A probationary essay on lumbar abscess / [Alexander Miller].

A

PROBATIONARY ESSAY

ON

LUMBAR ABSCESS.

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ON

LUMBAR ABSCESS,

SUBMITTED,

BY THE AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,

TO THE EXAMINATION OF

The Royal College of Surgeons of Edinburgh,

WHEN CANDIDATE

FOR ADMISSION INTO THEIR BODY,

IN CONFORMITY TO THEIR REGULATIONS RESPECTING THE

ADMISSION OF ORDINARY FELLOWS.

BY ALEXANDER MILLER,

SURGEON.

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MDCCCXXXI.

TO

JOHN THATCHER, Esq. M.D. F.R.C.S.E.

LECTURER ON MIDWIFERY, &c.

My dear Sir,

Permit me, in dedicating to you the following pages, to express my warmest thanks for the many favours conferred on me, and at the same time to testify how highly I esteem, not only your professional attainments, but also your private worth.

I have the honour to be,

My dear Sir,

Your most obedient Servant,

ALEXANDER MILLER.

20, Rankeillor Street,
September, 1831.

REMARKS

ON

LUMBAR, OR PSOAS ABSCESS.

By the term Lumbar Abscess, surgeons understand a collection of matter, formed, either in the substance of the psoas magnus muscle, or in the surrounding fat and cellular membrane.*

Under these circumstances, the abscess differs little from one of an extensive nature in any other part of the body; but in many cases the lumbar vertebræ are more or less diseased; indeed, I believe it is the general opinion of surgeons, that the disease is more frequently connected with, and caused by, a carious state of the lumbar vertebræ than otherwise; and in an examination of a patient affected with this disease, it is of importance to ascertain, if possible,

* Continental writers call such, Abscesses by Congestion, or Abcès froids; and this name, though not a good one, is obviously better than our own.

whether the bones are affected or not, as the ultimate success in the treatment of the case will very much depend on this circumstance. If they be affected, the case is one of great uncertainty; it is not, however, hopeless, as there are many instances on record in which patients have recovered, where there was every reason to suspect disease of the vertebræ. A lumbar abscess may either be very large, or so small as scarcely to be distinguishable; and the contained matter may vary from a few ounces to several pints.

When the patient first seeks advice from the surgeon in this disease, the affection is in general in a very advanced state. In instituting examinations, the presence of matter is generally detected at once. The matter, wherever it may have originally been formed, almost always tends to the surface of the body; and in proceeding thither it may take different courses. It may present itself in the loins, nearly in the situation of the disease; it may take the course of the gut, and fall down towards the anus;* it may

* When this occurs, Mr B. Bell remarks, that it "may be mistaken for a collection of matter originating in the neighbourhood of the rectum. But no farther inconvenience can occur from this mistake, than that the sore, which ensues from laying it open, or from the matter bursting out, will not so readily heal as when the disease is local; and it is probable, that this is one cause of abscesses in these parts being in some instances so difficult of cure."—*System of Surgery*, vol. i. p. 163.

appear at the lower part of the belly, somewhere above Poupart's ligament; or it may project in the upper part of the thigh under this ligament. It will appear somewhat extraordinary, that a disease, commencing in the loins, should shew itself first at so distant a part of the body as the upper part of the thigh; but such is the case; and a little reflection on the anatomy of the parts with which the disease is connected, points out the cause of such an occurrence. The matter follows the course of the psoæ muscles, which are known to run from the loins, towards Poupart's ligament, the one to be inserted into the brim of the pelvis, the other into the upper part of the femur. In consequence of a person being generally more or less in the erect posture, whether sitting or standing, the fluid, at first secreted in the loins, gravitates downwards, and ultimately appears in the situations before mentioned. I should be inclined to think, that when the abscess takes place in the psoas muscle, whether connected with disease of the vertebræ or not, that the matter would be more likely to point under Poupart's ligament than above it. The reason, to be given for a result of this kind, lies in the position of the psoas muscle itself; moreover, the matter would be more likely to point at the loins, or above Poupart's ligament, when the affection is originally in the cellular

membrane and fat, lying in the loins. I merely throw this out as a conjecture, as I have had no means of ascertaining whether this is actually the case or not; but I think it a point well worth attending to, as it will enable the surgeon to form some opinion as to the probable success of the treatment; besides, I have already mentioned, that the danger is not nearly so great in the one case as in the other. The position of the parts in which the disease is situated, how these parts are covered by the peritoneum, and how, in all cases, the matter is situated exterior to this membrane, are to be remembered.

