REMARKS

ON A

CASE OF ABNORMAL DISPOSITION TO SLEEP, ALTERNATED WITH CHOREIC MOVEMENTS.*

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THE following case was recently brought under my notice, in consultation with a medical friend, on whose experience and skill entire confidence may be placed as regards such details as were not under my own observation. If I abstain from mentioning his name on the present occasion, it is simply because his absence from this meeting makes it impossible to appeal to him; while a too close indication of the locality might possibly lead to uneasiness within the bounds of a very small family circle, living in strict retirement in the country. Within my own personal experience, the phenomena of the case are unique, and I am, therefore, led to suppose that a brief statement of them may be acceptable to the members of the British Medical Association. I am also not without hope that some curious statements of a more or less parallel kind, or some useful suggestion bearing on treatment, may be the result of the present communication. It has, indeed, occurred to me since drawing up this narrative of facts, to submit a condensed statement of the case in conversation to several individual members of the profession who have kindly assisted me with their experience, and it is chiefly in the expectation of drawing from a larger circle some additional and more valuable materials for a scientific induction, that I venture to place before the Section the present narrative of facts.

As I wish to be brief, I will abstain from reading *in extenso* the notes prepared for me by my friend, on the basis of pencil jottings made by myself in presence of the patient and her immediate relatives. These notes comprise a history carried over more than three years of observation of various phases of the disorder; and as these different phases are a little perplexing to follow, I will now endeavour, without adopting a strict chronological order of narrative, to bring before you two distinct groups of abnormal phenomena as mainly constituting the peculiar manifestations of the disease after it had assumed its present form. One of these groups of associated phenomena is a disorder of the muscular movements somewhat resembling *chorea*; the other is a disposition to sleep, occurring under circumstances, and to a degree wholly unusual, and suggestive (though with marked differences) of the rare pathological conditions which have been duly labelled and classified under the heads of catalepsy, ecstasy, lethargy, etc. Indeed, the association in one and the same case of abnormal muscular movements, with a temporarily suspended state of the consciousness resembling sleep, is so directly suggestive of the states above-mentioned, that perhaps the surest way to give a clear idea of the present case will be through a series of negatives, indicating the contrasts that occurred to me in witnessing the phenomena that may be even now daily, and almost constantly observed in the case of M. T.

This young girl of eighteen is, then, not a *cataleptic* according to any of the current descriptions of that rare condition. Her muscular movements have no resemblance whatever to the peculiar rigidity of catalepsy, and besides this difference in their character, these movements differ from those described in cataleptic subjects, while they approach the well-known jerking or jactitations of *chorea*, in the fact of their alternating with the state of suspended consciousness, instead of being an accompaniment, or rather an essential element of the unconscious or quasi-comatose state. In other words, while this young lady sleeps, she is for the most part still and tranquil; when she is awake, she is, almost without intermission, a prey to involuntary muscular movements. Indeed, with certain exceptions to be noticed by-and-by, there are absolutely no movements during the sleep that would be regarded as out of place during deep natural sleep.

Further, this girl is certainly not subject to any of those conditions allied to catalepsy, and, like it, among the more rare phenomena of disordered innervation, but still apparently faithfully described in some instances—conditions usually arising out of disordered emotion, and

ending in more or less complete unconsciousness with or without muscular disturbed movements of an irregular kind. It is impossible, in viewing the attacks of somnolency in the case of M. T., to confound them even for an instant with *hysterical coma*, or with the cases described under the names of *ecstasy*, or *trance*. There is, in fact, in my patient, no highly wrought emotional state whatever; and any hysterical appearances, properly so called, have been purely accidental and transitory, in the earlier part of her illness only, and scarcely to a greater degree than might have been expected from the moral effect of so singular a disease affecting an ordinarily sensitive subject. She has menstruated regularly throughout; has been subject to no known cause of hysterical derangement; has never sought to attract attention, or been in any way made an exhibition of, either in public or in private; she is, within the limits of her waking movements, cheerful and even lively, presenting no trace of exaggerated self-consciousness, and no dramatic or imitative faculty; she has no religious or metaphysical prepossessions connected with her disorder; enjoys on the whole fair bodily health, and is altogether what one would call a normal person of her years, apart from the peculiarities to be stated in this communication.

