

OBSERVATIONS
ON THE
NATURE AND TREATMENT
OF
CERTAIN FORMS OF PARALYSIS

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[Reprinted from the ASSOCIATION MEDICAL JOURNAL.]

LONDON:
T. RICHARDS, 37, GREAT QUEEN STREET.

1855.

[This paper, written for the Annual Meeting of the Provincial Association at York, but not read for want of time, was published in the JOURNAL by request of the meeting.]

OBSERVATIONS,

ETC.

I BEG to submit to your consideration a few remarks on the nature and treatment of certain forms of paralysis. It would be altogether a work of supererogation were I to occupy the time of such a meeting as the present by any remarks on the nature and treatment of ordinary cases of paralysis, arising from recent attacks of apoplexy of the brain or spinal cord, caused by congestion, effusion, or compression of the brain or spinal marrow, or by organic lesions of these organs; inasmuch as such cases have been ably discussed in separate monographs on the subject, and in systematic treatises on the practice of physic, with which most of the gentlemen present are no doubt quite familiar. My remarks, therefore, shall be confined to chronic cases of long standing, which may have been preceded by structural lesion, effusion, congestion, or compression, but which morbid conditions have been relieved or removed by treatment and the salutary efforts of nature during a course of years, without a corresponding improvement having taken place in the voluntary power, and which may, therefore, be considered as the result of an impairment of functional power, independently of appreciable organic lesion. There

is also another variety of paralysis from sudden attacks of persistent tonic spasm of certain muscles, and entire loss of power of others, which frequently manifest themselves without any appreciable corresponding organic cause, and which, occurring as they do chiefly in individuals with the hysteric diathesis, in which there is an excess of mobility of the nervous system, I would venture to designate *hysteric paralysis*.

So long ago as the year 1841, a paper was published by me in the *Edinburgh Medical and Surgical Journal*, entitled "Observations on Talipes, Strabismus, etc.", in which I adverted to this subject, and adduced cases successfully treated by me according to the views therein set forth. I there remarked, "It is a curious fact that a rigid and permanent contraction of one or two muscles may be sufficient to exhaust the whole nervous and muscular energy of the leg or arm where it occurs, so that there shall be a loss of heat, feeling, and muscular energy of the whole member, all of which may be restored, with so much rapidity, by simply dividing the tendons of the contracted muscles, that it would be no difficult matter to make superstitious people believe that a miracle had been performed. Every one who has treated cases of club-foot must have observed the increase of temperature which follows the operation; but, in cases of contraction of the hand, and fingers, and arm, from any contraction of the biceps, long flexors of the wrist and fingers, etc., the division of their tendons have, in many instances, been followed by the most surprising results. Not only have the hands and fingers been set at liberty, but such increased energy has been restored to the whole arm, that patients of upwards of thirty years of age, who had been deprived of the power of lifting their arms for five or six, or more years, have, in the course of two or

three minutes, been able to lift them to their heads. In one case, a patient, upwards of seventy years of age, who had paralysis of the right side, and had been dumb for three or four years, in eight or ten minutes after the operation was able to lift the arm pretty freely, and the following morning spoke for the first time since his paralytic seizure.

“To maintain this advantage, so soon as the cutaneous wounds have closed, and lymph has been effused to unite the divided ends of the tendons, it is necessary to make extension, so as to insure a new portion of tendon growing into the point of separation, otherwise, on the reunion, contraction might be re-established, and with that the original feeble state of the member.

“The only physiological reason which I can offer, as to the cause of the restoration of power and feeling after these operations, is this. I infer that a certain amount of nervous energy is elaborated for each member for the general supply of the whole of its functions, and that the quantity necessary to maintain these muscles in this state of morbid tension produces enervation of all the others, with loss of tone, and languid circulation. The operation, by cutting off this profuse expenditure in one channel, allows it to flow for the general benefit of the whole, and hence the muscular power is restored, with freer circulation of blood, which will, of course, produce an increase of heat in the whole member. The operation is also frequently followed by increased vigour of the whole body. This was remarkably evinced in a boy on whom I operated for talipes, from contraction, in 1840. He was ten years of age, paralytic of the leg, so that he had never had the power either of standing or walking on it, and so weak in his body generally, that he was a most pitiable object,

leaning feebly over his crutches, unable to support his head erect. In three weeks after the operation, he was able to walk across the floor by the help of supporting him by the hands. In a short time longer, he could walk with his crutches, supporting most of his weight on the leg, and supporting the head with ease; and ere long he was enabled to throw his crutches aside entirely, and walk with a little stick in his hand."

I could easily adduce other instances where weak and withered arms, almost from birth, have thus been restored to power and increased in size; but, from a fear of encroaching too much on your time and patience, I shall only narrate one case which lately came under my care, and which is a beautiful and interesting example for illustrating this branch of the subject.

CASE I. On the 3rd of March, 1854, I was consulted in the case of a boy, 3 years and 9 months old. His father was a strong healthy man; his mother had been delicate ever since her second confinement. She was the mother of four daughters and four sons, and all the four sons, of whom my patient was the youngest, were born at the seventh month. My patient had a well developed brain, and seemed very intelligent for his age; but he had never had the volitional control of either legs, arms, or fingers. He had never been able to pass his arms round anyone nursing him, so as to aid in supporting himself, nor to lay hold of, or pick up anything with his fingers, or fingers and thumb. When he attempted to grasp hold of anything, it was a mere clutch with the whole fingers together, and he had no power of loosing his hold but in the same manner. As regarded the inferior extremities, from tonic spasm of the internal iliac and psoas muscles, the thighs were permanently and rigidly flexed on the trunk; and, from a similar state of the

adductors of both thighs, the knees were held rigidly in close contact. Moreover, from rigid tonic spasm of the flexor muscles of both legs, they were held strongly flexed on the thighs; and, from tonic contraction of the gastrocnemii muscles of both legs, the heels were drawn up, and the toes and feet held extended, in the form of a complete case of talipes equinus. The boy was thus as miserable an object as could well be imagined, entirely deprived of the use of both superior and inferior extremities. Several professional gentlemen had been consulted in his case, but without having afforded him the slightest relief. At length, one professional gentleman, personally unknown to me, recommended the parents to bring him to me, from knowing that I had given a considerable share of attention to the treatment of various distortions.

