. He had got many new words, and had become tolerably proficient in the use of the dumb alphabet. As a last specimen of his writing, I have a note which was written, during my stay, to a friend who had made him a present of a book.[110]

I find that I can scarcely allow myself that freedom of observation which would be necessary to make a commentary upon this case interesting; besides, I think that at the present time facts are more valuable than opinions. I prefer, therefore, to let the narrative stand alone, assured that within itself it contains a mine of physiological and pathological wealth that will amply repay a careful exploration. But although I do not enter upon a commentary, I am unwilling to let the paper go to press without making one or two remarks with reference to my own experience of the complications of typhus fever, at least of such of them as bear some resemblance to the present case. I have said that this case, as one of hemiplegia and loss of intellectual language following typhus fever, is unique; at least, I have never met with one of the kind either in my personal experience or in the accounts of cases published by other physicians. Most cases of typhus fever begin abruptly and pursue their course resolutely to the end, which is either a rapid convalescence or death. Enteric fever, on the other hand, is treacherous throughout. Grave nervous accidents, it is true, do occur in typhus fever, and it is by no means a rare thing to have a patient cut off by coma and convulsions just as he is on the eve of recovery and seems to be out of danger; but still, as a general rule, when a marked amelioration takes place about the thirteenth or fourteenth day of the fever, a favourable opinion of the result may be entertained. It was so in this case; there was no circumstance from the beginning to the end of it that created in my mind the slightest suspicion of even a transient interference with the intellectual powers, much less did I anticipate the sad change—the obviously deep-seated lesion—which has unfortunately attached so much interest to it. When I said in my letter of the 17th, "I hope and believe he will make a good recovery; I need not write again unless something untoward should occur," I made statements which were quite consistent. Looking to the general rule, there was no longer cause of anxiety, but looking to exceptional cases, an accident might still befall the case. No man could have reasonably anticipated such a result. It is true there was a family history of

hemiplegia and aphasia; but that was not discovered until afterwards, and even had it been known before, I am not aware of anything that could have been done to avert the calamity more than was done to preserve the patient's life. There was no history of rheumatism, nor was there any valvular imperfection to cause apprehension of an accident in the vascular system.

Speechlessness, aphasia, partial paralysis, and other nervous affections are occasionally witnessed after continued fever—more frequently after enteric than typhus—but they are usually of short duration, and ultimately disappear entirely as convalescence advances. I have seen several cases of this kind, three of which—as they were marked by temporary loss of speech, and occurred after typhus fever—I will briefly mention. An Irishman, æt. 24, was admitted into Ward IX. with typhus fever. He passed safely through the fever, but on one of the early days of his convalescence he presented peculiar nervous symptoms. Amongst the rest, he told the nurse that he was dead, and then refused to speak. This state continued for a few hours, after which all the nervous symptoms disappeared, and he recovered. There was no paralysis.

P. L., æt. 18, passed through typhus fever in Ward IX., and was discharged after an ample convalescence. The following day he returned whimpering, and declaring that he had an eruption upon his hands which we could not discover. He was low-spirited, and wandered listlessly about the ward. On the fourth day after his re-admission—to use the nurse's words—"he hopped about from bed to bed like a roebuck;" but after one of these capers he suddenly tore out the sash of one of the windows, and attempted to throw himself out. The nurse was fortunately in time to save him. From that moment for several weeks he never uttered a word. He was sullen and obstinately contradictory in his manner; and twice, if not oftener, threw his meals at the nurse. After remaining in this condition for three weeks, having no bodily ailment, he was removed by his friends to the country, where he still continued speechless for some weeks longer. Nine months afterwards he called upon me in perfect health, active, and cheerful; and when, amongst other questions, I asked him why he did not speak, he replied, "It was not that I *could* not, but that I *would* not." When I asked him why he attempted to throw himself out of the window, and why he behaved so rudely to the nurses, he said he did so because he was under the impression that they wanted to kill him. There was no paralysis, and from the time of his leaving the Infirmary no treatment was attempted; in fact, he never saw a medical man, but "gradually came to himself."

