MOTOR AND SENSORY APHASIA.*

(WORD BLINDNESS, WORD DEAFNESS, MIND BLINDNESS).

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ALTHOUGH in each of the two cases of aphasia here related there was a combination of motor and sensory disturbance, it is chiefly on account of the sensory derangement of speech that I report them.

My first patient was a well-built man, aged 41, an artist by profession.

Past History.—A little more than nine years before he had had some slight epileptiform convulsions, and after one of these attacks he had paralysis of the right arm and leg, and was aphasic. The aphasia, however, was not so lasting as in the attack I am about to describe, for he went to work in fourteen weeks, having recovered speech completely and the power of the right arm and partial power of the leg. Five years afterwards he had another, but much slighter, attack, lasting a fortnight, when speech was again affected, and there was paresis of the right side. His health receiving a great shock he gave up the very active work he was engaged in, and had a long rest. He practically recovered, and worked fairly hard again, but complained of headaches and giddiness. The viscera were healthy, and there was no evidence, though a suspicion, of syphilis.

The attack I now relate commenced on October 29th, 1892, with no marked premonitory symptoms. He was gloomy the day before and shut himself up, and drew some curious pen-and-ink sketches, but did not complain of his head. He retired to bed, and his wife roused him early next morning as he had an appointment, and she discovered that he was perfectly conscious but speechless; she noticed the tongue was drawn to the right side, but the features were quite straight. There was slight numbness all down the right side, but power enough in the hand to write slowly.

I was called in to see him at 8 p.m. I found complete motor aphasia, that is, he had lost all power over the motor part of speech, and the only sound he could utter fairly well was "o" and "a," and "u" indifferently. The tongue could only be partially protruded, and deviated to the right, and the lips did not move. There was slight loss of power in the right leg, less marked in the right hand. He could, however, write slowly with this hand, and asked me several questions in writing, which were intelligent and written correctly. He complained of the back of the head being painful, and of having a burning sensation in that region. During the first week he was very emotional and easily excited, and at the end of the week he was very drowsy and difficult to rouse, and the paralysis of the right side was complete, both for motion and sensation. There was marked rigidity of the right hand and arm, and the thumb was firmly contracted into the palm. The left hand was very tremulous and deficient in power, and sensation was diminished on the left side, but not so markedly as on the right. A curious spot of hyperæsthesia was discovered by the nurse on the inner side of the right knee, so sensitive, that if touched ever so lightly he would spring up in bed and suffer agonising pain. He was now in a very sensitive condition, for the movement of lifting him up in bed to change his position had an extraordinary effect upon him, and produced a drowsy and more or less unconscious condition, which was very marked during the whole of the second week. Motor power, however, on the left side was practically normal, and he could write slowly with the left hand. From the third week he gradually improved, gaining steadily more power in the right leg and arm, and recovering sensation. He was much interested in all that was going on, reading daily papers, and discussing topics of the day, by writing with the left hand, for he was none, or very little, better so far as his aphasia was concerned. There was, however, during this period of motor recovery a good deal of sensory disturbance, particularly from the eighth week to the eleventh, when another condition developed, that of sensory disturbance of speech.

It was noticed he was slightly deaf on January 19th,

which increased during the day and became complete on the following day. Dimness of sight was also observed, and he suffered a good deal of pain in the head. Next morning he could not read writing, however large, but could read words composed of child's large printed letters, but these were only of use until 3 o'clock in the afternoon, when they could no longer be seen.

On the following day sight and hearing were both gone on both sides, but a lighted taper passed before his eyes produced a pupil reflex. The ophthalmoscope showed the fundus of both eyes to be normal. There was a good deal of difficulty in swallowing. He had a fixed, staring look—straight out; always plucking at the bedclothes with the left hand, and a meaningless sing-song was heard at intervals. He now continued deaf and blind for ten days, and could only recognise his wife and nurse by the sense of touch, feeling their hands and articles of dress. On the eleventh day he showed signs of delight when the blind was drawn up and light admitted; he could then recognise the difference between the hands of his nurse and his wife. He was still deaf to words, but could hear sudden sounds. On the twelfth day he heard and seemed to recognise his own name; he also noticed details in dress of those about him. The next day he saw colour in some tulips placed before him, which evoked grunts of satisfaction. Pointing to his ears and eyes, he asked with his finger on the coverlet why he was deaf and could see so badly. Fourteen days after the loss of hearing he heard sounds at a distance—a dog barking—whilst he was comparatively deaf to sounds at his bedside, and on the following day he asked, by making the outlines of the letters on the coverlet of the bed with his finger, why he heard sounds—at the same time pointing towards the next house where a piano was being played—yet could not tell what was said by those about him.

