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MANNER OF DETECTING DEEP SEATED MATTER,

BY

NATHANIEL MILLER, M. D.

OF

FRANKLIN, MASS.

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DISSERTATION.

GENTLEMEN,

I HAVE been much perplexed in selecting a subject of discussion for the present occasion. But anticipating that something in relation to Surgery might be expected, and always happy to gratify the wishes of this society, I have taken a branch of that noble art for a few practical and experimental remarks.

It is, however, very difficult to find a distinct topic, which has not been thoroughly investigated, described and treated with accuracy by the most eminent, scientific and practical surgeons. I have feared that it might be considered presumption for one who has enjoyed only the comparatively few anatomical facilities which the interior affords, to attempt to throw any additional light upon subjects which have received the minute attention of so many learned and practiced minds.

I had contemplated confining myself to some practical remarks upon *the nice and beautiful operation for the cataract.* This subject has been very minutely investigated by eminent men, who have endeavoured to point out the best method of

restoring sight to the unfortunate sufferers from this complaint. Yet this very important branch of the surgical art is still enveloped in darkness and great uncertainty; and the young and inexperienced practitioner is left to adopt that mode, which his own discretion, or that of his *capricious instructor*, may dictate.

By one, we are informed that removing the opaque lens wholly from the eye, through the pupil, is the best method of relieving the difficulty. Another, with perhaps equal experience and sincerity, will tell you that pressing down the lens from its nidus is the better mode; whilst a third asserts, with unbounded confidence, that only *poking* and *lacerating the sight of the eye* is the most humane and successful—thus leaving this delicate organ, with the vague expectation, that the inherent powers of kind nature will lend their aid, to give success to this uncertain procedure.

I was formerly much engaged in the operation for Cataract. In May and June 1798, I operated on twenty-one eyes *by extraction.* All received sight, save one, in the course of three and six weeks. As far as our present knowledge extends, I am decidedly in favor of this mode of operating. I presume however, that I should gain but few proselytes to my belief among those who have commenced practice, and made themselves familiar with other methods. The assurance which long experience has furnished me, might be imputed to my peculiar

prejudices; and to that unfounded preference, which often arises from the long and exclusive practice of any particular method of treatment. I therefore leave this subject of inquiry, being well assured that, at no distant period, a mode of operating, *different* from any now in use, will be the received one, embracing more the objects of the operation without its present difficulties; and that the result will be attended by less pain and far more success.

The subsequent remarks will be confined to the principal objects of this discourse, viz. *to illustrate the importance, and direct the manner of detecting deep seated matter.*

As far as I have been acquainted with surgery, a knowledge of detecting deep seated matter, concealed in various parts of the body, whether in tumours, swellings, or otherwise, is of the first importance; nay, the very *first lesson* to be taught, and understood, in our profession.

A great proportion of the strictly surgical cases presented to us, either for advice or treatment, involve, in fact, this question of *matter;* and a right understanding of this directs the prognosis and cure. A knowledge of this subject lays the foundation of a practice, which, in a multitude of instances, will alone guide you, in safety, to the restoration of your patient.

The labours of Benjamin Bell (more, perhaps, than those of any other man) have been the means

of exploding many of the barbarous practices formerly in vogue in this country. Speaking, in his system of surgery, upon collections of matter, he says, "this is a circumstance of much importance in practice, and deserves, it may be remembered, more attention than is commonly given to it. In no part of a surgeon's employment, is experience in former similar cases, of more use to him than in the present; and however simple it may appear, yet nothing, it is certain, more readily distinguishes a man of observation and extensive practice, than his being able easily to *detect deep seated matter.* While nothing, on the contrary, so materially affects the character of a surgeon as his having, in such cases, given an inaccurate or unjust prognosis; for the event in disorders of this kind comes generally at last, to be clearly demonstrated to all concerned." Again he says, "abscesses too, on any of the joints, or upon either of the large cavities of the breast or abdomen, and more especially when they seem to run deep, should always be opened as soon as the least fluctuation of matter is discovered."

Baron Boyer, in his able Treatise on surgical diseases, strongly admonishes to a watchful attendance on abscesses when they are near an organ, surrounded by a great quantity of cellular substance, as the lower extremity of the rectum. If we waited to open such an abscess, for a total solution of all the inflamed parts, the intestines would become

denuded to a great extent, and their union with the adjoining parts would be difficult. By their pressure sometimes on the urethra they will cause a retention of the urine and death ; in parts also which are immediately concerned in the natural functions of life, as in the parotids, preventing a free return of blood from the head to the heart—on the anterior part of the neck preventing respiration and deglutition, &c.

I will now, Gentlemen, briefly mention the general symptoms, as they are laid down in our standard works, and the directions therein given for detecting matter; then close with a few critical remarks, and with directions on this subject.