An equally broad line of demarcation is to be drawn between the present case and all of those characterised by the term *somnambulism*. In the case of M. T., there is no disposition whatever to *somnambulise*, or to perform any function of the waking state during the sleep; on the contrary, the periods when consciousness is withdrawn are, if possible, more distinctly and sharply divided from the waking periods than in the case of natural sleep, and are, so far as can be clearly ascertained, undisturbed even by dreams. There is also an entire absence, in the case now under consideration, of any of those phenomena of disordered or externally controlled will witnessed in the subjects of the so-called *mesmeric coma*, or *hypnotism*; and, *à fortiori*, no kind or manner of resemblance to cases, genuine or other, of *clairvoyance*.

The nearest approach, perhaps, to a classification of the case of M. T. among the *comata* of Sauvages and other systematic writers, would be under the designation of *Cataphora*, or *Coma somnolentum*. But little is gained when that name is conferred on the present case, beyond the recognition of the fact that abnormal or excessive sleep has been in other cases described as a form of diseased function.

There remains only one hypothesis to be negatively dealt with in advance; and no doubt it will have occurred to many as having been already in view in some of the diagnostic indications previously submitted. A sceptic might be disposed to ask, Is this girl a malingerer? If the preceding remarks are not a sufficient answer to this question, I can only appeal to the strong, indeed irresistible, moral impression produced by personal observation of the case, and by strict inquiry into all its incidents and surroundings, to justify an emphatic negative to the suggestion. I can, moreover say, that anything like premeditated deception or scheming, acted out consistently for so long a period as in this case, would imply *powers*, as well as *motives*, for deception, which seem to be wholly absent. And although, in criminal cases before the courts of law, the absence of apparent motive is properly not allowed to prejudice the direct or circumstantial evidence of a crime actually committed; yet, in a scientific inquiry, the absence of motive, and the presence of every conceivable guarantee of truthfulness, together with the almost physical impossibility of a sustained self-consistent imposture under the circumstances, must be allowed great weight in determining the mental constituents (so to speak) of a case of what appears to be purely physical disease. To proceed, then, with the description of the positive facts apart altogether from hypothesis.

1. The *chorea-like movements* in M. T. were among the earliest, and have been the most persistent, of her symptoms; indeed, before the peculiar somnolence, afterwards to be described, occurred, there was perhaps not very much in the character of these movements to distinguish them from ordinary *chorea*. As already remarked, they have, at all periods of the case, been characterised by a nearly complete intermission during sleep; and this remark applies to the natural and periodic as well as to the abnormal sleep. Further, the movements are in themselves painless, however disturbing; and they belong mostly to the series of the *clonic* spasms, or involuntary jerking movements. By far the most considerable, and certainly the most characteristic of these movements, is a slight, but rapid, oscillation or rotation of the head, precisely similar to that of a person who should wish to express, more or less emphatically by signs, his dissent from some assertion or argument; three or four such successive quick shakes of the head being followed by a brief interval of rest, and then by renewed shakings. There is never any nodding movement (as of affirmation); and the rotatory or shaking movement is wholly devoid of any dramatic

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Edinburgh, August 1875.

character or apparent significance, *i.e.*, wholly involuntary and purposeless; it is also quite distinct from the tremor of paralysis agitans or of mercurial poisoning. It is, to a certain extent, increased by mental emotion (as when she is watched), but never is wholly absent at any waking moment, and yet is instantly and completely suspended during sleep. I have satisfied myself that this oscillation of the head, although, as above stated, not uninfluenced by her mental condition, is nevertheless to a considerable extent beyond the control of the will, judging by all the tests usually applied in the case of choreic movements. This peculiar movement is not, however, like the jerking in many mild cases of chorea, determined simultaneously with, and apparently in direct relation to, a voluntary effort; on the contrary, it is capable of being considerably restrained for very limited periods, and is habitually either kept in abeyance, or at least minimised, during all positive and voluntarily directed movements of the body, but always recurs when no such positive movements are taking place. A similar effect, in temporarily restraining the involuntary movements, is produced by anything that for the moment fixes her attention, as in looking or listening intently, etc.