People of all ages seem to be liable to this disease; Mr Abernethy describes cases in individuals from 14 to 55 years of age; but I think in all the instances that I have seen, the patients have reached the age of puberty: when I mention people of all ages, I mean to say from 14 to 50 years of age, for I do not think the disease is common in children or very old people. It seems to affect individuals of apparently a tolerably healthy constitution, as well as those possessing what is termed a scrofulous diathesis, although more frequently remarked in the latter.

The disease generally commences without any apparent cause, and is often far advanced before the patient is aware

that any thing is materially wrong. It can sometimes be traced to some violence done to the loins, either by a blow, by wrestling, or by some other circumstance likely to produce this effect. Very frequently, however, no such proximate cause has existed, and the patient perhaps remembers having had a considerable pain in the loins, which went away and returned occasionally, but not with such violence as to excite any particular attention. Matters may have thus gone on for many months, the health and strength of the patient, however, gradually diminishing.

There are various symptoms which will lead an attentive observer to suspect the formation of a lumbar abscess, and among these the following are certainly the most prominent:—The person will complain of a fixed pain in the loins, more or less acute—the body will be slightly bent forward—there may be a slight curvature of the lumbar portion of the spinal column—the patient cannot lift his foot on the affected side with facility—is apt to strike the ground with his toes while walking—labours under considerable pain—is perhaps totally unable to lift the thigh when he attempts to place the foot of the affected side on a high object, such as a stool or step of a stair—the pain may extend up the spinal column and down the thigh of the affected side—the appetite for food will be deranged—and

the bowels much out of order. At the commencement of the complaint frequent shiverings will have been experienced, indicating the formation of matter; and, lastly, as the disease advances, the matter will be directed to some of those places already mentioned. Such I consider to be the more common symptoms; but every case will doubtless present appearances peculiar to itself.

In the treatment of lumbar abscess, the stage of the disease must be attended to. If there is reason to believe that matter has not already formed, then the surgeon ought, by all the means in his power, to prevent such an occurrence. When a patient presents himself, and complains of some of the early symptoms of the disease, should it happen that these are caused by some recent violence done to the loins, then the line of practice will be quite clear; the patient must be placed under the regular antiphlogistic regimen; he must be bled and purged; and, unless under very particular circumstances, local bleeding will be preferable. In general, this can be accomplished over the loins, either by means of leeches, or of the cupping apparatus; and having abstracted as much blood as the nature of the case may be deemed to require, the bowels must next be particularly attended to,—purges should be freely administered: and the patient should lie in bed, in

order that the muscles of the loins may not suffer the least stress. Counter irritants will also be found of great service after the bleeding, and of these the mustard poultice, the tartar emetic ointment, the blistering plaster, and the moxa, will be found the most efficacious.* These means, with others that may suggest themselves during the treatment of each individual case, will perhaps suffice, and so cure the affection, even although a little matter may have formed. In a later stage of the disease the treatment must be somewhat different, as then there is no doubt as to the actual formation and presence of matter. When this has taken place, it becomes our duty to disperse the abscess — to cause it to disappear — or in fact to cure it without making an opening into it, if this be at all practicable. The late Mr Abernethy, in a very valuable treatise which he has written on lumbar abscess, explains his views at considerable length with regard to its nature, and the line of practice that ought to be adopted. He believes that in most cases a lumbar abscess is completely analogous to one of a chronic nature occurring in any other part of the body, and he thinks that consequently the

* A counter irritant, from which I have seen the greatest advantage derived, is the muriate of mercury, applied in the form of a paste made with a little water: this in the course of twelve hours produces a very deep eschar.

treatment ought to be similar in these affections. The internal surface of an abscess, wherever situated, has the power both of secreting and absorbing its contents; this fact I have often witnessed while treating abscesses, and I have been often highly gratified to find that matter, even to a considerable extent, was gradually absorbed, so as ultimately to cure the disease without the necessity of an opening. In Mr Abernethy's opinion, "the cysts of abscesses perform the same function with respect to their contents, that the membranous surfaces of cavities do in cases of dropsy. In either instance, if secretion exceeds absorption, the disease enlarges; if it be equal, the disease is stationary; and if it be less, the disease diminishes."*

As surgeons of the present day almost invariably treat the lumbar abscess on the principles laid down by Mr Abernethy, I shall of course more particularly follow his line of practice when speaking of the advanced stage of this disease, as my own experience has not been so great in this affection as to lead me to differ from the correct views taken of it by that eminent surgeon.