By a process, which I shall describe presently, I was enabled to excite the antagonist classes of muscles into play, and thus reduce the morbid activity of those which had bound the limbs in this state of permanent rigid contraction; so that in about ten minutes I was enabled, with very little effort, to extend and separate his legs to an extent which never could be achieved previously by the strongest efforts which anyone had applied to them. This same process was repeated with equally satisfactory results on two subsequent days; but it appeared to me that the far most speedy and certain mode of effecting a cure in such a case would be at once to divide the tendo Achillis in both legs by subcutaneous section, and thereby ingraft a portion of new substance between the divided ends of the tendons, as practised in treating ordinary cases of talipes equinus. By this means I not only expected to restore the feet speedily to the normal position, but also that there would be a decided improvement effected on many of the

other morbidly contracted muscles, through the laws of sympathy and consensual action, which plays such an important part in nervous power and muscular motion. To this proposal, the parents readily gave their assent, and I operated accordingly on both legs, on the 8th of March, 1854. The small punctures in the skin, made by the narrow blade of the tendon knife, having been closed by adhesive plaister, I applied splints and bandages, so as to retain the feet in their original malposition, and compress the gastrocnemii muscles, so as to prevent such separation of the ends of the severed tendons as might prevent the lymph thrown out extending to both ends, and thereby preventing their ultimate reunion. In two days the splints and bandages were removed and reapplied; but so as to secure slight extension, and a farther effusion of lymph, to increase the bond or medium of reunion. This extension was increased at each dressing, so that, in fourteen days, there was sufficient addition of substance implanted between the divided ends of each tendo Achillis to permit the feet to assume the natural position to the legs, and sufficiently strong to warrant me in removing the splints and bandages, and providing the patient with a pair of lace-up leather boots, with side splints. Having put on the boots, he was found able to stand with his feet flat to the floor, and to support a considerable portion of the weight of his body by his own muscular efforts.

I had also applied gutta percha splints behind the legs and thighs, supported by bandages, so as to assist in overcoming the contraction of the flexors of the legs. These were kept constantly applied night and day for a month, and, after that period, during the night only for ten weeks, after which they were entirely dispensed with. At each dressing, moreover, I manipulated, as in the first instance,

so as to excite the morbidly weak muscles, and to subdue the morbid rigidity of the others. I also induced the patient to exert his best efforts at walking during my visits, and the result was that a considerable increase of power had been attained by the end of April, and, on the 2nd of May, I sent him into the country for the benefit of air and exercise. He remained in the country till the beginning of August with decided advantage. Since his return home, I saw this patient a few times, when I manipulated and exercised him as I did prior to the division of the tendons, which manipulations seemed also to be highly beneficial to him.

There is one remarkable fact connected with this case, to which I beg now to direct your special attention, in corroboration of what was remarked at the commencement of this paper, viz., that in about six-and-twenty hours after the section of the Achilles tendons, the patient was discovered to have acquired complete volitional power of his arms, hands, and fingers, for the first time during his life; and the most gratifying part of the narrative is this, that his volitional control has remained perfect ever since; thus clearly proving the remarkable consensual and sympathetic influence of one part of the muscular and nervous system with that of others. Believing that it would be interesting to my professional brethren to see the said patient, I had requested the mother to bring him to the Manchester meeting last year, so that the members might have had an opportunity of seeing both the patient and his mother, and of making any personal inquiries of the latter which any gentleman might have felt inclined to do. As there was no time to read the paper at that meeting, the boy was not exhibited before those present, but Professor Simpson of Edinburgh, and Mr. Adams of the London Orthopædic

Hospital, accompanied me, and saw him at my consulting rooms.

"In the course of my investigations and practice", to quote again from my paper in the *Edinburgh Medical and Surgical Journal*, "I found that there was another variety of talipes, of pretty frequent occurrence, which did not arise from preternatural contraction, but from paralysis, or preternatural relaxation of certain classes of muscles, and for which the Stromeieran operation was inapplicable. I was, therefore, desirous of discovering a remedy for that, and a very fortunate idea struck me, which has enabled me not only to treat such cases of talipes successfully, but also other affections of a paralytic nature. The idea was this; as cases of contraction were relieved and cured by division and elongation of tendons, might not the relaxed and paralysed muscles be cured by the converse mode, namely, by cutting out a portion of the tendons of such muscles, bringing the divided extremities together, and securing their reunion in that state? It was so strongly impressed upon my mind that this would at least cure the flapping condition of the member, and might, moreover, stimulate the muscles to renewed vitality and contractility, that I resolved to try it, which I did on the 30th of June, 1840, assisted by my friend, Mr. Rhind, surgeon, Edinburgh, my son, and my apprentice, Mr. Pacey.

"CASE II. The patient, aged 6 years, had been given up as the subject of hopeless paralysis for two years previously, after the failure of the most approved treatment, under able practitioners. The left leg was perfectly powerless, dangling by the side of her crutch, without reaching the ground, much colder than natural, the foot assuming a slight degree of varus, so that when placed on the ground it rested on its outer edge, the heel slightly elevated, and the

toes turned a little inwards. I excised three-sixteenths of an inch of the peronæus tertius, dressed and bandaged, so as to maintain the divided extremities in contact. In a week she could walk across the floor with the assistance of holding by my hand, and on the tenth day, in the presence of my talented friend Dr. (now Sir) J. L. Bardsley, and others, she actually walked across my surgery floor, and back again, without any assistance whatever,—a circumstance which equally surprised and delighted that gentleman and others present. In twenty days she put on a boot, and in another week walked entirely without the crutch, which she has done ever since.

"CASE III. On the 5th July, 1840, in a patient, aged 10 years, I excised one-quarter of an inch of the tendon of the tibialis posticus and flexor longus pollicis pedis, in a case of valgus from paralysis of these muscles. As in the former case, the leg, which had always felt cold previously, became warm after the operation. All went on well, and in three weeks she put on a boot, and walked quite straight.

"CASE IV. On July 6th, 1840, I operated upon Mrs. —, aged 50 years, who had all her life suffered the annoyance of varus, principally from relaxation of the peronæus longus and brevis. The leg had also been cold. I excised three-eighths of an inch of these tendons, dressed and bandaged so as to maintain the divided extremities in a state of approximation. All went on well; in three days she was able to move her toes for the first time in her life. In three weeks she put on a laced-up boot with a steel support, by which she was enabled to walk with much more comfort than she had ever done previously.