Associated with the rotatory movements of the head, are certain twitching movements of the left side of the face, especially of the angle of the mouth, exactly similar to the jerking or twitchings of chorea. The same remark applies to occasional, but by no means very frequent, jerking of the right arm. It is curious that these jerking or twitchings, first of the *left* side of the face, and afterwards of the *right* arm, preceded in point of time the rotatory movements of the head, and also all the other local and general symptoms now present; so that the resemblance of the case at its first origin to one of ordinary chorea appears to have been very complete. When at the worst (about May 1873) the head-shaking and associated jerking movements were so constant, and so utterly uncontrollable and violent, as to be (according to the medical description) "fearful to look at". Even at this period, however, sleep, whether naturally or artificially induced, completely abolished these abnormal movements, and was practically undisturbed.

Certain abnormal muscular states, either associated with the sleep or of a more permanent character, will be mentioned immediately.

2. The *somnolence*, or abnormal disposition to sleep, in M. T., may be, as to its main characters, very easily described; it is, in fact, in most of its apparent external manifestations, nothing more than very deep and sound natural sleep, occurring at abnormal intervals, and in a very frequently recurring manner, without previous fatigue or exhaustion. In one respect it differs from this description; the patient usually cannot be roused by agitation or concussion, or even by ordinary noises; but is, on the other hand, usually readily enough awakened by calling out her name pretty loudly, and close to her ear. The most marvellous, and, to my mind, unexampled feature in the case, is the sudden transition from waking to sleep, and *vice versa*. In almost all the described cases of lethargic or comatose affections, there has been a kind of gradual transition between deep sleep or coma and thorough waking or consciousness; but in this case there is almost no such intermediate condition. Many times in the course of an hour, nay, several times within a few minutes, the patient may pass from the most perfect wakefulness into the most profound sleep, or from the latter into the former; and (with certain occasional exceptions, presently to be stated) no yawning, or stretchings, or mutterings, as in dreams, or any other of the familiar appearances of the half-asleep state, attend the transition. So uniform and so irresistible is the tendency to sleep, that the patient will inevitably be found to yield to it in a few minutes when conversing, or knitting, or performing any other habitual and mechanical operation, unless she is constantly roused and stimulated by some extraneous impulse towards voluntary and non-automatic movement. Given such impulses from without, at frequent intervals, she can be kept awake indefinitely; but in the absence of positive *external* impulses she is sure to pass into deep slumber, and that with a suddenness that is almost incredible, except on witnessing the fact. After a few seconds only of agitation the head drops upon the breast, and she is at once in a state of torpor from which nothing will arouse her but the familiar sound of her name spoken into her ear. And the moment that is done, she is awake again, and *fully* awake; the act of waking having something like the effect of a shock or concussion, and being immediately announced by a renewal of the head-shaking and other jerking and involuntary movements. So great is the tendency to fall asleep, that she has been frequently known to drop suddenly asleep when, in the course of walking about, she has stood still even for a few moments; her limbs then becoming relaxed, so that she would have fallen to the ground if not supported. And yet so completely is any permanent or enduring torpor or lethargy absent, that, if she be only *kept* awake, she will converse without any apparent sense of fatigue, will read a newspaper or a novel, will do any ordinary women's work, and will show

entire self-possession, a fairly good memory, and no deficiency of cheerfulness or of ordinary intelligence. If she be allowed to fall asleep, and then again suddenly reawakened (in the manner before mentioned), were it even many times in the course of half an hour, she still shows no want of self-possession, but resumes conversation, or her ordinary occupations, exactly at the point at which she left off. Such, in fact, has been the habitual course of her uneventful life, ever since her first period of abnormal sleep in March 1873.

