REMARKS

ON A

PECULIAR FORM OF NERVOUS APNŒA:
ITS PHYSIOLOGY AND TREATMENT.

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THERE is a peculiar and distressing form of nervousness about which I have not unfrequently been consulted, and which has still more frequently been brought to my notice in the course of conversation with friends and with patients who have consulted me about other symptoms. In most of the cases that have come under my observation, the nervous affection to which I refer has occurred while the patient has been engaged in reading aloud, with his family, either prayers or a chapter out of the Bible. The reader finds that his heart begins to flutter, while his breathing is oppressed; and his utterance becomes indistinct and broken. With this, there is sometimes more or less of a feeling of giddiness, and a tendency to faintness. Sometimes, by a determined effort of the will, the difficulty and the distress are overcome, and the reader continues and completes the work in hand; but not unfrequently the symptoms become more and more distressing, until the patient, voiceless and panting, is compelled to give in and discontinue the reading. Most of those who have spoken to me on the subject have been men, but I have known the same difficulty occur to women. Several of my patients have been clergymen; and more than one of them, to the distress and alarm of themselves and their congregations, have broken down in the manner described while engaged in reading the service in church. All who have suffered in this way have been of a sensitive and excitable temperament; some have been under the influence of nervous depression or a temporary derangement of health. In most instances, some emotional disturbance has been the immediate exciting cause of the nervous paroxysm; it requires no small amount of resolution and nerve to get through some of the lessons which the clergy have to read to their congregations. In some cases, the recollection of a former attack and a dread of its recurrence have increased the liability to the attacks, and provoked their frequent return. One of the most curious examples of this was afforded by a clerical friend, who one day had to run to his church in order to avoid being late. When he went into the reading-desk, his breathing being still hurried by the recent exertion, he had some difficulty in getting through the first part of the service. His breathing gradually became quiet, the difficulty in reading ceased, and for the time he thought nothing more of the occurrence. On the next occasion, when he began to read the same service, he had gone without hurry into the desk; but the recollection of his former suffering brought back the same distressing train of symptoms—palpitation, difficulty of breathing and of utterance—to such a degree, that for a few minutes he could scarcely continue the service. Again and again, at the commencement of several successive services, the memory of his former distress and a nervous apprehension of its recurrence brought back the same train of symptoms; and several weeks elapsed before he got free from the distressing weakness.

The vexation, annoyance, and even alarm, occasioned by these nervous seizures, are often very great; and the patient begins to fear that he has some serious organic disease of heart or brain.

Now, it is a matter of some practical importance to be able to give an intelligible explanation of the phenomena, and upon this to base the suggestion of a simple and efficacious remedy. The explanation which I am in the habit of giving, and which I believe to be the true one, is this. Some kinds of emotional excitement, while they quicken and disturb the heart's action, partially suspend the breathing. It is the suspended breathing, the partial apnœa, the gradual emptying of the chest by the expiratory effort of speaking, that is the main cause of the increasing distress and the difficulty of articulation. We know, as a physiological fact, that a partial suspension of the breathing involves, as its necessary correlative, an impeded circulation, primarily through the lungs, and secondarily through the whole system; hence the feeling of giddiness, faintness, and increasing sense of exhaustion. That this is the true explanation of the phenomena in question, is proved by the fact that a few deep inspirations, deliberately taken, usually suffice quickly to remove the distressing sensations. A deep inspiration, filling the chest with air, at once renders vocalisation more easy, and the circulation more free; and I repeat that a few deep inspirations quickly lessen and remove the distress which had resulted from a partial arrest of the respiratory movements. I am in the habit of saying

to these patients that, when they are threatened by a nervous attack while reading, they may ward it off, and escape all serious annoyance, if, while continuing to read, they give so much attention to their breathing as to ensure a continual succession of deep inspirations. I tell them to bear in mind that, while the organ is continually emitting sound, the bellows must be regularly and vigorously worked. It scarcely need be said that, if any discoverable bodily derangement or debility appears to contribute to the nervous disorder, this should be treated by suitable remedies.

In connexion with this subject, it is not without interest to remark that most patients, whether men or women, who are subjected for the first time to examination by the laryngoscope, require to be told that, while the examination is being made, they must continue to breathe freely. I had practised laryngoscopy for many months before I discovered that the slight nervousness experienced by most patients on having their throats inspected causes them to hold their breath; and this suspension of breathing soon distresses the patient, and embarrasses the operator. The direction which I now invariably give to my patients is, in substance, this: "While I introduce the mirror and look at your throat, do not hold your breath, but continue to breathe in and out freely." And I do not attempt to introduce the mirror until I see that my patient understands and obeys my directions.