He had now extended vision, pointing to pictures on the wall facing him, but the field of vision was very limited, and it was found he had right hemianopsia. He continued very deaf to ordinary word sounds; but the experiment of whispering the word "better" slowly in the right ear was tried. He heard it, and immediately began to write on the coverlet the whispered word, and showed signs of gratification. The same word spoken in natural tones produced an expression of pain and bewilderment. His mind continued to be very clouded, and he was unable to understand day from night or the time of day.

February 9th was the last day he made known his thoughts by drawing with his finger the outlines of letters forming words. He had during the day thought out and written a number of questions and was somewhat exhausted. His left hand, which he could only use, was said to be rigid in the evening, the rigidity passing off very soon; but next day his sight was very much worse and all hearing gone again. He now had a slight attack of influenza, which was prevalent at the time. He could no longer form the outlines of letters, and the only way he could express his thoughts was in pantomime. He, like an uneducated deaf-mute, made pictures in the air to express his wants, and his wife understood his drawings in a wonderful manner. Wishing for a chop, he drew the shape in the air. Wanting milk and soda water, he pointed to the sheet for whiteness and drew in the air the shape of a soda-water siphon.

Before losing all sight he had enjoyed seeing and arranging a bunch of lilies of the valley. He evidently remembered this, and drew in the air the shape of lilies of the valley, arching the stems and dotting them with flowers. His wife understood, and brought the flowers to him, when he was quite satisfied, and arranged them with care. His sight again came back, but he was still suffering with right hemianopsia. Although an omnivorous reader when well, he did not recognise when tried either letters or figure symbols, and when a paper was given him he turned it upside down, and by gesture asked why it was given him.

There were now (end of February) distinct signs of recovery of motor loss of speech, and he uttered his first word distinctly enough to be understood—"better." The right leg and arm also had much more power, but the arm was exceedingly sensitive to touch. He understood whispered language more easily, but was unable to recognise words in the ordinary strength of tone. Although deaf to words, he interpreted

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tones and gestures so well as to be conversant of much that transpired.

In March, mind blindness was most marked, though he had not so much difficulty in remembering objects as persons. His aunt, to whom he was very attached, was allowed to see him. He did not recognise her, but after she had left the room he drew with a pencil in the left hand the house in which she lived, with the road to it, the garden and the dog at the gate, which was a very fair description of her abode. During this month his deafness gradually improved, but was more deficient on the left side than the right. The sense of smell was impaired on the left side. He saw better but had yet word blindness. He was able to articulate more, and used and understood more words, but made use of pantomime as well. The very sensitive spot on the inner side of the right knee, which had remained so all these months, could now be touched, he having asked nurse to lay her hand lightly upon it for trial. He tried to count but it was difficult, especially on more than one hand. He soon became more inquiring, and asked "what was it he used to do?" When told "to paint" he remarked, "What was that?" Upon pursuing the subject he was told he used to read books, when he replied "that sounded like it." He was now getting up daily, and greatly interested in building with dominoes. He took a little more interest in things, but at the end of March, five months after the attack commenced, he still had forgotten that he ever was a painter. He was one day anxious for a certain picture to be brought to him, which, as a matter of fact, he had painted; but when asked if he painted it he emphatically stated no, but that he remembered seeing a man paint it. He was very anxious to know what a book was.

In April he noticed the lettering upon half a crown, given in his hand, when he asked to have it read to him, repeating each letter after the nurse, and committing them to memory and comparing their form with other letters; he asked if these were what were contained in books. He could not remember his own surname, and, when told his wife's surname, he indignantly denied it, and uttered her Christian name. He was now taking great interest in looking at pictures in illustrated papers, and was very critical. He was able to remember letters and words told him a few days ago, and it was interesting to notice what aid the fingers of the left hand were to his memory. If he wanted to remember a thing, he looked hard at his left fingers, and, as he remarked, he saw it there in a short time, but often after much puzzling.