To this general statement, however, there fall to be recorded several exceptions, which I shall now proceed briefly to detail. In the first place, the passage from the waking state into the sleep is not always perfectly tranquil, though always nearly instantaneous. It appeared to me, on several occasions, to be attended by spasmodic movements of a quite different kind from those observed in the waking moments; movements, especially of the hands, more or less similar to the carpopedal spasms of infancy, and with a considerable degree of tonic rigidity, though of brief duration; also a kind of unconscious *hand-washing* movement and convulsive spasms of the lips, all of which conveyed to a skilled observer a hint or suggestion of the earliest stages of certain paroxysms of epilepsy, without, however, the least degree of lividity, or pallor, or change in the character of the pulse, and without any ultimate development in the direction of a characteristic fit, either of epilepsy or apoplexy. A degree of moaning and restlessness, also, very commonly attends the first moments of the sleep; and similar manifestations are occasionally presented during its course, but without any apparent consciousness of them on the part of the patient, either at the time or afterwards. The nearest approach that has hitherto been realised to a half-asleep state, or to dreaming, has been an obscure impression of consciousness of words spoken to her in sleep; but opinions upon this point vary. It is agreed that even loud and unusual sounds, such as thunder, have often failed to awaken her, although apparently making her uneasy and restless. It is also agreed that all the usual sensations connected with the evacuations are powerless to awaken her, though giving rise to symptoms of distress, which have always made it expedient for her kind friends and nurses, by whom she is most carefully watched, to awaken her artificially; and, perhaps, one of the strangest (yet apparently well-attested) parts of the history is that she has never had any involuntary evacuations, even in her deepest somnolence. It is the decided conviction of her friends (founded, so far, upon actual experience) that she would never awake spontaneously, however long she might be left undisturbed; that neither the sense of starvation, nor the pressing necessity of evacuation, nor the weariness of an unvaried posture, nor any other naturally arising impression, would put an end to the somnolence. This impression must be taken as partly confirmed, partly to be corrected, by the observation that, in June, and again in December, 1873, she actually was submitted to a kind of unintentional experiment. On these occasions, she is said to have passed many days continuously in a state of profound and unbroken slumber, without either spontaneous evacuations or food artificially given. The longest period so passed on either occasion (as reported) was eight days. On these occasions, however, she did, at last, awake spontaneously and suddenly; so that it is not altogether certain that the experiment, if it could now be carried out with propriety, or even without danger, would not end in a similar way. But, on the other hand, it is the impression of her friends that artificial awakening is now more difficult than it was at first, requiring both more decided and loud noises, and closer to her ear than formerly. When she awoke spontaneously after an eight days' sleep, she had no conception of having slept more than a single night. She is able to dress herself, to take all her meals herself, to play the piano, and in many ways to enjoy life, and keep herself in occupation. But, in every instance, she requires to be constantly watched if anything of importance has to be done, otherwise she would be almost sure to fall asleep in the doing of it. This applies even to the ordinary evacuations as performed during her waking intervals. On the other hand, all the truly involuntary functions are perfectly maintained during the deepest sleep; the pulse never fails, the respiration is perfectly and naturally maintained, without much stertor; the feet and hands, however, tend to be cold, without any positive sense of chill.

There has never been any fever, or any severe or formidable local pain, but one of the most apparently persistent symptoms—one, indeed, present almost from the first—has been a certain amount of dull pain or uneasiness in the left temple; and she observed, at an early period, that, when this sensation was at the worst, the twitchings were also aggravated. An appreciable amount of halting in the right leg, and comparative weakness of the right arm, have been observed at times, especially by the patient herself; but there has been no permanent, nor even any unequivocal, paralysis at any time, or in any part of the body.

The following note of ophthalmoscopic observations in this case has been kindly furnished by Dr. Thomas Reid, of the Glasgow Eye Infirmary.

Ophthalmoscopic Examination in Case of M. T.