In that state of the abscess which I have last spoken of,

* Abernethy's *Surgical Works*, vol. ii. p. 136.

viz. when matter can be distinctly perceived, and when there is no urgent necessity to open it, our object must be to endeavour to disperse it, by causing it to be absorbed, and the best means that we possess for doing so, are the following:—The application of powerful counter irritants, (and perhaps the best of these are blisters, or the paste of the muriate of mercury,) from the surface produced by which, a constant discharge must be kept up; if there be the slightest tendency to inflammatory action, the patient must be confined to bed; but should this not be the case, Mr Abernethy strongly recommends exercise in the open air, in order to improve the general health of the patient—a point of essential consequence. If the patient can ride in a carriage, so much the better; if obliged to walk, crutches ought to be used, in order to cause as little effort to the muscles of the loins as possible.

Notwithstanding the various means that may be employed with a view to cause an absorption of the contents of the cyst to take place, still it may become larger and larger; and in order to prevent more disagreeable consequences, it becomes then the duty of the surgeon to make an opening into it, to allow its contents to escape. This, I may mention, is of important consideration; for there is a danger of allowing the abscess to burst of its own accord, as in doing

so, it may enter the cavity of the peritoneum itself,—an occurrence which is related to have happened in different instances, by the late Mr B. Bell.* The propriety of opening these abscesses, has sometimes been condemned; but I presume, the most eminent surgeons are now agreed, that it is better this should be done, than that the abscess should be allowed to break of itself. In making an opening, the incision should be in the part where the prominence is most distinct.

When the matter presents itself in the groin, there is some danger of the abscess being mistaken for a hernia; but by a proper examination into the circumstances attending both of these affections, I think a careful surgeon will never commit this mistake; the previous pain in the loins—the derangement of the patient's health—the gradual appearance of the tumour—the feeling of fluctuation—the position of the disease farther out or nearer the anterior superior spinous process of the ilium over the psoas muscle, than a hernia can be,—will be sufficient guides as to its nature. To prevent the danger arising from a mistake, however, Mr B. Bell recommends in doubtful cases incisions to be made carefully down upon the tumour

* *System of Surgery*, vol. i. p. 171.

with a common scalpel;* but, in my opinion, when there are doubts, the symptoms of the disease must be very equivocal indeed.†

When an opening is determined upon, it may be made with any convenient instrument, a scalpel, bistoury, or lancet. I have also seen a trocar and canula used to evacuate the matter. The object that the older surgeons had in view in opening lumbar abscess, viz. the discharge of the matter and the cure of the patient, was very good, but not likely to be attained by their mode of treatment: it is, therefore, to Mr Abernethy that we are indebted for the proposal of a method of cure which is at once scientific and efficient; at least, I believe it to be the most successful that has yet been laid before the public.

The great objection to opening an abscess of a chronic nature, is the danger of inflammation of the sac, of which

* *System of Surgery*, vol. i. p. 171.

† After all, the principal difficulty the surgeon experiences, is in deciding whether the case be one of the true lumbar abscess, or the abscess by congestion, having diseased bones for its basis, or cause; or whether it be a case of common abscess, unconnected with such circumstances, but exhibiting itself in the upper part of the thigh, in consequence of having followed the direction of the psoas and iliac muscles in travelling towards the surface of the body.

the consequences might be fatal. When an abscess is left to burst of itself, as the opening will be pretty large, there is certainly considerable danger of this occurring; and when it is opened by the surgeon, if this be large, the danger is still the same. In order to prevent this, Mr Abernethy proposed his peculiar mode of treatment, by making a very small aperture in the abscess with a lancet, which is to be pushed obliquely through the skin, so as to make a valvular opening. The matter is to be slowly evacuated, and the greatest care taken that no air get into the cavity of the abscess through the opening. In order to prevent this, constant pressure is to be kept up over the tumour, and as much of the matter as possible is to be let out. Curdy flakes frequently present themselves in the matter of a lumbar abscess, and should any of these fill up the opening, they can be cautiously removed with a probe, so as to allow the matter to run out as freely as the nature of the opening will permit. During a process of this description, the patient should be desired to cough, in order to cause the matter to descend from the loins into the groin. When all the matter, or as much as can possibly be, is discharged, the small opening is to be carefully closed, and immediate union encouraged.* If this take

* Abernethy's *Surgical Works*, vol. ii, p. 154.

place, and no inflammation of the sac ensue, then Mr Abernethy's plan is so far accomplished; the matter will, nevertheless, again collect, and in the course of a fortnight or so, the abscess may be again opened; a much smaller quantity than was originally discharged will now be let out, and the opening may be again closed, and a new one made, perhaps at the distance of fourteen days more, when a still smaller quantity of matter will come away; and thus the surgeon proceeds until the case is cured.