The patient's condition from this time gradually improved. He was able to understand word symbols more readily day by day, and could read. He would repeat a word over again and again, after following the outline of each letter, and having been told what they spelled. He often employed a circumlocution of more general words instead of the special word he could not revive in his memory, and, instead of asking for "a pencil," would ask for "something to draw with." His great trouble was that he had forgotten so much. His mind blindness did not improve, and he could not recollect his most intimate friends when calling to see him. Neither could he recognise paintings which he had spent a great deal of time over, but little sketches which had cost him very little time and thought he could recognise as his work. In August he had partially recovered his loss of power, but he had still right hemianopsia, and his motor speech was very indifferent. His friends attempted to get him into the air, after which he seemed very much worse, for the movement upset him considerably. Early in September he had been reading, and was very cheerful before taking his afternoon sleep, but when he awoke he was found to have a dazed look, and to have lost all power of the right side. On the following morning I found hearing and sight completely gone. The tongue could not be protruded from the mouth, but deviated to the right. Swallowing was difficult, and there was also loss of sensation and power of the right side. He was completely deaf to words, even when whispered, but had painfully acute hearing for sounds. There was one marked difference in his condition now than in his previous attack, which was that he had always been able to make known his various wants by writing with his finger the outlines of the letters upon the sheet, which power he lost in this attack, when he was reduced to pantomimic signs. The word deafness and all vision was absent for four weeks, but he had right hemi-

anopsia for several months afterwards. While deaf and blind to words, as well as having complete paralysis of motor speech, he expressed a wish to make his will, and made his wishes known by forming the outline of the letters on the sheet of the bed. He also made his lawyer and wife understand that when they meant "yes" they were to tap his hand, and when "no" they were to cross it. To satisfy him the will was executed, and with his left hand he very badly wrote his signature.

He now gradually recovered from word blindness and very slowly regained power in the limbs, but the motor part of the aphasic condition was very slow in recovering, for he was unable to speak until the following April, when he started and rapidly regained speech, it having been absent since its partial recovery for thirty-two weeks. On getting downstairs, he almost at once commenced to strum on the piano, and it was noticed that he had no difficulty in reading music. This test, however, had not been tried when he was word deaf.

At the end of the second year he was able to walk slowly on crutches. His zest for painting returned, and he found the greatest pleasure in sketching from Nature at Filey, where he was convalescing. His mind was a complete blank with regard to paintings he had done before his illness. His power of motion steadily returned, and at the end of the third year he could dispense with his bath chair. It was very curious, how in the early period of his convalescence movement of the body, that is, to another room, brought on the sensory disturbance of speech for perhaps twenty-four hours. This occurred on three or four occasions.

Four years have now elapsed since the attack came on, and I have quite recently had a chat with the patient in his studio. He tells me he has tried hard to paint during the last year, but he is so disgusted with his work that he has practically given it up. To my uncritical eye his work looks very passable. He says, however, that his difficulty is in trying to remember how he used to do it, and when he finds he is doing the thing wrong, he is so dissatisfied with his efforts that he has ceased making further attempts. He can, however, do pen and ink work exceedingly well. On asking him if he remembered painting the pictures about his room, he said he did not, but he still thinks he saw another man paint one of them. He describes himself as being a better judge and more critical than ever he was before, but no workman; and this is not through want of muscular power, for that has quite recovered.

He has been colour-blind ever since he was 15, his difficulty being to distinguish green from red. On inquiring if this is any worse or is in any way explanatory of his failure, he says not, but if anything he thinks the condition a little better. He has always had an ambition to become an author, and has written considerably, but he tells me that he now finds this work most difficult, his power of concentration being limited and thought slow. He has a very good vocabulary, however, when talking, and never wants for a word, though there is sometimes an occasional hesitancy in pronunciation. Contrary to Lichtheim's experience, the sensory aphasia in this case of total aphasia cleared up before the motor.

Another case of sensory and motor aphasia came under my care at the Royal Halifax Infirmary in the month of February. I had previously seen this patient five years before in consultation with Dr. Steele, of Halifax, when he was suffering with paralysis of the extensors of the left forearm, which had come on quite suddenly. There was no disturbance of speech at this time. He is said to have recovered from this attack. Two and a-half years afterwards he had an epileptiform seizure and partially lost the use of the right leg and foot, from which he recovered; but he had subsequently at intervals slight fits, one of which ushered in the present condition and was attended with twitching of the right side of the face. There was a clear history of syphilis, made out before, but the condition of the patient now was such that he could give no account of his illness. "I really cannot tell you, I am sure, just now," was his answer to every question put to him, and it was evident he had no comprehension of word language. He read with great difficulty figures, and could not read printed matter accurately, but could make out some letters. He could not recognise a bell on the table, but could recognise a watch

and a knife. When a water pipe was pointed at he could not say what it was, but said "hot." Apparently there was no defective eyesight, but an exact perimeter tracing could not be taken on account of the patient's inability to comprehend what was wanted. The motor part of speech was good, and there was no paralysis and his gait was normal, and so were the organic reflexes. The patient looked in good health, and apparently was always in good humour, readily pleased, but not in any way emotional or childish.