The third case in some respects more closely, though but trivially, resembles that of Mr X. Mr ——, a gentleman of liberal education, æt. 22, passed through typhus fever under the care of Dr Peddie. He appeared to be progressing favourably, and was considered to be convalescent, when suddenly, on a Sunday after-

noon, he became speechless. In the evening I saw him, with Dr Peddie and Dr Begbie, but by that time the symptoms had disappeared. There was no paralysis, the urine was not albuminous. I asked him why he could not speak; he replied, "I don't know why, but I could not if it would have saved my life." During the attack he made signs for writing materials, and when they were given to him he scrawled something which somewhat resembles the word *aphasia*. In the evening he said, "I wanted to write that I thought I was about to become an interesting case of aphasia; but they tell me that I wrote nonsense." He had two more attacks of the same kind, but still more transient; the second, on the following Wednesday; and the third, two or three days later. Since his recovery, he has furnished me with the following notes:—

"The advent of loss of speech was in my case gradual. I lost the power of articulation, and of phonation equally. So long as I was able to say anything audibly, I articulated those words which I wished to pronounce, and when quite unable to say a word, I was also (I think) unable to produce any sound. I never felt as if I did pronounce other words than those I wished, or as if words were suggested which had no reference to the thoughts present in my mind at the time. I never lost my consciousness of what was going on in the room, and believe that if I had had the power of speech, I could have named all the people in the room, recognising them by their voices. I had during all, but especially during the first of the attacks, great muscular prostration, and an intense aversion to make any movements. Thus, when Dr Peddie came into the room, I knew he was there—not because I saw him, but because I heard his voice. I was lying with my face to the wall at the time. I remember distinctly some of the questions which he put to me,—thus, he asked me if I knew him, which I answered in the affirmative by nodding my head.

"I was capable of thought, I firmly believe, because I began to question myself as to the cause of the 'aphasia,' when in the first attack; and having, as I thought, satisfied myself as to its cause, I next began to wonder how long I would be in that state. With the exception of two or three minutes when the first attack came on, I never had any dread as to the issue; but for a short time at the commencement of the first, I certainly did think that it would terminate fatally. I remember distinctly making signs for writing materials, and doing my best when they gave me a pencil, to write the word 'aphasia.' I also remember my aunt saying that it was all nonsense (*i.e.*, what I was writing), and the intense disappointment I felt when she said so. What I said afterwards, when Dr Begbie came, as to their having said that what I wrote was nonsense, was from recollection of what took place during the attack, *not* from anything said to me after I had emerged from it. I have no distinct recollection of how I felt on emerging from the attacks. My impression is that speech returned almost instantaneously, not gradually; but of this I cannot be sure. I have a

remembrance of making signs during the second attack, which must have corresponded to the raving of delirium. I sought to communicate ideas which must have been neither more nor less than nonsense. The third attack lasted but a few minutes, and was accompanied by scarcely any of that muscular prostration to which I have referred. Premonitory symptoms of weakness of voice and disinclination to exertion were of longer continuance in the last two attacks. I think that, after the third attack, more than once I felt as if I was going to have another, but it never developed into anything, nor were those feelings even noticed by those attending me."

This was obviously not a case of aphasia, but merely the simulation of aphasia. Previous to his illness he had heard me speak of Mr X.'s case; in the state of mental prostration produced by the fever, the thought had taken possession of his mind that he also was to suffer in the same manner. His will fell into subjection to the prominent idea, it became enthralled and consequently inefficient as an originating cause of speech. It was not that the machinery was out of gear, but simply that the will was not strong enough to set it in motion. It is true that he believed that he was making a strong effort to speak, but the belief that he was, as he afterwards said, "about to become an interesting case of aphasia" overpowered his will, just as the "electro-biologist," by his simple dictum, can produce speechlessness in certain susceptible people even in health. That the thought of aphasia held his mind in captivity, is clear from the abortive attempt which he made to write the word; the true aphasiac would not even have remembered it. In this case there was merely a functional aberration; in Mr X.'s case, there was from the first moment of the attack a deep-seated grievous anatomical lesion.

Cases such as that of Mr X., if painful and full of anxiety to those in charge of them, are nevertheless pre-eminently interesting. They teach us practically to be cautious, even when there seems to be no danger, and to be prepared to act at a moment's warning, when we little expect to be called upon; lest by neglect on the one hand, or by a busy but mischievous interference on the other, a life, already so nearly ebbed out, should be rudely shaken into the grave. In a scientific point of view, they lead to studies of the highest importance, both with reference to the pathology of fevers, and the general physiology and pathology of the nervous system.

Postscript.—Just as the proofs are leaving me, I have a note from Dr ——, dated 5th December 1866, which contains the following passage respecting Mr X.:—"His power of speech improves notably. He seems to have got over most of his mechanical difficulties, but has still some about the gutturals and the j. For example, wishing to tell me, the other day, that his father was waiting for me in the surgeons' room, he said,—'father (something not understood), surton rooms.' When I told him to write the last two words, he wrote 'Surgeon rooms.' The mistake of putting the s at the end of the wrong word is a fair specimen of the kind of blunders he still commits in writing."