The directions of the authorities for the discovery of matter may be summed up in these few words ; —where there is a remission of the inflammatory action, if the tumour be soft in the middle and pointed, there is no doubt that pus is in the tumour. My object is not to dwell at all on cases of this kind, in which even a nurse or any bystander may see matter through the skin. They then go on to tell us—"if the matter is deeply seated in the interstices of the muscles, and beneath strong aponeuroses, it is then difficult to ascertain its presence; and thus it has remained a long time undiscovered."

These are the cases to which I wish to draw your attention, and to show that under such circumstances the existence of matter may with certainty

be determined. It is true that the general and local symptoms of abscesses are to be kept perfectly in view in relation to the discovery of deep seated matter. They are guides and tokens which will lead us to a strict examination of the swelling.

Since the importance of being able to detect deep seated matter is, as we have seen, so strongly inculcated, it is matter of no small astonishment that so few hints and directions have been given by gentlemen of experience and ability in this department of surgery. A volume ought to have been written on this particular subject, possessing the good sense and discrimination of a Pott, and the lively imagination and boldness of John Bell. Considering the very slight directions which are given us to lead our inquiries after deep seated matter, it is not strange that young surgeons and physicians meet with so many embarrassments, difficulties, and disappointments in this branch of practice. That such is the fact, the experience and observation of more than thirty years has taught me. If I can throw any additional light upon this point, I shall not regret this effort, nor the embarrassment which I feel in addressing you.

My method of detecting deep seated matter is by *the touch*—not by the fingers, but with the *thumbs*. In feeling for matter deeply seated, under large muscles, it is absolutely necessary that a considerable *heavy pressure* should be applied, when the quantity of matter is *small*. A *light* pressure

will not produce the required result. This fact is an important one, and should be constantly borne in mind. The *fingers*, from their length, are not fitted to support a sufficient pressure, for the purpose. The *thumbs* must be brought into action in order to sustain the necessary resistance, and they are sufficiently strong for this purpose. From their situation in the hand they can also be more firmly and steadily supported than the fingers, which is of great consequence in this examination. In examining a large limb your hands and fingers will naturally embrace both sides, and thus afford a fine and steady support to the thumbs when brought upon the spot where you propose to feel for the matter.

In order to illustrate the truth of these remarks, I will suppose a case of common occurrence in business. Circumstances may lead you to suspect deep seated matter in the fore part of the thigh. On the spot where you intend to examine for matter, place your thumbs, steadily supported by your hands and fingers, placed on each side of the thigh. Having brought the thumbs nearly into contact with each other, (as Sir Astley Cooper recommends to bring the fingers) you will begin by pressing with them very gradually, gently and perpendicularly—by degrees increasing the pressure with both thumbs. Now let one thumb fall with considerable more pressure, the other remaining firm and stationary; now and then resuming the pressure with

increased power. In the cases of which we are treating, viz. where the quantity of matter is *small and deep seated*, it will be proper to move your thumbs, from time to time, more apart, then approximating them, until you discover the fluid, which will be announced by a *gentle rising* under your stationary thumb. On discovering this feeling you have positive assurance that there is matter under the point where the *rising* is felt. Some call this feeling a fluctuation or undulation. I have never experienced that sensation in the case of small and deep seated collections. It is the *rising* alone under my thumb that I depend upon.

If you have any doubts existing of this distinct elevation, pass your thumbs off to a point a little distance; there make the same examination in the same careful manner, and if in this place there is no matter, you will not perceive the rising, but the flesh will feel more solid and unelastic. Then remove your thumbs, and, placing them in the same situation as at first, if you feel the same *rising*, the question is placed beyond all doubt. Fingers will not do this—*thumbs will.*

Having ascertained this fact, if you should be of opinion that good practice requires an opening, place your scalpel upon the spot, carry your incision down through the *thick muscles*, and even to the *bone*, unless you meet the enemy on the way. There you will find a cavity and a fluid, though there may not be more than a table-spoonful!

This I have frequently seen in practice, and have never opened under such circumstances and been disappointed. My *thumbs* have never deceived me. When the operator has not possessed the confidence which the method I have attempted to describe will give, I have known him to commence an opening, and not finding matter, but muscles, to abandon the search—the matter subsequently finding its own way out, to the no small disappointment of the patient and the faculty.

Having recommended strong pressure when the matter lies deep, the question may naturally arise, how can you use strong pressure where the parts are very tender. This is a *difficulty*, and a very embarrassing one to young practitioners. It may, however, be surmounted, sufficiently for *manual examination;* and this, such as I have endeavoured to describe it, is absolutely necessary to success; *you cannot succeed without it.*

I will adduce, for an instance, a patient twelve years old, who has suffered from a local swelling, and an inflammation of the thigh. The limb is sore; pain is occasioned by the slightest touch; and the patient has, by confinement, become restless and peevish. The general and local symptoms denote deep suppuration. The swelling is uniform around the limb. Suspicions arise that there may be matter in the interstices of the muscles, or on the bone. How shall we be able to detect matter by the touch? How can we apply a sufficiently

heavy pressure, where the parts are so sensible of pain?