"CASE V. Master G., aged 6½ years, had talipes valgus from one year old, arising from absolute paralysis of the gastrocnemii and other muscles at the back of the leg.

There was not only total inability of extending the foot, but such relaxation of all the extensor muscles, as to allow the foot to be pressed upwards, until its dorsum rested on the tibia. On the 4th September, 1840, I excised three-eighths of an inch of the tendo Achillis, closed the wound, and bandaged, so as to keep the divided extremities in contact. On the tenth day the wound was nearly closed, and the tendon so firmly united as to resist any attempt at pressing the foot upwards, excepting to a trifling degree, beyond a right angle with the leg. He had also by this time acquired the power of flexing and extending the foot freely, showing that the paralytic state of the extensor muscles was completely overcome. At three weeks from the operation, the patient fell and injured the leg, so as to cause inflammation and suppuration around the newly formed cicatrix, which retarded his recovery. Notwithstanding this, in three months after the operation, this patient was enabled to walk with ease, flexing and extending the foot freely, and capable of maintaining the foot and leg in their proper relative position. Before the operation, any attempt at walking was attended with great awkwardness, the leg being tossed forwards, the toes turned very much outwards, and the inner ankle approximating the ground.

"CASE VI. Master B., aged $12\frac{1}{2}$ years, had been much in the same state as the last case for about a year. In October 1840, I excised five-eighths of an inch of the tendo Achillis, and dressed and bandaged as usual. On the sixth day the wound was almost entirely closed, and he had the power of bending and extending the foot freely; indicating the reunion of the tendo Achillis, as well as the restoration of muscular motion in the paralysed muscles. In two months he put on a boot, with which he walked with ease,

and can now walk nearly as well as if he had never been so afflicted.

"CASE VII. Master M., aged 10 years, had the right leg quite useless from a paralytic seizure in infancy. The leg was not only powerless, but also cold and withered, being about half the size of the other one; the knee was bent to an angle of 45° ; the foot was turned outwards, and could be easily pressed up against the tibia, showing the extreme want of tone of the gastrocnemius and tibialis posticus. I excised three-eighths of an inch of the tendo Achillis, and about as much of the tibialis posticus, and dressed and bandaged as usual. All went on well, and he was provided with a high soled boot, to compensate for the shortness of his leg. He was enabled to walk without a crutch, merely requiring the assistance of a stick. This leg is much grown, and greatly warmer than before the operation; indeed, he is much stronger altogether.

"CASE VIII. Miss —, aged 14 years, had talipes valgocalcaneus of the left foot for twelve years, from paralysis of the gastrocnemii, with contraction of the tibialis anticus, extensor proprius pollicis pedis, and extensor longus digitorum pedis. On the 25th of September, 1840, I operated by excising a full half-inch of the tendo Achillis, and dividing the tendons of the tibialis anticus, extensor proprius pollicis, and extensor longus digitorum pedis. The wounds were closed with plaster, and splints and bandages applied, so as to maintain the extremities of the tendo Achillis in approximation, and those of the other tendons apart. All went on well, and on the sixth day she had the power of bending and extending the foot, showing the reunion of the divided tendons, and restored irritability and contractility to their respective muscles.

"CASE IX. W. B., Sheffield, aged 7 years, had talipe-

also calcaneus from infancy, supposed to have arisen from paralytic stroke when six months old. He had no power of the gastrocnemii, so that the foot could be pressed upwards, until it almost reached the tibia. When walking, the foot was turned very much outwards, and the malleolus internus nearly touched the ground. On the 26th of February, 1841, I excised three-sixteenths of an inch of the tendo-Achillis, and dressed and bandaged in the usual mode for such cases. All went on well, and in six days, he could bend and extend the ankle-joint and toes. From this period, he recovered so rapidly, that, in eighteen days from the operation, he could walk easily without any apparatus applied to the foot or leg.

“I could easily multiply cases of a similar nature with other tendons, but I forbear.

“The general inference to be drawn from these and numerous other cases is this, that in about six days the extremities of tendons from which a portion had been excised, and which were brought and maintained together in the manner described, were sufficiently firmly reunited to maintain the member in the desired position, and to restore muscular contractility or increased strength to such muscles as were weak, or had been paralysed for many years.”

It is now upwards of fifteen years since I first devised and practised this operation; and I feel confident that it will answer in all or most of such cases as those to which I have referred, provided it is properly managed. It requires considerable care, however, to execute these operations with that degree of exactness which is requisite—because, if too little be excised, it will not excite that degree of tone and contractility requisite for insuring sufficient energy; whereas, if too much be removed, it may produce rigid and permanent contraction of the correspond-

ing muscles, with innervation of others, which require an entirely opposite mode of treatment.

I farther added: "Thus, the treatment of these varieties of talipes directed my attention to efficient modes of treating local paralysis, where one class of muscles was in constant rigid contraction; and also to another variety, not with morbid tension of the muscles, but where there was a morbid relaxation of one or more muscles. I found a third variety in which there was a morbid relaxation of the whole member—say a leg or an arm—with wasting of its substance; and it became an interesting inquiry, whether any other method could be devised to meet such cases. It is truly gratifying to be able to say, I have been so successful in this variety by a mode of treatment entirely new. I am actively engaged in investigating this subject; and intend, in due time, to lay it before the profession, when I have made some farther observations on the subject. In the mean time, however, I shall give a few of the results, as witnessed by professional gentlemen of high talents, who have examined the patients, in some cases before I saw them, and again, in ten minutes after my application. It has succeeded in cases where the patients have had the benefit of all the most approved appliances which modern science has suggested, including electricity and galvanism; and it is equally successful in infants and children, as in adults, whether male or female.