On account of the rapid and incessant lateral movements of the head, it was impossible to make the examination in the waking state. She was accordingly allowed to fall asleep, which she did quickly in the usual way. The pupils, previously normally dilated, remained so during sleep, except occasionally when, either from the stimulus of the light thrown into the eye or from involuntary muscular contraction, the pupil contracted slightly, and this was always accompanied by the associated act of accommodation for near objects. The left eye was slightly hypermetropic, and a good view of the fundus oculi was got both by the direct and the indirect method. The optic disc was oval-shaped, the major axis being vertical. The retinal veins were congested and rather tortuous; the arteries diminished in calibre, and barely visible. The right eye was slightly myopic, the optic disc ill-defined, contracted, rather pale, and slightly depressed in the centre. The veins and arteries were nearly as in the left eye. On being roused, an attempt was again made to see the fundus, in order, if possible, to compare the state of the circulation in the two conditions; but, with the exception of an apparent slight increase of the circulation indicated by the greater intensity of the reddish reflection of the fundus (which was all that could be observed under the circumstances), the condition in both states appeared to be much the same. The oval shape of the left disc was probably congenital. The atrophy of the right was probably associated with some intracranial degeneration. The appearance presented by the vessels might be accounted for by some local constriction at the optic nerve-entrance. There was no trace of hæmorrhage or exudation throughout the fundi.

Details of Case as referred to above.

M. T., a strong, well-formed, and well-coloured girl of fifteen years of age, of previous good health, and with no particular family history of any nervous disease, while sitting in an omnibus on her way home from school, in the beginning of May 1872, was suddenly seized with sickness, a feeling of fainting, and a peculiar spasmodic twitching of the muscles of the left side of the face. The sickness soon passed off, but the twitching remained: the spasmodic movements ceased during sleep. When this twitching had continued for a month or so, it was observed that her right arm began to twitch in like manner, and her head also began to jerk towards the left side. The case had at this time all the appearance of being one of chorea. In conveying food to the mouth, or otherwise using her right hand, she seemed to have little control over its movements, and it occasionally missed what it was intended to do. She continued in this state for some months with little or no change. She was able to go about, and even to go from home for change of air. About this time, she first complained of a dull heavy pain in the left temple, at the junction of the frontal and parietal bones, sometimes better and sometimes worse, but of no extreme character. This pain has been very persistent; and she has observed that when it is most severe, the twitchings are more marked than at other times. Latterly, she noticed that every second night the spasmodic twitchings of the face and the erratic movements of the head and arm were very much aggravated, so much so that she remarked that she had only one pleasant day out of the two: she dreaded the periodic return of the spasms. During this period she had a few hysterical fits.

In March 1873, she suddenly became unconscious, and lay for about a fortnight with her eyes wide open and pupils dilated. She talked nonsense in a stammering manner, sang songs and hymns, had optical delusions (e.g., saw wild beasts, etc.), and did not know her friends. During this time, the spasmodic twitchings and the shaking of the head ceased. When she recovered from the unconscious state, the twitchings and the head-shaking began again in the most violent manner; and towards the end of May 1873, her state was something fearful to look at: the head rocked to and fro on the pillow in a semirotatory motion, and very rapidly; it could not be controlled, even by exerting considerable force and holding her head firmly with both hands. These violent movements ceased, however, during sleep; and in order to procure rest, the hypodermic injection of morphia was had recourse to. In performing this operation, it was remarked that at first, on the insertion of the needle, before the morphia was injected, the head ceased moving, and she fell into a sleep, the sleep being pretty much as is usual under morphia: latterly, however, she did not fall asleep till morphia had had time to act.