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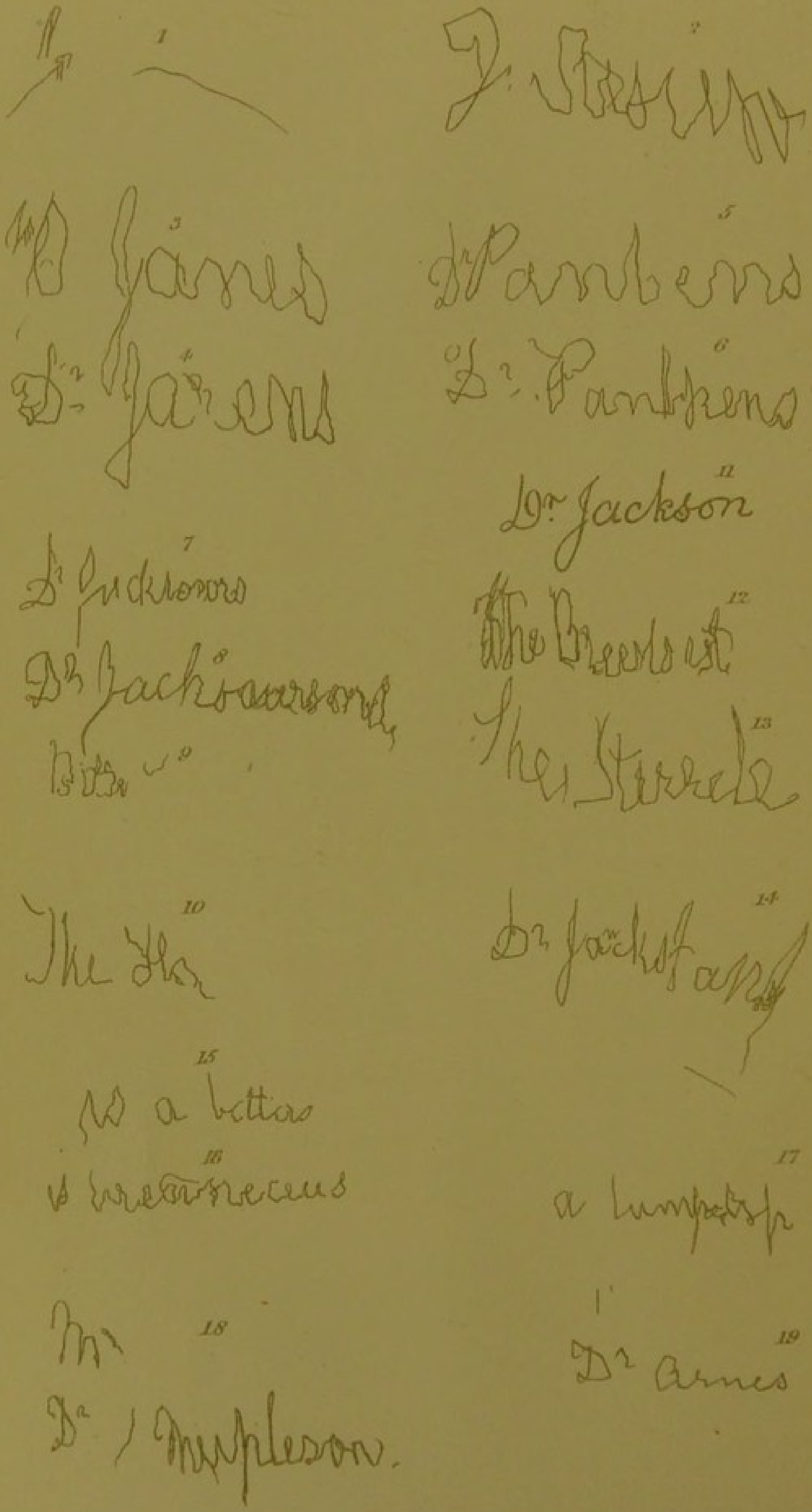
Dr. Jackson

20
This is Better

21
This is a nice work

22
Fellow

23
Dr. Jacksons

24
A. Jacksons

25
A very brilliant

26
Yes. I have none

27
Mother she keeps
mother keeps

28
This is a very
fine day.
its very nice
like a spring
Lough

29
Dr. Jackson

30
Dr. Sanders

31
Dr. Jackson

32
1 2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10
100
3000
27717
277717

33 a match. 34 a inkspank 35 a spinhant

36 a b c d e f h g l m n o p r s t u v w x y z

37

1 4 3 7 6 2 4 5 8
6 7 2 1 8 5 9 3 4
8 1 5 9 4 8 3 9 2

38 Christison

39 It shall be in the power of the college to examine & organe not examine any the Licentiate, but to prevous-ly to high by admissionly to a Fellow to Sopha as they those think fit

40 very much

41 I: take at Dr Jacksons

42 They view fiew thence is & very the, is commanding a wide & dangre a of range of wide & it aoiatic aside, and a of a afore the ghs glotty