"I had long entertained the idea—which, indeed, is the general notion amongst physiologists—that the functions of the nerves depended on a subtle fluid circulating within them; and it now occurred to me that friction over the ganglia, and gentle pressure over the course of the nerves leading to the paralysed parts, from their central to their peripheral extremities, might propel a greater quantity of

nervous influence into these parts, and thus restore increased energy to them. Moreover, I thought from the proximity of the arteries, that the same mechanical means would, independently of the increased nervous energy, send a greater quantity of blood along the arteries, and thus also tend to rouse the dormant muscular action. Having formed this theoretical view, I very soon had an opportunity of trying the experiment, and the results exceeded my most sanguine expectation, as a brief notice of the following cases may show. The great sympathy which exists betwixt the muscles and tendons with which they are connected, induced me to apply the same means along their course, especially over the insertion of the tendons of the weakest muscles. Any hard smooth substance will answer the purpose, such as a strong well-made ounce phial.

"This is, undoubtedly, a different view of treating such cases from that which avails itself of the aid of Mesmerism or animal magnetism. Whether I am right or wrong in my theory, there is no mistake in the satisfactory results of the practice, as it has been witnessed by many, including professional and scientific gentlemen.

"CASE x. A girl, aged 12 years, had been paralytic for seven years, and for the last five the case had been given up as hopeless. The right arm was quite powerless, and the leg so uncertain in its action, that she walked very badly. In ten minutes after my application, she walked much better, could move her fingers, and raise, bend, and extend her arm. In three days she had a second application. In ten minutes after this, she could walk almost without lameness, and was so much improved in the arm, that she was able to feed herself with it from that time. By a few more applications she was quite restored, and continues now perfectly well.

"CASE XI. Mrs. —, the mother of a numerous family, had been paralytic of the right arm and hand for thirteen months. In ten minutes after my application, she was able to grasp firmly with the hand, and move the arm freely; and when she went home the same day, surprised her family by extending her arm, and shaking hands with each of them. A few more applications made her quite well.

"CASE XII. — had been thirteen months quite powerless in his right hand and arm. In ten minutes, he could move his fingers, swing his arm round his opposite shoulder, and toss it about in all directions. Next day he had still more command over it. The third day he had greater power; and on the fourth, was so much better, that he did half a day's work, as a labourer; on the fifth day, a whole day's work, wheeling a barrow, etc., and has continued to do so daily ever since.

"CASE XIII. A young lady, aged 21 years, had a paralytic seizure when eleven months old, which left her with her right arm withered, not more than half the size of the other, and cold, and without the least power of motion. The same day I first saw her, she called upon another surgeon, who said she must content herself to remain as she was for life, as he considered her case was entirely hopeless. In ten minutes after my application, she could move her fingers, and throw her arm round her body, and over the opposite shoulder.

"I could enumerate many more cases where patients have been unable to move a finger, and who, in ten minutes or less, have regained the power of hand and arm to the extent of being able to lay hold of the rail of a heavy chair, and lift it entirely off the floor.

"CASE XIV. A case of a gentleman who had paralysis of

the left side of the face for six years, who had not the power of closing the eyelids of that eye during that period, regained that power in five minutes, and in an equally short space of time, the nose and mouth, which had been drawn to the opposite side, were made nearly straight.

"CASE XV. I shall only add two more cases, one that of a young man, whose case engaged the attention of many of the most accomplished members of the profession, both in Scotland and England. He was a labourer in Edinburgh, and was under two of the most eminent professional gentlemen in that city on the first appearance of his complaint, but without regaining the power of his arm. He afterwards went into Glasgow Infirmary for some months, but derived no benefit. He then took to hawking for a subsistence, and got into three of the most celebrated provincial hospitals in England, and afterwards into three of the London hospitals, but was dismissed from all of them as incurable, after remaining many months in several. He had been afflicted in this manner for about five years and a half. When he called on me in October 1840, the following was his situation :—There was the most complete atrophy of the deltoid, biceps, and triceps, and, in a considerable degree, of all the other muscles connecting the scapula with the chest on the right side. In short, from the shoulder to the elbow there was nothing visible but the integument covering the bone, and he had not the least power of moving the shoulder or flexing the elbow. The muscles, from the elbow downwards, were well developed, and he could move the fingers and wrist freely. In ten or twelve minutes after my application, he was able to flex his elbow, and raise his arm, and swing it about in all directions. I made him exercise it for some time, which he seemed quite delighted to have the power of doing. He called again the

same evening, and was examined by many who were present at the time. He called on me, and had a repetition of the same means several times, and in about ten days left quite vigorous in his arm. There was a slight tendency to the same disease in the other extremity, all of which improved in like manner.

“CASE XVI. In 1841, I was consulted in the case of Mrs. P., aged 42 years, who had a paralytic seizure four years previously, which deprived her of the power of speech ever since, and rendered her paralytic of the right leg and arm. She had regained a little power of the leg, so that she could move from place to place in the room, steadying herself by anything she could lay hold of with the left hand. She could also with great difficulty make her way into the next cottage door, supporting herself against the wall. In ten minutes after my first manipulations, so greatly was she improved, that she walked home on her own feet, a distance of fully more than three miles, and continued to walk wonderfully well ever after. The power of the arm was also very much improved, so that she could lift and bend it freely, and bend and extend the fingers; whereas she previously had no power of either. She also regained the power of speech, so that she could speak tolerably the following day. This case is particularly interesting, from the fact of my having seen the patient only once, and never heard more of her till four months after, when I was attending a young lady in the neighbourhood.

“Of course, paralysis arising from organic lesion of the brain or spinal marrow will resist this as well as every other human agency; but I think sufficient has been said to prove that much more can be accomplished for certain varieties of paralysis than has hitherto been thought possible; and it ought to encourage us to still more energetic

researches regarding the treatment of this and other intractable complaints."

With a few observations on hysteric paralysis, I shall have done. Every medical man of experience must have met with cases of hysteric paralysis, either with contraction or with partial or complete loss of muscular tone, as well as voluntary power; and it is well known that such cases are so rebellious to ordinary treatment as to be held as the *op-probria medicorum*. It cannot, therefore, be otherwise than gratifying when I am enabled to lay before the members of the Association, for consideration and approval, what has been found by me to be a speedy, certain, and safe remedy for such affections.

It is no doubt known to many that, in 1841, I entered upon the experimental investigation of the phenomena of Mesmerism. I did so as a decided sceptic in every respect, resolved, if possible, to discover and expose the trick by which certain phenomena then being exhibited in Manchester were accomplished. I very soon discovered, however, that there was a certain amount of truth, mixed up with what I believed to be error; and I therefore resolved to attempt to separate the former from the latter.