A few days since, while I was discussing this subject with Mr. Ernest Hart, he reminded me of a precisely analogous instance of nervous apnœa. It happens occasionally that, when a nervous patient is about to inhale chloroform, emotional excitement so completely suspends the respiratory movements, that the patient has to be encouraged, and instructed to continue his breathing, before the inhalation can proceed.

THE TREATMENT OF HÆMORRHOIDS.*

By DANIEL MACLEAN, M.D., Glasgow.

AMONG the diseases of the rectum, that abnormal condition of parts which we call hæmorrhoids, and which is popularly called piles, is the most frequent which the medical man in general practice is called upon to remedy; and from its known frequency, the public expect that our profession should be able to relieve those who suffer much more expeditiously and satisfactorily than from less known diseases. So well known is this disease by the public, that there are a great many popular remedies generally used, often in mild cases with benefit, and we are very seldom called upon for advice till the disease has assumed a stage in which ordinary remedies are of no use, and active procedure is necessary at the hands of the surgeon.

Judging from authorities who have written on this subject, notwithstanding the frequency with which this affection is met, a plan has yet to be fallen upon which will bridge over the gap between the treatment of mild cases and that of the most severe. In the former class, we content ourselves with removing the cause—if known—and with the application of innocuous remedies, such as ointments, lotions, etc.; in the latter, we proceed to use what has been called the "opprobrium of surgery"—the knife, ligature, etc.; but any method of treatment which would bridge over the great distance between these two extremes we have not. The very strong objection on the part of our patient to any operative procedure, so great, indeed, that the mention of cutting, tying, clipping, or burning, will cause him to submit to an even greater amount of pain, from the disease under which he labours, than what he would require to suffer under treatment, is a great inducement for us to endeavour to discover some means more efficacious than lotions and lavements, and less heroic than the knife. To point out a method whereby this result may be accomplished, is the reason of this paper being submitted to your notice.

Hæmorrhoids have been divided by authorities into internal and external, and by some we have yet another class called intero-external. These have their names from the position which they occupy in relation to the sphincter ani muscle. The internal are situated within or above the sphincter; the external without or below the sphincter—taking the body in the erect position; and the intero-external occupy a position intermediate to the other two divisions, being placed over the fibres of that muscle.

Piles, in whatever position they are placed, consist essentially of knots or tumours, developed upon a varicose condition of the hæmorrhoidal plexus of veins. "A pile in this state is quite soft and compressible and can readily be emptied by pressure; and, when cut into, it will be found to be composed of one or more cells filled with blood

* Read in the Surgical Section at the Annual Meeting of the British Medical Association in Newcastle-upon-Tyne, August 1870.

and surrounded with areolar tissue. The appearance of cells is, however, deceptive, and is occasioned by a section of the sacculated and dilated veins which enter into the composition of the tumour. After the piles have existed for some little time, or after they have once become inflamed, the tissues that enter into their composition undergo modifications that induce corresponding alteration in the character of the tumour. The coats of the veins become thickened; their cellular dilatations are filled with coagulated blood; the investing areolar tissue is hypertrophied or thickened by plastic deposit; and, on being cut into, the pile is seen to be composed of a spongy kind of tissue filled with blood." This description of the pathology of hæmorrhoids is that given in Erichsen's *Science and Art of Surgery*, and will generally be admitted to be correct.

Passing over, in the meantime, the obstruction to the return of blood through the portal system of veins, the relaxed condition of the rectum, and anything which is the primary cause in the formation of these hæmorrhoidal tumours, we have an impediment to the onward flow of the blood beyond the tumour, and an impediment to the flow of blood in the tumour itself. The greater the obstruction in the tumour, the greater the uneasiness and pain felt by the patient. This is accounted for by the blood flowing into the tumour, and being unable to leave with sufficient quickness, so that it is thereby held in the sac. This blood being continually forced in, distends the parts, and causes pressure on the surrounding tissues, irritating the nerves. The blood is sent into a vessel in which the channel of exit is the same as that of entrance; and the walls, unable to resist the propelling force of the blood, distend, till the utmost limit of distension is attained. In external piles we have another force brought into play which increases the uneasiness and pain to an unbearable extent; for, in my experience, piles on and external to the sphincter are by far more painful than those above that muscle. The blood in these cases not only fills the external hæmorrhoidal sac, distending the tissues and pressing on the nerves, but also acts as a source of irritation to the fibres of the sphincter muscle, and, causing them to contract, keeps up a painful feeling of irritation in the muscle itself, which also, by its contracted condition, prevents the pile from being emptied, even to the extent that takes place in those tumours above the sphincter.