On further examining the aphasic condition, he seemed to have a more or less complete comprehension of the uses of the objects shown but could not always give the correct designation. Some things shown he remembered easily and could pronounce their name, others he could not name; but if he thought for a time he sometimes gave the correct name or a similar sounding word, or substitute a roundabout phrase as an equivalent. Occasionally, when taken suddenly, he seemed to answer instinctively and generally correctly. A pencil he knew the use of but could not name. A pen he called "pea," then "pen." A knife and fork and book he knew; a cork he knew, but called a bottle "brot," and "medicine" he could only pronounce partially. A key he called "lock," recognising its use. He knew his own name, but occasionally transposed the two parts. In the identification, then, of objects shown he occasionally used the association of ideas. Water pipe he called "hot" and the key "lock," but mispronounced some words.

On investigating the visual sense in reading printed or written matter he was found much more incorrect. He could read figures accurately, though with some hesitation in some cases. When spelling out printed words letter by letter he was very incorrect, and did not always give the same interpretation on two consecutive occasions, while in time he might stumble into a correct reading. When reading and pronouncing words there was similar hesitation and inaccuracy, while there was often an approximation to the sound; for example, he called London "Luddenden," the name of a local village, after considerable doubt. His own name he was able to read correctly. On testing his capacity for repeating words there was evidently a degree of inability to recognise certain words and phrases. "What is your name?" he replied to correctly. "How old are you?" he could not understand. Certain words he was deaf to and could not repeat, and through the word deafness he was unable to comprehend, and allowed his mind to dwell on one or two stock phrases, which were always ready, and from which it was difficult to divert his attention. His memory was very defective, and he could not say where he lived, or the town he lived in (but the word deafness might account for this), neither could he say how long he had been ill. On testing his writing from a copy, it was found he made the same errors as in spelling but did not make the same blunders twice. At times his writing was quite clear, at others quite unintelligible. He could write his name, but sometimes transposed it and sometimes left out letters. He could copy figures more accurately than letters.

His condition seemed to improve a little, and remained bright and cheerful. He was able to talk and answer simple things correctly, and his memory was a little better. Early in the morning of March 24th he went to the ward lavatory, and was found afterwards in an insensible condition. Apparently he had had a fit but was quite unable to speak. There was complete paralysis of the right leg, the limb being quite flaccid and paralysed, with rigidity and contracture of the right arm. The eyes and face were unaffected. He could only partially comprehend what was said to him, and could make no response. He gradually recovered power in the leg and arm, and made attempts at speaking, and could utter one or two words—"very nicely," "yes," "getting on," and a few others, and seemed to comprehend more what was said, but his attention was very easily overtired.

On May 8th he had another attack, when he was quite speechless and collapsed. The nurse had observed some twitching of the muscles of the right side of face when he awoke; he then lost the power of the right arm, but the leg escaped. The condition of paralysis was succeeded by one of rigidity. There was difficulty in swallowing, and the patient was very irritable. He seemed to understand a little more what was said to him in a few days, but recovery was very incomplete,

for there was no return of intelligible speech, and there was complete loss of power over the right hand, and partial loss of power of the right leg. He became very restless, constantly attempting to get in and out of bed, and was so noisy that we could no longer retain him in the infirmary. His condition is very pitiable at the present time; he cannot understand anything said to him, has complete motor aphasia and right hemiplegia, is very emotional, and presents all the symptoms of cerebral softening.

Although motor speech has been involved in both of these cases as well as sensory, as I have said before, I have brought them forward chiefly on account of their being good examples of sensory disturbance of speech. In the first case, that of the artist, it is remarkable how compound was the aphasic condition, and it is most probable that there was thrombosis of the Sylvian artery, for all the cerebral centres concerned either in the expression or the interpretation of speech are situated within an area supplied by this vessel.