This violent semirotatory motion of the head continued without abatement till towards the end of June 1873, when one day she complained of feeling very wearied, and almost immediately thereafter she fell into a deep sleep, and slept continuously for two days (all the spasmodic

movements ceased). At the end of this time, she awoke for a few minutes, made a remark or so, and again fell asleep, continuing in this sleep for eight days. No amount of pinching or shaking her, however severe, could awaken her. Strong ammonia applied to the nostrils caused her uneasiness, but did not awaken her. At the end of eight days she awoke suddenly and spontaneously, her first remark being, "Is it true that my head has stopped shaking?" The head had stopped shaking, though there remained a slight, almost imperceptible, twitch of the face. During her sleep, she took no nourishment but a little wine and water, and beef-tea poured into her mouth with a teaspoon, and with difficulty swallowed (i.e., swallowed mechanically). The bowels never acted, nor was her urine passed, nor did any necessity appear for the use of the catheter, there being no perceptible accumulation.

For the next five months, she kept pretty well in health, though there was always a perceptible twitching of the left side of the face (but very slight), and she complained of weakness of the right arm and right leg. In walking, it was noticed that she had a slight halt, and she dragged the right leg. She took her food well, and her health and strength visibly improved, so that she was able to go about, take walks, do fancy work, knit, sew, etc.

Towards the end of December 1873, she again suddenly fell asleep, and slept for eight days without awaking. Twitching ceased as usual during sleep, and she lay in a state similar to that in which she was in the June previous. At the end of the eight days, she awoke as suddenly as she had fallen asleep, got up and moved about as usual, seemingly unaware that she had slept more than one night; and then began the curious state in which she is at the present time. When she goes to bed, she falls asleep at once, and never awakes spontaneously, until she is awakened by her friends in the morning: she then gets up at once and dresses herself, but requires to keep always moving and active, for, if she were to sit down or stand still an instant, she would certainly fall asleep. She falls asleep at her meals, in the act of conveying food to her mouth, in the middle of a sentence, while carrying on an animated conversation, in playing the piano, or in reading or sewing. The only way she can prevent herself from falling asleep is by keeping herself in a state of activity by walking about. If she wish to read, or sew, or knit, she must keep moving; if she stand still, she falls asleep, and falls to the ground; and if she sit down, she sleeps almost immediately, and often falls off her chair, so that she has constantly to be under the supervision of her friends. During her sleep, she seems to have a sort of consciousness of some sensations, for when she has taken purgative medicine, about the time the bowels are going to act, her friends notice her getting uneasy; she moans and tosses about, and appears unhappy, and, on being awakened, she has an urgent call to stool, and asks why they did not awaken her sooner. She also appears to have a consciousness of noises, but never awakes, only gets restless and uneasy in her sleep.

At first, she used to fall asleep more easily, and was more easily awakened than she is now. She may sit now for five or ten minutes conversing before she drops off asleep, whereas at first she used to sleep the moment she sat down; now she can only be awakened by shouting her name close into her ear, whereas at first she could easily be awakened by making a noise at a distance from her, by whistling, or clapping of the hands.

Detailed Account of Waking State.—Constant lateral vibration of the head is observed, with quick movements of rotation, only stopping for a few moments when her attention is fixed, as in looking or listening intently, with slighter and less constant chorea-like twitching of the angle of the mouth on the left side; slight twitchings of the right arm are markedly observed, though not so much of late. There is a slight halt of the right leg, but no irregular movements. Washing and graspings of the hands are observed, evidently due to nervousness in the presence of strangers; they are not usual. She speaks intelligently, answers questions correctly, and is very observant.

The sleeping state is in the main a deep sleep, with body and limbs quite quiescent. This applies at least to the greater part of the duration of sleep, say during the night; and at first this was the usual condition of sleep at all times. In falling into sleep, her head drops on her breast, and she moans. At first, there was almost always more or less of spasms, twitchings, and quasi-convulsive movements of the hands and arms, and also of the face; but of late there have been decided rigid convulsions of the hands and forearms, very like the carpo-pedal spasms of infants. The hands are strongly flexed on the wrists, and the fingers bent into the palms of the hands, so strongly that they cannot be unclasped. The head is observed at times to be turned round to the right shoulder in a strong spasm; this occurs sometimes in the middle of the sleep. These spasms are sometimes increased in intensity when she has been excited. There are also