43 To keepchage
To sheepoage
44

45 To alumen
To albuminate
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a b c d e f g H I C M N O P S T U V X Y Z

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a b c d e f g h i j k l m n o p q r s t u v w x y z

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a b c D E F G H I J K L m n o p Q R S T U V W X Y S

51

4 | 3 5 4 2 6 8 7 5
9 8 8 4 7 4 6 . 8 4

52

3 7 6 5 2 4
8 1 4 3 2 0
5 6 2 3 7 6
1 5 3 3 2 2 0

53

3 4 2 7 8 6 4 1
2 5 7 6 4 3 9 5
4 1 6 8 2 5 6 3
1 7 2 7 0 6 5 7 9

54

5 8 4 1 4 3 6 2
2 1 5
5 2 0 8 1 8 1 0
4 8 4 1 4 3 6 2
1 1 4 8 2 8 7 2 4
1 2 6 1 9 0 9 7 8 3 0

55

4 | 4 7 6 3 8 2 9 3 7 3 9
1 1 9 0 9 5 7 3 9 3 4 3

56

3 7 4 2 8 5 6
4 3 8 7
2 6 2 0 0 9 9 2
2 9 4 2 8 4 8
1 1 2 8 5 6 8
1 2 9 7 1 4 2 4
2 7 4 5 6 2 8 6 7 2

57

It were well to be a sunbeam
In this fair world of ours
Calling forth the skylark's note
And wakening up the flowers

58

It were wall to to be affoubr
In this fair disapper of ours
On forth the skylark's note
And wakening up the st sup lowers

59

The shade of eve came solower downe
The woods are aprouke in deeper
The aster wyptei from heart downer

The fox his herd upon the peard, heard agen

60

The shades of eve came slowly down,
The woods are wrapped in deepest brown,
The owl awakens from her dell,
The foxes heard upon the fell.

61

19 two opportives to 3

62 It is the wrong six had three two 2½ housse 63 80 minutes

64 2 hours 40 minutes
20 minutes to 3 hours

65 40 minutes 2 hours
3 hours - 20 minutes

~~by~~ [66] ink-point [67] hat [68]
dumb-bells knuncp [69]

Ink-stand, [70] knife-stand [71] Book. [72] Draught.-stand [73]
Rocker [74] Scissors [75]

It shall be in the ~~power~~ [76] power as the College to examine as ~~to~~ gnots which examine as in a Licentiate, previously to his admission ~~to~~ a to his fellowship as they shall think fit

It shall be in the power [77] of the College ~~to~~ to Examine or not ~~&~~ examine any Licentiate, previously to his admission to a fellowship, as they shall think fit

very well [78]

Not going to sleep not going ~~&~~ to care for it. [79]

I had for ~~a~~ tea breakfast one just ~~B~~ [80]

2 egg-heat toast coffee, breath [81]

Where I was at Porto ~~&~~ Elbehne [82]

Months in order 3 ~~of~~ of 1 [83]
1 January 2 Feb 3 Mar 4 April 5 May
June 6 July 7 Aug 8 Sept 9 Oct 10 Nov 11
Dec 12

Sun Mon Tues Wed Thurs Frid Sat [84]

In what [85] 1812 [86] Wellesby,

Napoleon [87] B — I compared the name [88]

Duke of Wellington [89] - Napoleon + B

Waterloo [90] In county [91] Brussels Holland [92]

Belgium [93] Typhus [94] Illness On 13 weeks [95]

My [96] soul is aware during my withw, but they are add within but ^ the specify.

The [97] Weather very fine able, last weather very bad but able come to made to this.-

Jan [98] 31 Feb 31 Mar & 28 April 30 May 31 June 30
July 30 Aug 31 Sept. 30 Oct 30 Nov. 30 Dec 31

All [99] almonies were shirt but that last one ~~and~~ were walked & a last ~~x~~ a fine grande one they walked though the garden some behind they saw whom they knowed one of nether.

I saw [100] some red, blue fellows, I know how & fought who; Roland's fought with blue, some blue, took 1st, red 2nd

I [101] fully am prossessing, but thing progress hope I shape

7 Fx Day[102] fully dries well I wrote an arrow[103]

D[r] Sanders.[104] He said, I was better.[105]

I feel better much[106] I differs many much.[107]

I enjoyed the country, but still of your home I[108]
enjoyed it very much. the river from 2,
two-legged do, I fancied they as Rabbits.
Several 4.5 which gave primrose. drive back the
ponies.

The view from thence is very striking,[109] commanding a
wide & extensive range of the European and Asiatic
shores, and of that gloomy and too turbulent
sea so celebrated in the songs of the sunny
archipelago.

Dear[110]

I am

very much obliged to you

for your kind present

I am

Dear Sir.

Yours truly.