The centre for motor speech (the posterior part of the third frontal convolution and the lower part of the ascending frontal on the left side) were first affected, and the ascending frontal convolution containing also the cortical centres for the movement of the tongue and lips accounts for the early loss of these movements in this case. The part of the brain concerned in the sense of hearing was next affected, which is the posterior half of the first temporo-sphenoidal convolution on the left side. When this region is diseased there is often transient deafness in the opposite ear, as was the case here. The fact observed that he could hear a whisper and understand the word when whispered very softly and slowly is one I find no record of, but points, I think, to over-stimulation of the centre by the ordinary voice, preventing perception of sound characters. The hearing of both ears went simultaneously, but the right, or that on the opposite side of the lesion, was the first to recover.

In word blindness a lesion of the first temporal convolution is found in the majority of cases. The hemianopsia was probably due to involvement of the occipital lobe, for the pupil still continuing to respond to light supports Wernicke's suggestion that the symptom is then due to a lesion in the occipital cortex. The amaurosis which has been present in both attacks was probably cortical also. The optic nerve always looked healthy. Mind or object blindness was part of the visual disturbance. It has been produced artificially by Munk in dogs by extirpating parts of the occipital lobe. Loss of smell, which was associated with the sensory aphasia, is thought by Gowers to be due to softening of the root fibres at the commencement of the fissure of Sylvius.

I have not mentioned the fact before, but this patient had visual hallucinations to which Professor Henschen in his work on the *Pathology of the Brain* directs attention, as likely to trouble a patient with homonymous hemianopsia when that symptom is of cortical origin. He said he could always see in the blind half of the field of vision a man at the back of his head holding two lighted candles. Bastian has strongly pointed out that lesions in the posterior parts of the brain are more apt to produce hallucination than lesions in the middle or anterior parts. The amount of sensory disturbance was very remarkable in this case, and might have suggested at an early period a purely functional origin; but as Wyllie says, in *Disorders of Speech*, p. 375, "The very existence of word deafness or word blindness in any case should suggest an organic rather than a functional cause."

In the other case I have recorded, there is not much to note except that the sensory aphasia came on first, and long before the motor condition; also that there was an absence, as far as could be made out, of any hemianopsia, with the word blindness. The probable cause in this case is thrombosis, which may be proved in a short time as the patient is now *in extremis*.

An important question in connection with aphasia is its influence on testamentary capacity. My patient, as I have related, made a will and signed it; but as Gowers remarks, word deafness is incompatible with will making, inasmuch as the testator cannot understand what is said to him.

This patient's will was entirely made on his own instructions, for he had no agaphia and was aided by pantomime.

Since a short notice of this paper was published, Professor

Gairdner, of Glasgow, has written to me for fuller particulars of my patient's will making, as he is to be called as a witness in a case next month in which it is to be attempted to reduce a will made by an aphasic whom he attended. Dr. Gairdner says: "I touched briefly upon the subject of the testamentary capacity of the aphasic in my address at the Liverpool meeting of the British Medical Association, but it has always appeared to me one of great difficulty and depending essentially on details."

A CASE OF COMPLETE APHEMIA OF NINE WEEKS' DURATION: SUDDEN RECOVERY THROUGH AN ACCIDENT.¹

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THE patient, C. R., aged 34, a bricklayer, was seen by me on September 2nd, 1896. Complete loss of speech had occurred suddenly on the night before. There was no specific history, no history of previous blow or fall, and none of previous neurotic attacks of any kind. He had always taken a considerable amount of beer, but had been a teetotaler for seven months, and until a fortnight before the loss of speech occurred, when he took to his old custom. He had always been in good health, with the exception of occasional rheumatism and an illness seven years ago, which was stated to be inflammation of the lungs and kidneys.

His present attack came on quite suddenly on his way home from the public-house, and just after having left a friend with whom he was conversing as usual. As he left his friend to walk to his house—a distance of about 50 yards—he experienced a feeling of faintness and swimming in the head, with weakness in the left leg, which rendered him unable to walk steadily. He asserted that he was quite sober. This his wife corroborated.

On arriving home he discovered that he was unable to talk, and he had since been unable to articulate a single word, though able to express himself freely by aid of slate and pencil without the slightest hesitation or mistake.

The patient, a well-built dark-complexioned man, with a narrow retreating forehead, looked somewhat dazed, pale-faced, with anxious, emotional expression, and profuse perspiration of head and face, which increased on his being questioned, when he showed an amount of distressed effort. His temperature was slightly increased. The tongue was furred and moist, and on attempt at protrusion impinged on the teeth at the right angle of the mouth. There was difficulty of deglutition. The throat was relaxed and the uvula deflected to the right side.