chorea-like movements of the shoulders, and rather extreme convulsive jerking of the left angle of the mouth in falling into sleep, also deep sighing and moaning: this has been more observed of late. She never awakes spontaneously, nor is she ever awakened by any ordinary disturbance, or even by severe concussion, or painfully pinching or pricking within limits. She has been lifted off her chair and roughly shaken without being awakened. The only thing that can be counted on to awake her is to speak her name into her ear, or make a loud noise or whistle close to her ear. She used to be more easily awakened than now: a loud sound at a distance, as whistling or clapping of the hands, succeeded at first in arousing her, but not now. Loud sounds disturb her sleep, but do not awake her; even thunder, which is very disturbing in its effects on her when awake, does not disturb her sleep. When she is awakened, she looks up startled and confused, and looks about for an instant as if collecting herself. She is not conscious of anything during sleep, but has been suspected of being conscious of words spoken by others during her sleep; but this has not been verified. Frequent slight whinnings and restlessness occur during sleep, as if unhappy, but she appears unconscious of them, or of any impression to cause them. In sleep, the pupils are widely dilated, the pulse is not affected by sleeping or waking, breathing is perfectly calm, and her colour does not change.

From the beginning of her illness up to the present time, she has always been perfectly intelligent, and can carry on a conversation with spirit; occasionally reads books and the newspapers, writes letters, and does fancy work. Her memory is not impaired; remembers what she reads perfectly well. In her disposition she is amiable, good-tempered, equably minded; has never any paroxysms of grief or anger; feels her position keenly; is easily excited; is rather sensitive, and does not like being seen by strangers; has not had hysterical symptoms for at least two years.

Her bodily health has been pretty fair all through her illness. At first, she was stout and of good complexion, but latterly she has lost flesh, is paler, and not so strong; walks with a halt, and prefers to lean on a person's arm when walking. Pulse 90 to 100. The bowels are constive; never moved except by medicine. The urine has never passed involuntarily; it has never required to be drawn off, but accumulates during sleep; never awakens her by necessity of discharge, but gives rise to symptoms of distress. Menstruation has been regular all through her illness; no uterine derangement; appetite poor; food is not taken heartily, but not refused or vomited; no gastric derangement; tongue white, and breath mawkish; no fever at any time; extremities always cold, but no sensation of chill or shivering; she has had occasionally, however, a feeling of a creeping sensation up the back, apparently formication.

As regards remedies used, the disease assumed so many different phases that the treatment had to be changed from time to time. At the beginning, the remedies given were such as are usually administered for chorea: notably bromide of potassium, oxide of zinc, valerianate of zinc, ammonia, quinine, strychnia, and several preparations of iron. Antispasmodics were given for the hysterical symptoms while they existed, with alteratives and purgatives. To produce sleep and give rest, and so stop the constant vibration, chloral hydrate was administered, also opiates and the hypodermic injection of morphia. Blisters were applied to the nape of the neck and down the spine; the head was shaved, and blistered over the seat of pain. The bromide of potassium was given at several times—at one time in very large doses, either alone or combined with strychnine; but its use had to be stopped, owing to misgivings as to its effect on her health. Iodide of potassium and phosphorus were also administered. Tonics of quinine, strychnine, and iron, mineral acids, with bitter infusions, have been had recourse to of late in order to restore her strength.

CASE OF AORTIC ANEURISM SUCCESSFULLY TREATED BY THE DISTAL LIGATURE.

By THOMAS ANNANDALE, F.R.S.E.,

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R. B., AGED 62, was first admitted under my care in August 1874, on the recommendation of Dr. Wilson of Motherwell. The patient had suffered from symptoms of thoracic aneurism for about six months; and, as these were steadily increasing in severity, he was advised to come into the Infirmary.