The internal piles, from their position, have not the same accompaniments as the external; and thus we have in the internal piles a dull aching uneasiness, but in the external piles, an acute lancinating pain, causing severe constitutional disturbance.

Whatever be the size or position of these tumours, their pathological condition is that of a cell or sac with fluid contents. They may contain, in some cases, coagulated blood, effused serum in the cellular tissue, and externally thickened integument; but the condition which is essential to the existence of the hæmorrhoid is the sac with its fluid contents. The other pathological conditions are results, and are not necessarily present. I leave out of account that varicose condition of the rectum, which is sometimes called internal hæmorrhoids, with no distinct tumour. Without the tumour, it may be called "a varicose state of the rectum"; as any other part may be varicose from the same condition of the veins; but the term pile or hæmorrhoid can only, with propriety, be applied where there is a distinct sac or tumour.

Seeing, then, that all kinds of piles have necessarily a sac or cell with fluid contents, and that, so long as this sacculated condition continues, you have an abnormal condition of parts with its accompanying suffering; and so long as the vessel or vessels are unable to perform their functions properly, from the continued injection of blood against the already over-strained walls, the obvious mode of treatment is to support the weakened walls, and then empty the sac, as you would do in a case of hernial tumour by a process analogous to the reduction by the taxis. This is a method of treatment not mentioned by authors, but which in my practice I have found eminently beneficial.

I was first led to employ this method of relief in hæmorrhoids in some cases which I had occurring after parturition. I was in attendance on a lady in her confinement who was a martyr to this form of ailment after all her previous labours. From the nature of the labour, I was obliged to keep up steady and uniform pressure on the perineum. Around the anus there were three large hæmorrhoids, which each of her pains enlarged, accompanied with acute suffering. After delivery, and during my subsequent attendance, she expressed herself as never having been so free from the effects of her labours in the form of piles as at this time.

From this case, I was induced to consider the effect of pressure on piles arising from parturition, and was led to the application of the taxis to this form of tumour.

Hæmorrhoids after parturition generally come on in patients who are of a soft, loose habit of body, or who are, at all events, flabby and relaxed in the perineal region. In treating them, I first get a free evacua-

tion of the bowels by some aperient medicine; and when the effects of the medicine have passed off, I order the parts to be well fomented for a few hours, to relieve as much as possible the irritation and spasm of the parts. I then proceed to apply the taxis to the tumour. Taking a piece of soft, well-oiled cloth, and grasping one of the tumours—if there be more than one—with two fingers and the thumb, thereby encircling the enlargement, and curving the fingers so that they cover the fundus of the pile, I proceed to press the tumour towards the mouth of the sac, with a kneading motion, continuing for a little time until I find the swelling become gradually smaller under the manipulation, and there only remain the thickened integument and whatever effusion of serum may have taken place into the cellular tissue.

In the beginning of the application of this process, the pain is sometimes considerable, but, as the tumour becomes emptied, the pain decreases, and, when it is fully reduced, a great sensation of relief is experienced. The reduction of the first hæmorrhoid being completed, the same procedure is applied to the others in rotation; and, the whole being reduced, astringent lotions or ointments are applied to the part, and the operation is complete.

We are now at liberty to proceed with the removal of the primary cause, if any exist, and there is usually some such cause in cases other than post-parturient. In these last, their acute origin is much more recent, and therefore much more easily reduced; but whatever the cause, the method of treatment is still the same, and will be found of value.

Looking to the pathology of hæmorrhoidal tumours, containing, as they do, a single sac, or a plurality of sacs, with fluid contents; the first principle of treatment is to empty the cavity of its fluid, remove all tension and irritation, and enable the tissues to resume their normal condition.

In external and intero-external piles, there are—if not seen sufficiently early—besides the fluid contents, what I have called the results of the hæmorrhoidal condition, viz., the coagulated or semi-coagulated blood, the infiltrated cellular tissue, and the thickened integument. Having emptied the sac by the process mentioned, I continue the taxis to what remains of the tumour, either at that sitting or at one subsequent, and generally get quit of the static materials. What remains is removed by natural agency. It might be objected that the forcible propulsion of coagulated blood into the current of the circulation would give origin to the formation of an embolism in some distant part, and by that means act as a source of danger to the patient; but, whatever force this objection may have theoretically, it does not hold good in practice, as it might be expected to have shown its evil consequences in the course of the two or three years during which time I have employed the plan. The same or an analogous condition of parts is seen in the veins surrounding a varicose ulcer. You have little knobs at different parts in the course of these vessels, which, from their solidity, size, and shape, can only be coagulated blood obstructing the venous return, and keeping up the congestion surrounding the ulcer. By applying the kneading process, and causing the patient occasionally to do the same, you gradually reduce the amount of hardness in the part, and ultimately remove the occluded state of the vessel, but in no case does the patient suffer afterwards from embolia.