The view taken by Mr Abernethy in proposing the above method of cure was as follows:—That as the matter is secreted by the cyst of the abscess, it will gravitate towards the lower part of it, whilst collecting again, after being once emptied, and thus the upper part will be allowed gradually to contract, provided the matter be frequently evacuated, until at last only a narrow canal remains, leading from the loins into the groin, where the cyst may still be pretty large. Hence it will be perceived that the abscess, from being deeply situated, becomes one of a superficial character; consequently, it is brought more under the management of the surgeon. This, therefore, is Mr Abernethy's peculiar plan of treatment with regard to opening the abscess.

In order to promote the absorption of the matter, this distinguished surgeon recommends the trial of emetics, such as the sulphate of zinc, or the powder of ipecacuan, administered three or four times a-week, if the patient can bear their effect; he has also found, that when electricity was passed through the abscess from the loins to the thigh, it was of great service in very unpromising cases.*

During the application of the local means, it is of the greatest consequence that particular attention be paid to the constitutional treatment, always bearing in mind, that the patient's strength must be supported by every means in our power during the successive discharges.

There is a circumstance which ought not to be forgotten: notwithstanding the great care bestowed in closing up the

* Mr Abernethy gives his opinion of the effects of electricity in the following words: —"That all the observations which I have made on electricity applied to diseased parts, lead me to conclude, that it acts as a stimulus, which has the peculiar effect of accelerating that process which happens to be going on at the time. Thus, in some states of inflammation, it hastens suppuration, whilst, in others, it promotes dispersion. We should therefore always endeavour, previous to the use of this remedy, to bring the tumour or abscess into that state in which its progress is stopped, and in which, perhaps, it is rather inclined to recede; and by this rule I have been guided in the application of this remedy to lumbar abscesses."— *Surgical Works*, vol. ii. p. 174.

small wound made with the lancet, the sac sometimes inflames, and places the patient in the most imminent danger; and if air be allowed to enter, the danger of the sac inflaming is certainly much increased. I have seen a large lumbar abscess opened, when no air was suspected to have passed in during the operation, and next day the abscess appeared larger than before being opened; on removing the dressings, a very considerable quantity rushed forth, and this was said to have been generated in the sac. I think that this distension may be explained in a satisfactory manner, without having recourse to the idea that air is secreted by the sac. Is it not probable, that on making an opening into any cavity of the human body, whether abscess or not, that a small quantity of cool air may be admitted; and this air, by coming in contact with substances of a higher temperature than itself, (as it must do on entering any of these cavities,) will consequently attract heat from these substances; and as we know that air and all other gaseous substances are very much rarified by increase of temperature, and, of course, must necessarily occupy a greater space than the same quantity of air at a lower temperature; and there being no exit to the escape of this expanded air, the wound in the sac being carefully closed,—am I not justified in the opinion, that this may be the cause of the great distension and apparent

accumulation of air in abscesses after they have been once opened?

Some surgeons, even of the present day, recommend a large opening to be made into the sac at once, so that the matter may have a constant and free egress; and, for this purpose, the late Mr B. Bell used to keep a canula in the wound for several weeks. From the distinguished character of the late Mr Abernethy, however, and from a review of the many cases which he published, where his practice seems to have been eminently successful, I certainly am inclined to follow the instructions laid down by that great surgeon.

Notwithstanding the employment of all the best means our art can suggest, this disease is but too frequently attended with fatal consequences. On dissection, we find extensive suppuration to have taken place in the substance of the psoas muscle, and that even, in some cases, this muscle is entirely destroyed, the matter extending not only into the pelvis and thigh, as low down as the knee, but also making its way under the ligamentous arch, extending from the transverse process of the first, to the body of the second lumbar vertebra, over the upper part of the psoas muscle, so as to get into the cavity of the thorax. It is, indeed,

sometimes found communicating with the substance of the lungs itself;* occasionally, also, the bodies of one or more of the vertebræ are found entirely destroyed; whilst, in other cases, a mere speck of diseased bone, not the size of a sixpence, is found to be the cause of all the mischief; while a small fistulous track is discovered, leading from the diseased portion of bone to the upper part of the thigh. On the opposite side, a very small quantity of matter is sometimes found in the substance of the psoas muscle.

* See a remarkable case, recorded by Dr Knox, in the *London Medical Repository*, vol. v. for 1816.