On admission, there was a distinct aneurismal tumour, pulsating strongly, and passing up from behind the clavicle and sterno-clavicular articulation into the neck, as far as the cricoid cartilage. The trachea was displaced towards the left side by the tumour, and the inner half

of the clavicle and its articulation with the sternum were pushed forward by the portion of the tumour under them. There was a well-marked *bruit* to be heard on all sides of the swelling, and there was dulness on percussion over a considerable area, corresponding to the situation of the thoracic part of the tumour. In addition to these symptoms, the patient had a constant irritating cough, pains shooting up into the head, want of sleep, and he was losing flesh markedly. He was ordered to keep in bed; and iodide of potassium, in twenty-grain doses, was given three times a day. After one month of this treatment, he left the hospital with his symptoms somewhat relieved, and he was advised to continue the iodide of potassium.

On February 8th, 1875, he was again admitted into my wards, as his symptoms had returned and become more troublesome. He had been unable to continue the iodide regularly, owing to the expense of it. An examination of the tumour showed an increase in its cervical portions. It had not only spread higher up, but it had also spread laterally so as to overlap the site of the subclavian artery. The upper portion of the tumour felt softer; and it was this portion which seemed to be increasing most rapidly. After carefully considering the circumstances of the case, and determining that pressure on the right carotid artery, immediately above the cervical portion of the tumour, very much diminished the aneurismal pulsation, it seemed to me a favourable opportunity for practising the distal ligature. The position of the tumour did not permit the subclavian artery to be ligatured; but there was just sufficient room to secure the common carotid above the cervical portion of the aneurism.

The patient having given his consent, I, on the 2nd of March, ligatured the common carotid immediately under the omo-hyoid muscle, which was drawn upwards, so as to reach the vessel. The internal jugular vein was unusually large and dilated; and some care was necessary to avoid injuring it, as it completely overlapped the artery. The operation was performed under the carbolic spray, and the ligature used was prepared catgut. The immediate effect of the ligature was to almost stop the aneurismal pulsation, and to convert the strong pulsation into a kind of quivering motion. Not the slightest local or constitutional disturbance followed the operation; and the wound was healed on the 17th. A week afterwards, the patient was out of bed. The day after the operation, the patient expressed himself as greatly relieved. He no longer himself felt the pulsation in the tumour, and the pains in his head and neck had disappeared. The pulsation in the aneurism was felt to be very feeble, and the tumour itself was decidedly smaller.

The patient left the hospital a few weeks afterwards, his symptoms continuing in the same improved condition, and the tumour gradually becoming firmer to the feel.

From time to time, the patient returned from the country to show himself, and his state on September 27th was as follows. His general health was good, and he had no pain or other uneasiness. He could stoop freely without giddiness, and could go up and downstairs easily. The tumour had continued to diminish in size, and its cervical portion was fully half an inch lower in level than before the operation. The whole tumour had become much flatter, and also firmer to the touch. On placing the hand over it, only a very feeble pulsation could be felt, but the pulsation was slightly stronger over the upper part of the cervical portion. A *bruit* could still be heard on all sides of the tumour, but it was not nearly so loud as formerly.

REMARKS.—Although it cannot be said that the aneurism in the case reported was completely cured, there can be no doubt as to the great relief which followed the operation. The case, therefore, appears to me to furnish additional evidence in favour of the distal ligature in suitable examples of otherwise incurable aneurisms, and it also tends to confirm the opinions of Mr. Holmes* and Mr. C. Heath,† who have so ably written on the subject.

From my experience in other cases of thoracic and cervical aneurism, and from an observation of cases treated by my friend and colleague Dr. G. Balfour, I can testify to the value of iodide of potassium in relieving the symptoms and promoting coagulation in this disease; but I am inclined to express the opinion that, should a fair trial of this drug fail to give complete relief to the symptoms, the distal ligature of the carotid should be employed, provided the case be a suitable one for the operation. The test of the suitability of the case for operation being the effect which temporary pressure on the distal portion of the carotid has on the aneurismal pulsation. If such pressure diminish the aneurismal pulsation, and should there be sufficient space to ligature the common carotid above the tumour, then I think the case is a proper one for operative interference. I also think with Mr. Holmes that operative interference

* *Lancet*, July 13th and August 31st, 1872.

† *On the Treatment of Intrathoracic Aneurism by the Distal Ligature.*