He complained of occasional attacks of faintness and swimming in the head, of the same kind as he experienced at the onset of the attack. The apex beat was outside the nipple line, and the impulse weak. The first sound was indistinct, the second accentuated in comparison. There was a systolic murmur in the aortic area transmitted towards the neck. The urine was healthy. He complained of pricking or tingling sensation in the left leg as far up as the knee. There was no alteration in sensation or conduction. The pupils were equal and reacted well to light. There was general paresis of left leg and arm—of the leg more than the arm—and that mostly in the upper part.

His intelligence was good; he had no delusions, torpor, or coma, or much slowness of mental processes; attention and memory were good. Sleeplessness with restlessness had been troublesome since the attack. This he attributed to faintness and swimming in the head. No involuntary interjections were uttered and attempts at speech were abortive. He answered simple questions requiring affirmation and negation by nodding and shaking the head. He understood everything said to him, and promptly and intelligently answered all questions put to him by aid of slate and pencil, and without confusion of words or their sequence. He wrote the date of the month and the day of the week of the seizure, and gave dates and character of previous illnesses. He under-

stood and appreciated singing. He could read and understand what he read. Sight was good, and he recognised common objects and pictures of common objects, and named them correctly. He could copy words and figures, and wrote spontaneously and from dictation.

On September 3rd he could protrude his tongue with slight difficulty.

On September 12th he muttered "Yah! yah!" at the breakfast table without apparent application to anything. He tried to talk to a child, but unsuccessfully. He complained of weakness in the arm after getting out of bed for the first time.

His general condition improved, and he resumed his work on September 16th. He had a slight attack of lumbago and sciatica on October 1st, which soon passed away. Sleeplessness resulted if he worked in a stooping position. The loss of speech remained as before.

His general condition continued to improve until November 2nd, when, while building an oven at a height of 6 feet from the ground, he felt giddy, lost his balance, and fell backwards to the ground, landing on his head. He was stunned, moaned, and then shouted to his friend by name. His nose bled considerably, which it does occasionally and without apparent cause.

Next morning he informed me that he had been able to talk since, and spoke quite distinctly, but somewhat more slowly than usual. There was tenderness on pressure over the left occipital and parietal regions, with some effusion.

The exact pathology in this case is difficult. Hyperæmia, hæmorrhage, thrombosis, and embolus will suggest themselves, as also monospasm and hysteria.

There was inability to protrude the tongue, which was deviated to the right side. The left arm and left leg were paresed—the arm slightly and leg mostly in the upper part. The complete loss of speech are suggestive of a lesion in the left inferior frontal convolution or in that region, the patient being righthanded, although his work might help to make him partly ambidextrous. Can hyperæmia be so localised? There was no disease of the kidneys or of blood vessels which would tend to exclude hæmorrhage and thrombosis, and the lesion was probably not central. The heart was not satisfactory, and the multiple character of the lesions suggests emboli. If embolic, were both sides of brain affected? As to the sudden recovery through an accident, can it be owing to the sudden cessation of an enduring monospasm as Bastian would suggest? or to the resolution of the embolus or emboli? The leg on November 24th showed distinct weakness. As to the locality of the lesion as far as the total loss of speech in a case of aphemia such as this is concerned, Bastian suggests that the "defect is capable of being produced by damage to efferent internuncial fibres in any part of the course from the left glosso-kinæsthetic centre to the articulatory centre in the bulb," and Gowers, that the lesion is "probably so placed as to interrupt the fibres that go to the motor tract (internal capsule), and those to the corpus callosum, but has not destroyed the speech centre itself or the connection between it and the head centre."

TWO CASES IN WHICH THE SIGNS OF THE PRESENCE OF AN INTRACRANIAL TUMOUR WERE FOLLOWED BY RECOVERY.

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WHEN patients present themselves with signs of progressive organic intracranial disease, the outlook is, in the great majority of cases, of the most gloomy character. Sometimes, however, even when such signs are well-marked, an intermission or remission of the symptoms takes place, and, much more rarely still, a more or less complete recovery, and this in cases in which the character of the symptoms present seems to leave little room for doubt as to the correctness of the diagnosis.

With the exception of intracranial syphilitic disease, which is more amenable to treatment, and in which more or less complete recovery is frequently seen, the uniformly

¹ Read before the Staffordshire Branch of the British Medical Association at Stoke-on-Trent.