I was soon enabled to demonstrate that, by certain processes, some individuals were able, by their own unaided efforts, to throw themselves into a state analogous to those who were subjected to the Mesmerising processes. The most speedy and certain mode for accomplishing this was causing the subject to maintain a steady fixed gaze at any inanimate object, placed a little above the forehead, but so as to be seen distinctly by both eyes; the subject at the same time concentrating his undivided attention upon said unexciting act. This was at once a most important step,

as it proved the influence to be *subjective*, or a personal influence existing within the patient's own body, and not depending upon any influence *ab extra*, proceeding from the body of another human being. This inference was still farther supported by the fact that the varied nature and quality of the object gazed at seemed in no way materially to alter the subsequent results; whilst, in highly impressible subjects, it was proved that the results depended so much upon the expectant idea in the mind of the subject, that any physical combination of circumstances whatever to which they were told to direct their attention, with the assurance that they would be thereby sent to sleep, was followed by sleep; whilst the next moment they might comply with the same directions without going to sleep at all, if persuaded by the suggestion of a second party, or by a pre-existing idea in his mind to the effect that now the agency was to be inoperative, from some supposed change in the existing circumstances. It was moreover ascertained that, with some very susceptible subjects, the mere idea and belief that some particular process was going on at a distance, to send them to sleep, was sufficient to produce such result, even when no such process was taking place: and farther, in reference to the alleged power of the will of the operator to affect subjects, either near at hand or at a distance, after having carefully investigated the subject, I am warranted to state, as the result of my experience, that I have never found any influence whatever to be exerted over the patient by my *silent willing*; but they seemed very quick to catch suggestions from the manners, looks, tones of voice, or physical manipulations of the operator; and to become affected according to the purport of what they *inferred* to be the *will* and *intention* of the operator, and that even when he might be *willing* the *very reverse*.

In short, my experience went to prove that the real efficient agency of all the different processes was merely as aids to assist the patient to induce in himself a state of mental abstraction or fixity of attention, in which the powers of his mind should be so absorbed by a fixed idea or given train of thought as, for the nonce, to render him dead or indifferent to all other considerations and influences which did not harmonise with the dominant idea in his (the patient's) mind at the time.

As a very strong corroboration of the correctness of this view of the subject, I may state the fact that, from the difficulty of fixing the attention of idiots, all my attempts to hypnotise them have been unsuccessful, notwithstanding I have made many persevering efforts to do so.

Again, in my experimental inquiry into *The Power of the Mind over the Body*, which was published in 1846, as the result of a laborious set of experiments, I was enabled to demonstrate that a sustained act of attention, directed to any part of the body, was followed in a few minutes by a change or modification in the physical function of the organ or part so regarded; the general result being an exaltation of function; but, curiously enough, with many individuals the very reverse result might ensue, from a dominant idea to that effect having existed in the mind of the patient previously, or from its being strongly imprinted on his mind at the moment by an audible suggestion from another person, in whose prediction he could repose confidence. The more vivid the imagination and fixed the attention of the subject to the expected result, the more certainly and vividly were the phenomena realised; and, after the processes for inducing what I call the hypnotic state, it was found that these physical phenomena could be produced, through the mental influences of the subjects,

with far more certainty, celerity, and intensity, than in the ordinary waking condition. I therefore adopted the term hypnotism, or nervous sleep, to designate this peculiar condition of the nervous system, into which it could be thrown by artificial contrivance, and which differed in several respects from common sleep, as well as from the ordinary waking condition. In fact, hypnotism comprises, not one state, but rather a series of stages or conditions, varying in every conceivable degree, from the slightest reverie, with high exaltation of the function called into action, on the one hand, to intense nervous coma, with entire abolition of consciousness and voluntary power, on the other; whilst, from the latter condition, by very simple but appropriate means, the patient is capable of being speedily partially restored, or entirely roused to the waking condition. By this means, I maintain that the operator does not communicate any surcharge of a magnetic, odyllic, electric, or vital fluid or force, from his own body to that of the patient, as the real and efficient cause of the phenomena which follow, in altering or modifying physical action, or curing disease; but I hold that he acts merely as the engineer, by various modes, exciting, controlling, and directing the *vital forces within the patient's own body*, according to the laws which regulate the reciprocal action of mind and matter upon each other, in the present state of our existence.

I am well aware that, in correct phraseology, the term hypnotism ought to be restricted to the phenomena manifested in patients who actually pass into a state of sleep, so that they remember nothing on awaking of what transpired during their sleep. All short of this is mere reverie or dreaming, however provoked; and it therefore seems highly desirable to fix upon some phraseology capable of accurately charac-

terising these latter modifications which result from hypnotic processes. This is the more requisite, from the fact that, of those who may be relieved and cured by hypnotic processes of diseases which resist ordinary medical treatment, perhaps not more than one in ten ever passes into the state of unconscious sleep during the processes they are subjected to. The name hypnotism, therefore, is apt to confuse them, and lead them to suspect that *they* cannot be benefited by processes which fail to produce the most characteristic and obvious indication which the name imports. After much reflection on the subject, it has occurred to me that the object in view might be attained very satisfactorily as follows. Let the term *hypnotism* be restricted to those cases alone in which, by certain artificial contrivances, oblivious sleep takes place, in which the patient has no remembrance, on awaking, of what occurred during the sleep, but of which he shall have the most perfect recollection on passing into a similar stage of hypnotism thereafter. This then will embrace what has been called the double conscious state; and let the term *hypnotic coma* denote that still deeper stage of the sleep in which the patient seems to be quite unconscious at the time of all external impressions, and devoid of voluntary power, and in whom no ideas of what had been said or done by others during said state of hypnotic coma can be remembered by the patient on awaking, or at any stage of subsequent hypnotic operations. Then, inasmuch as I feel satisfied that the mental and physical phenomena which flow from said processes result entirely from the mental impressions or dominant ideas excited thereby in the minds of the patients changing or modifying the previously existing physical action, and the peculiar physical action thus superinduced, reacting on the mind; and that, whether these dominant

expectant ideas existed in the minds of the subjects previously, or were suggested to them after falling into the impressible condition by audible suggestions or sensible impressions excited by the manipulations of a second party—under these circumstances, I think the following terms would realise with sufficient accuracy all we need desire on this point:

Let *monoideology* indicate the doctrine of the influence of dominant ideas in controlling mental and physical action.