In internal piles, the application of the taxis is conducted in the same manner, but here it is necessary to cause the extrusion of the tumours, and this can be done as in the removal by the ligature, by passing an injection of tepid water into the rectum, and then getting the patient to expel them by straining, when the same process is gone through as in external piles, and, on the return of the bowels, we attend to the constitutional disorder and give injections of astringent lotions, etc.

When the internal variety of this tumour takes place in females who have had children, the reduction of the swelling may often be accomplished through the walls of the vagina, more especially if the parts are relaxed, which in the majority of women is the case.

Before concluding this paper, I will make a few remarks on this style of treatment compared with that usually recommended in this affection.

In all cases, whatever method of treatment or operation is followed, the plan above described should precede that treatment or operation. In some cases, the necessity for further operative procedure will be removed, and where operation is necessary, the risks and annoyance are reduced to their minimum.

In simple conditions of internal hæmorrhoids, where by straining the tumours are protruded, we are recommended to apply a lotion or ointment, and return them to the bowel; but if they be first reduced by the taxis, these applications will have a much more powerful influence over the condition of the parts, and tend to prevent their recurrence.

Where the tumours are such that we are recommended to apply leeches, or use the lancet to remove the pressure caused by their distension with blood, by the method which I have proposed, the same result is accomplished by removing the blood through an opening already

formed by nature, without the necessity of forming an artificial one, and the subsequent treatment is the same as in simple cases. There is this other advantage—besides the objection of the patient to the knife or leeches—that he is not required to remain in bed any time to the neglect of duty. The reduction of the tumour may be accomplished in the evening, and after a night's rest he may attend to business in the morning. There is also the advantage of applying the local remedies to an unbroken surface, thus avoiding the risks which sometimes follow.

I might here remark in passing, that some hours of an interval should be allowed to intervene between the injection of astringent lotions and the administration of aperient medicine. Time is thus allowed for the accumulation of the natural mucus of the rectum, which will facilitate the passage of the fæces, and in this way prevent the straining which often develops these tumours.

In cases where it is thought advisable to operate on these tumours by the clamp, ligature, etc., by first applying the taxis you may remove the necessity for the operation; but where other circumstances determine the operation, such as a relaxed condition of the parts, you reduce the pain and uneasiness considerably.

In hæmorrhoids ending in suppuration, of course the taxis cannot be applied, as the pile has become an abscess, and must be then treated according to the principles of treatment laid down for suppurating tumours.

WOUND OF THE ELBOW-JOINT TREATED ACCORDING TO THE ANTISEPTIC SYSTEM.

By ANDREW MARSHALL, M.D., Preston.

THE following short report of a case which occurred in my practice some time ago seems to me sufficiently interesting to be recorded.

On the afternoon of August 12th, 1869, A. B., a boy, 13 years of age, was brought to my house in consequence of an injury which he had received in a cotton-mill. He stated that, when sweeping the floor behind some machinery, a revolving-wheel caught his right arm, inflicting a wound over the posterior aspect of the elbow-joint; and he was alarmed by seeing the end of the bone sticking out.

On examination, I found in the situation indicated a wound three and a-half inches long: the elbow-joint was freely opened, and the articular ends of the humerus and ulna exposed. So far as I had observed, no account of a wound of a joint treated by the antiseptic method had at that time been published. Believing, however, in the germ-theory propounded by Professor Lister, and having previously witnessed the beneficial results obtained by the antiseptic treatment of ordinary wounds, I resolved without hesitation to adopt that treatment in this severe, and, so far at least as the joint was concerned, dangerous injury. Accordingly, I freely and fearlessly injected the aqueous solution of carbolic acid (one part of the acid to twenty of water) into the joint, where it was retained by my assistant holding the edges of the wound together while I freely moved the articulation, so that the lotion might be insinuated into every part of it. The lotion was then squeezed out; and, in order to ensure the destruction of any septic germs which might still lurk in the recesses of the joint, this part of the process was repeated. The edges of the wound were well washed with the lotion, and brought into apposition by wire sutures previously steeped in the same antiseptic fluid. The point of the syringe was introduced between the stitches and the joint once more injected with the lotion as before. A small piece of lint soaked in the carbolised oil (one part of acid to forty of oil) was placed over the wound, and the whole joint was enveloped in a similar covering; a piece of sheet gutta-percha covered this, and then a bandage soaked in the same oily solution was applied from the fingers to above the elbow-joint. The boy was put to bed, his arm placed on a pillow in the extended position, and his mother ordered to keep the dressing constantly wet with the oil.