Then *monoideism* will indicate the condition resulting from the mind being possessed by a dominant idea.

To *monoideise* will indicate the act of performing processes for inducing the state of monoideism.

Monoideised will indicate the condition of the person who is in the state of monoideism.

Monoideiser will indicate the person who monoideises.

And *monoideo-dynamics* will indicate the physical and mental changes, whether of excitement or depression, which result from the influence of monoideism.*

And, finally, as a *generic term*, which shall comprise the whole of those phenomena which result from the reciprocal actions of mind and matter upon each other, I think none could be more appropriate than *psycho-physiology*.

* Several years ago, Dr. W. B. Carpenter introduced the term *ideo-motor* to characterise the reflex or automatic muscular motions which arise merely from ideas in the mind associated with movement, without any conscious effort of volition. In 1853, in referring to this term, Dr. Noble remarked, "*Ideodynamic* would probably constitute a phraseology more appropriate, as applicable to a wider range of phenomena." In this opinion I quite concurred, because I was well aware that an idea could *arrest* as well as *excite* muscular motion automatically. Not only so, but my researches had moreover proved beyond all reasonable doubt that dominant expectant ideas could modify and control *every* other function of the human body, as well as muscular motion. I therefore adopted the term *monoideo-dynamics*, because it seemed to me the most comprehensive and characteristic term which I could devise for indicating the true relations which subsist between the mental and dynamic changes and reactions which take place in *every* function of the body.

Now, I shall give a few cases illustrative of the practical importance of these reactions, when properly managed, for the relief and cure of disease.

CASE XVII. In the spring of 1842, a girl was brought to me, under the following circumstances. She had been suddenly seized with violent tonic spasm of the hand and arm, so that her hand was rigidly clenched, the wrist flexed on the arm, and the arm flexed on the humerus, attended with considerable pain. Most of the servants, male as well as female, in a large hotel, had exerted their utmost strength without being able to open the hand or extend the arm. A highly respectable surgeon was now sent for, who prescribed medicine internally, and the application of a large blister on the nape of the neck. There being an aggravation of symptoms, I was consulted, when I immediately recognised this as a hysteric case, for which I hypnotised her, and then, by gently titillating the skin along the course of the extensor muscles, they were immediately called into action, and the morbid action of the flexors at the same time withdrawn, by which simple means, by *art*, and without the slightest effort, I was enabled, in a few minutes, to effect what had resisted the strongest efforts of powerful men to accomplish; for the hand was opened, and the wrist and arm extended, and the patient cured in a few minutes; and she never had any subsequent attack of the sort.

CASE XVIII. Again, about a month after the above case, a highly educated lady, 16 years of age, was brought to me from Newark, in Nottinghamshire. Dr. Chawner (then of Newark, now of Lincoln) accompanied her and her father, and informed me that her head had been rigidly fixed to her left shoulder, as I then saw, for six and twenty weeks; and so firm was the contact, that no warrantable

force applied to it could separate them to the extent of permitting a card to pass between the head and shoulder. The Doctor, moreover, added, that he had tried every remedy he could think of, and had done so energetically. He had caused the patient to be watched when in natural sleep, as well as when under powerful doses of opiates; but still the spasm was never observed to relax, by night or by day, during the whole period of six and twenty weeks. He also sent her to London, with a written history of the case; so that she might have the benefit of a personal examination and advice from Sir Benjamin Brodie. She returned, however, without improvement, and was never worse than at the moment when I was introduced to the patient. I found the patient exactly as described; the head so rigidly fixed to the shoulder that no effort of mine was capable of separating them in the smallest degree by force. I therefore hypnotised the patient, by causing her to fix her sight and thoughts upon my lancet-case, held about ten or twelve inches above her forehead. Her eyelids very soon closed, with the twitter peculiar to patients passing into the hypnotic state. I then elevated her legs and arms, to render them rigid, and quicken the circulation; and thus produced a state of excitement in the sensorium and spinal cord. When she had remained a few minutes in this state, and when I knew from experience that she was in the condition most favourable for acting on the muscular system, I gently titillated the skin on the right side of the neck, and thus roused the subjacent muscles into action, which I knew was the most certain and speedy mode of reducing the morbid rigidity in those on the left side, by reason of which the head had been so long bound to the left shoulder; and thus, by art, and not by force, I was enabled to move the head from the left, and incline it to the right shoulder,

with as much ease as a mother can change the head of her sleeping infant. Having allowed the patient to remain a few minutes in this attitude, I aroused her by a clap of my hands near to her ear, when she instantly awoke, and, to the astonishment of herself and friends, with her head quite straight. When I called to see her next morning, I found her reading a book, with the head quite straight. There was a slight curve in the spine, however, for which I hypnotised her whilst standing on her feet; and during the sleep I manipulated the spine, so as to place it upright, in which condition I aroused her, when the body was found to remain quite straight, and the head also quite upright. I only visited this lady once more, when she appeared to remain quite straight, in which condition she returned home a few days thereafter.

CASE XIX. On the 11th of August, 1853, a young lady, 23 years of age, was sent to me from Berwick-upon Tweed, by Dr. Johnston, of that city. The following is the history of this very interesting case. Four years previously, she had been seized with a paralytic dragging of the left leg, which became worse and worse, notwithstanding the most assiduous efforts of Dr. Johnston, who is a most experienced and scientific physician, aided by the opinion and advice of Sir B. Brodie, who had been corresponded with on the case by Dr. Johnston. Four months having elapsed without improvement, she was taken to Edinburgh, for a consultation with Professor Syme, who examined her spine with great care, said he found no disease there, and hoped she would recover ultimately, although several years might elapse before such event took place; and that he could only, in the meantime, recommend attention to her general health, with exercise in the open air, by riding on a donkey. This was persevered in for ten months more, without the slightest

improvement, when the patient was taken to London, to have the benefit of the personal examination and advice of Sir B. Brodie. Still no improvement ensued for months, and at length all treatment was abandoned. After this patient had been in this condition for twenty months, and after all treatment had been abandoned as quite inefficacious in her case, she at length gradually recovered the use of her limbs. From that period, she had occasional threatenings of a return of her old complaint; and, in the summer of 1852, she frequently felt as if her legs were being galvanised. In February 1853, she had a return of her paralytic affection, which continued for a fortnight; and, at the end of April 1853, she had another seizure, which had obstinately resisted all the best directed efforts of her old and tried friend, Dr. Johnston, for four months, when he sent her to me, to try the effect of hypnotism; which he had been induced to do from having read some remarks on the subject contained in my paper on "Hypnotic Therapeutics", published in the July number of the *Monthly Journal of Medical Science* for 1853. The following is the paragraph which impressed Dr. Johnston with the belief that hypnotism would be the remedy for his patient; and he immediately recommended it to the parents, and wrote to me accordingly, and sent his patient hither.

"The most striking cases of all, however, for illustrating the value of the hypnotic mode of treatment, are cases of hysteric paralysis, in which, without organic lesion, the patient may have remained for a considerable length of time perfectly powerless of a part or of the whole of the body, from a dominant idea which has paralysed or misdirected his volition. In such cases, by altering the circulation, and breaking down the previous idea, and substituting a salutary idea of vigour and self-confidence in its place (which

can be done by audible suggestions, addressed to the patient in a confident tone of voice, as to what *must* and *shall* be realised by the processes he has been subjected to), on being aroused, in a few minutes thereafter, with such dominant idea in their minds, to the astonishment of themselves as well as of others, the patients are found to have acquired vigour and voluntary power over their hitherto paralysed limbs, as if by a magical spell or witchcraft. Assuredly such cures are as important as they are interesting and surprising, because such cases may resist ordinary modes of treatment for paralysis for an indefinite length of time; but still the *rationale* is simple enough, when viewed according to the principles which I have already explained, of the influence of an expectant dominant idea, *either exciting or depressing natural function, according to the faith and confidence of the patient.*"

On the 11th of August, the above patient called on me, accompanied by her mother. The patient was a tall, handsome, and intelligent young lady, twenty-three years of age, five feet eight inches high, with figure well proportioned to her stature, so that when seated she had all the appearance of youth and vigour. When she attempted to walk, however, her paralytic condition of the left leg was very obvious, as she could only drag it along the floor at each step as far as the heel of the other foot, with the toes of the affected limb turned outwards. I had no difficulty in recognising the nature of the case; so that I at once assured both mother and daughter that I would make very short work of that case. The mother said she would be glad if it turned out so; but she uttered this in a tone of voice which indicated that she was by no means equally sanguine on the point as I was. Having seated the patient in an easy chair, I hypnotised her, and extended her limbs,

and acted on them so as to change the previously existing state of the muscles. In about ten minutes I aroused her, and requested her to walk across the room, which she was enabled to do, lifting the left foot from the floor and carrying it forward before the other in the usual way; which she had not been able to do for four months previously. The improvement, although she was still a little lame, seemed greatly to surprise both mother and daughter; more especially, from the apparent simplicity of the means by which it had been accomplished. Next morning I repeated the operation, with still further improvement; and on the evening of the same day I operated again, after which she could walk up and down and around the room without the slightest appearance of lameness; and after a fourth operation, next morning, she could walk with the grace of a queen, or the agility of a sylph. Immediately after this operation, she rode to town, and there walked about through various shops and streets, as if she had never been lame at all. As the muscles of the other leg had also been somewhat affected, I recommended the patient to remain under treatment about a month, the more effectually to consolidate the cure; after which she returned home quite strong and active, and she remained so for twelve months.

During the summer of 1854, this patient had been so vigorous as to be able to climb the hills in the Highlands of Scotland as actively as her companions: but, during the autumn, from fatigue with a round of company, and anxiety about the health of a friend, her general health broke down; and, at the end of September, she had another paralytic seizure. As it had persisted for three weeks, she was brought to me once more; the mother of the patient expressing her fears, however, that I would not find hyp-

notism so successful as before, as her general health was so broken down on the present occasion. They arrived in Manchester at eight o'clock in the evening; and, as soon as they had had some refreshment, I told them that I intended to make the patient walk without lameness *before she went to bed*. The mother of the patient was quite incredulous: but I hypnotised, and acted as on the former occasion; and, in a quarter of an hour, the paralysis was quite gone, the patient walking without the slightest degree of lameness. After being hypnotised again next morning, she felt as vigorous as before the attack; and all the constitutional ailments her mother had been so anxious about speedily disappeared also under hypnotism, and the patient has kept quite well ever since.

CASE XX. Another case, of a similar description, came under my care on May 5th, 1854. The patient was nineteen years of age, and had been unable to walk for two years and a half, excepting pirouetting on her heels, with the toes and feet drawn up so as not to touch the ground. Being the daughter of a gentleman of independent means, she had had the benefit of the best advice to be had in the kingdom, including several of the most distinguished professional gentlemen in the metropolis. It might therefore be fairly held, that all the resources of ordinary medical means had been exhausted, and proved unavailing. So anxious were the parents about this young lady, that, besides the father, mother, and aunt accompanying her, they also had Mr. Nicholson, the ordinary medical attendant of the family, to come from Northumberland and confer with me on her case. On examination, I found the gastrocnemii muscles of both legs not only paralysed, but entirely atrophied, so that she had no calves to her legs; and the tibialis anticus and other muscles on the anterior part of the leg were

all inordinately active, so as to keep the toes and feet drawn up, and the tips of the heels only resting on the floor during any attempt to walk. I told Mr. Nicholson, who is a very intelligent man—he is a lecturer at the Newcastle School of Medicine—that what was wanted in this case, was to rouse increased activity in the gastrocnemii of both legs, and moderate the excess of action of their antagonists. He replied, “No doubt this would improve her condition; but *how is it to be accomplished?*” In reply, I said “I will soon show you that.” Hereupon, having hypnotised the patient and extended her limbs, in a little while, and after I knew that the muscular system would be in the proper state of excitability, I titillated the skin over the gastrocnemii muscles, and inclined the toes downwards, by which means both indications which I had in view were accomplished; and, on arousing the patient, in about ten minutes thereafter, she laid hold of my arm, and was able to walk up and down the room with the soles of her feet flat on the ground, for the first time for two years and a half. Next day, she was still farther improved; and, on the third day, whilst in the hypnotic state, I requested Mr. Nicholson, who is a strong man, to do his best to force the toes up; but so powerful had the gastrocnemii muscles become, that he was unable to do so. In six days, the patient was able to walk along the street very nicely for more than a quarter of a mile; in a few days more, a third of a mile; and, in about eighteen days, to leave Manchester, and has remained quite well ever since. Her general health has also been much better since she underwent the hypnotic process.