August 13th, 10 A.M.—The patient was slightly feverish, and complained of thirst. Pulse 100, tongue furred. He had no pain in the limb, and there seemed to be no swelling.

August 14th, 11 A.M.—The feverishness had entirely disappeared. The patient expressed himself as being quite well. He had no pain.

August 21st.—The patient had continued quite well since the 14th. He had no pain in the joint. This afternoon the dressings were taken off for the first time in the presence of a medical friend. The wound was found to have completely united by the first intention. Not a drop of pus was present. The joint was not swollen. The antiseptic dressings were reapplied in a similar manner, and the limb maintained at rest in the same position as before.

August 24th.—The dressings were removed to-day for the second

time. The joint was apparently quite well. The stitches were taken out and the dressings reapplied.

August 28th.—The dressings were removed to-day for the third time, and it was not considered necessary to reapply them. The movements of the joint were perfect. A little ointment was applied over the line of cicatrix. The boy was allowed to resume his work in the following week.

A result so satisfactory could not, I think, have been attained in so short a time by any other than the antiseptic system of treatment. I am quite aware that the details narrated above are not in accordance with the present mode of applying antiseptic dressings. I never dress wounds in the same manner now. A much less troublesome and much more elegant method is now adopted. I had not then heard of Lister's antiseptic sutures, with which I now always stitch wounds, and I had none of his antiseptic plaster at hand. But the treatment was in every particular strictly in harmony with the principles which Professor Lister has all along advocated. The result was everything that could have been desired, and everything that the antiseptic treatment promises to realise in such cases. There was a rapid recovery without putrefaction in the wound, and, after the first twenty-four hours, without any local or constitutional disturbance whatever.

From this and several other cases equally satisfactory I have been led to place implicit confidence in the antiseptic system, and I am persuaded that nothing is necessary to ensure success except a firm belief in the germ-theory and a careful application of the treatment founded upon it.

THE PHYSICAL NATURE OF VITAL ENERGY.

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THE conviction that it is "*only* by recognising the *physical nature of vital energy* that we can ever hope to establish therapeutics on a firm and sound basis" has, perhaps, led Dr. Ferrier* to express himself rather decidedly against some views which I ventured to put forward some years ago, but which I am ready to give up as soon as convincing evidence shall be adduced in favour of the physical doctrine of life.

If Dr. Ferrier will explain what is meant by "*molecular organisation*" and "*molecular machinery*", he will serve the cause he has at heart far better than by attacking me; for, as he must have gathered from many of my remarks, I am quite as anxious for light as anyone can be. What I desire is to learn in what particulars the "*living*" resembles and differs from the "*non-living*". I am quite ready to admit that one living thing is only some other living thing, or dead thing, or non-living thing, "*variously modified*" "*under sundry circumstances*", by "*subtle influences*"; but I should certainly like to have the meaning of these very comprehensive phrases explained. A man may be said to be but dust "*variously modified*"; but consider what is comprised in the "*variously modified*"! And perhaps I may be permitted to ask why, if it is right to attribute the marvellous phenomena of nutrition to "*subtle influences*", am I to be condemned because I prefer to employ provisionally the simple term "*life*" or "*vitality*" or "*vital power*"?

It is *possible* the "*molecular machinery*" may be discovered; but at present it is absolutely unknown. It has never been seen, and no one has yet told us what it looks like even in his imagination. But yet I must admit that it is *possible* such machinery may be beyond the microscopic limit. The imagination of *highly gifted persons* may be able to conceive the structure and mode of action of the molecular machinery of the existence of which they are perfectly certain, although it has not yet been rendered evident even to their senses. Nay, I will admit further, that a *sufficient* intelligence might be able to predict from the properties of its component parts the characters which the offspring of any given piece of "*molecular machinery*" will assume after it has continued to grow and multiply, say for a thousand years. But do such suggestions enable us to unravel the mystery of the life of even the simplest thing now alive, or to determine in what particulars a *living* particle differs from the same particle *dead*; or why a portion of a mass of living matter moves upwards as well as downwards, or in what manner it takes up non-living matter, and communicates to this its own properties, and divides into separate portions, every one of which possesses equal powers? It may be answered, "These phenomena are due to the properties of the molecular machinery which has long been known to exist in the imaginations of highly gifted persons; and, although as yet no one has succeeded in actually producing such machinery artificially, the efforts of philosophers tend towards such a con-

* Introductory Lecture on Life, etc. (BRITISH MEDICAL JOURNAL, Oct. 22nd).