I may remark, that both of these patients remained quite conscious during the whole of my processes.

I shall only refer to one more case—the restoration of

sight by hypnotism, in the case of impaired vision from partial paralysis of the optic nerve and retina.

CASE XXI. On the 19th of June, 1854, I was consulted in the case of Miss R. Twelve months previously, she had had an attack of ophthalmia, which yielded to treatment so far that she was able to go out of doors in a month. She now had the misfortune to sustain a blow, from a pole falling upon the upper and left side of her head. Two or three days subsequent to this accident, she suffered severe pain from the blow, when suddenly she became quite blind of the eye on the same side, with dilatation of the pupil. For this affection her medical attendant again subjected her to a course of treatment; and the result was, that in four months sight was partially restored to this eye. At the beginning of January 1854, whilst reading the newspaper, this patient suddenly lost sight entirely of the other eye, with dilatation of its pupil, as had been the case previously with the other eye. Another surgeon was now consulted in the case; and a few days thereafter, whilst rising from the stooping posture near the fire-place, the patient had the misfortune to strike the same part of the head against the mantel-shelf which had sustained the former injury from the falling of the pole, which blow against the mantel-shelf was immediately followed by total loss of sight of the corresponding eye; and thus she required to be led about in a state of total blindness in both eyes. After treating the case for some time himself, the gentleman now in attendance, from a consideration of the obstinacy and importance of the case, recommended her to go to Dublin, and place herself under the care of Mr. Wilde, a celebrated oculist in that city. This was complied with, and she remained under the care of Mr. Wilde for six weeks, during which period she went through a course of very

active treatment with decided improvement; for the iris had become somewhat irritable on the application of light, and she was able to discern large objects, but could neither see to read nor write. She now returned home, where the same line of treatment was persevered with, under the supervision of the surgeon who sent her to Mr. Wilde. After she had been at home for some time, and finding the improvement had become stationary, this gentleman recommended her to try hypnotism, and furnished her with a letter of introduction to me, detailing the history of her case. On examination, I found no apparent physical imperfection to account for the impaired vision; nor was there any pain about the head or eyes. The eyes had very much the appearance of an incipient case of amaurosis, only the pupils were not quite so much dilated. I suspected that the cause of the impaired vision was a want of sufficient nervous irritability in the retina, and, if so, that hypnotism would very soon relieve her. My first object was to apply a test by which I might be enabled to ascertain what amount of benefit had resulted from my processes. On presenting the title-page of a book to her, with the largest and boldest letters in my room, I found she could not discern a single letter, notwithstanding there were some letters a quarter of an inch long, and very bold open print. Having hypnotised the patient and directed the nervous power to the eyes, by wafting over them, and gently touching them occasionally, so as to keep up a sustained act of attention of the patient's mind to her eyes and the function of vision, she was aroused in about ten minutes. I now presented before her the title-page of the same book, when she instantly exclaimed, with delight and surprise, "I see the word commerce!" pointing to it. I told her she would see more than that presently; and in a little while

she exclaimed "I see commercial"; then "I see dictionary"; and shortly after, "I see McCulloch", the name of the author; but she could see nothing more. I told her that, after a little rest, I felt assured she would see still smaller print; and, after a few minutes, she was able to read "London, Longman, Green, and Longmans". Such was the result of my first process. After a second hypnotic operation, next day, the patient could read, when first aroused, the whole of the title-page of a pamphlet; and, in about five minutes after, she read two lines of the text. After another operation, the same day, she could read the small close print in the appendix; and was able the same evening to write a letter home reporting progress, for the first time for twelve months. She only required two more hypnotic operations, when she was found able to read the smallest sized print in a newspaper; after which she left me, quite cured, and, as I have heard, she has continued well ever since.

None of these last five patients took any medicine whatever whilst under my care, nor had they any external application; which, therefore, with the shortness of the time they were under treatment, leaves no doubt but hypnotism and their cures stood towards each other in the relation of cause and effect.

I know of one eminent professional gentleman who has been consulted in between two and three hundred such cases, and who candidly avows that he knows of no certain remedy for them, although they generally get well ultimately by the efforts of nature, such as in two or three years.

Whilst I have been so far successful in producing important results of a practical nature in the relief and cure

of certain diseases, by hypnotism, I do not wish to hold it up as a panacea or universal remedy. Indeed, I do not believe in *any* universal remedy. Moreover, it is well known that I use hypnotism alone only in a small number of cases, to which I have found it particularly adapted; and that I use it in other cases in conjunction with the exhibition of medicines; whilst, in the great majority of cases, I do not use hypnotism at all, but adopt the ordinary mode of practice, by prescribing medicines in such doses as are calculated to produce obvious physiological effects. Moreover,* I do not pretend by hypnotism to have the power of rendering patients clairvoyant, and capable of manifesting what are called the higher phenomena of Mesmerism. These feats are quite beyond the range of my power and humble pretensions; and, indeed, such pretensions comprise phenomena which are not only at variance with reason and common sense, but such as, if true, would actually upset the whole fabric of society in the present state of our existence. But, independently of this *a priori* argument against the probability of such pretensions being true, I have still stronger reasons for being sceptical on the point, for I have had many opportunities of investigating the pretensions of some of the most noted clairvoyants in Europe; but, from my knowledge how to guard against probable sources of fallacy, every one of them broke down; which surely would not have been the case, had they really possessed the transcendental gifts attributed to them.

Rylaw House, Manchester, August 1855.

* It is my intention shortly to publish a volume entitled "Psycho-Physiology: embracing Hypnotism, Monoideism, and Mesmerism." This volume

will comprise, in a connected and condensed form, the results of the whole of my researches in this department of science; and it will, moreover, be illustrated by cases in which hypnotism has been proved peculiarly efficacious in the relief and cure of disease, with special directions how to regulate the processes so as to adapt them to different cases and constitutions.

FINIS.