Begin very lightly, and rather carelessly, to apply your fingers to the limb, at a little distance from the sore part, passing them about from place to place as if in search of matter, but be cautious not to touch the sore parts, until the patient gets a little familiar with you, and finds that you do not hurt him. By this management he will get over the alarm, and then you may advance slowly to the sore place, and you will soon be able to place your thumbs over the part where you may suspect the matter to lie. Wonderful as it may seem, it is nevertheless a fact, that if the thumbs are kept steadily upon the spot, with gently increased pressure, the little patient will remain still, and without much complaint, yield to a proper examination.

It is very important, when you are feeling for *deep seated matter in small quantities*, that the patient should be as still as possible. Only the agitation of the system which arises from crying out is an hindrance to the perfect feeling of the fluid. This fact I have often noticed. In very *nice cases* of detecting matter, I have thought I could feel the fluid with more accuracy, when a room was perfectly still, and no voice to be heard.

Another case of abscess, which frequently eludes the researches of the practitioner, is where a patient is attacked with pain and lameness in the upper part of the thigh, and with general inflammatory

symptoms. The limb swells, and the complaint is pronounced rheumatism. Upon this diagnosis the patient is treated with the usual remedies for inflammatory rheumatism. A crisis is supposed to have taken place in three or four weeks, from the remission of general and local symptoms. The pain abates; the swelling is lessened; the appetite improves; and the patient is thought to be in a convalescent state.

At the expiration of three or four weeks more the swelling of the thigh is, perhaps, somewhat diminished, and no pain exists unless an attempt is made to move the limb. Although the appetite of the patient is pretty good, there is a wasting of flesh, and he has a hectic countenance. His friends and the physician now have fearful apprehensions of a decline, and a consultation is called. This is not an *unfrequent case* in my practice.

Upon general principles we might conclude that a solution had taken place. In this rather easy situation it had remained gradually undermining the health of the patient.

When he is introduced to us, and the limb is presented for examination, the swelling is uniform, and the skin of a natural appearance. The examination should be commenced by the touch, towards the extremity of the thigh; and by approximating the hands slowly, and feeling with some firmness, and frequently asking the patient if he feels any soreness. Proceed in the same manner, and advance

nearer to the centre, asking the same question, until he says that you hurt him. Continuing the pressure still further you will find *a margin of tenderness*, which may be three or four inches in diameter. Here then is the *spot* to which your attention will be drawn. The parts not being very sensible, you can make the *pressure* required to feel the fluid. The first process of the examination cannot be dispensed with, as you have at first no *guide* to the spot; but having discovered this line of *demarcation*, which is seldom wanting in these cases, your attention is concentrated upon the small circle in which you feel. Now if the matter is in the deep interstices of the muscles, or even at the bone, and that in a small quantity, you will most assuredly discover it, by managing the thumbs as I have directed. The gentle elevation is felt with the stationary thumb, while you press firmly with the other, having all still around.

If it is determined to evacuate the matter, it would be well, if there is cause to believe that the quantity is *small*, to mark the point with *ink* before your thumbs are removed; otherwise if you should remove your eyes and thumbs for a moment from the limb, and place the scalpel but a small distance from the spot where the elevation is designated, you might be led *by the cavity*, which would occasion great embarrassment and confusion. In such cases I *always* mark the centre of the spot in which the touch gives assurance of the presence

of matter—I then proceed with coolness and determination, and as I before remarked, I have never been disappointed.

There is one circumstance which might prove a source of deception. On applying the thumbs over the belly of a single muscle, thinly covered with cellular substance, without considering its anatomical structure, you might mistake the sensation arising from a pressure of it, for the rising of a fluid. If you fix them transversely to the fibres, the feeling so much resembles that of a fluid, that in some instances, there would be danger of deception. But if you place them *longitudinally* with the fibres of the muscles, and press perpendicularly, the sensation will not be experienced. Attention to this hint, will cause a distinction to be noticed.

This subject of deep seated matter applies with almost equal importance to the whole class and variety of tumours. What *tumour* is there, presented to us for examination, which does not involve the question of its contents; and particularly, whether it contains a fluid or not? A correct decision of this question, in most cases, determines the *character* of the complaint. It constitutes the business of our profession to make that distinction, which is the only *basis* on which we can with confidence prescribe.

In a case of swollen scrotum, there may arise three questions—whether it be Hernia, Schirrus, or Hydrocele; for the external appearances may

be very similar in all these *complaints.* There is no way of distinguishing these very different diseases except by the symptoms and *touch.* Suppose you decide that it is Hodrocele, when it is either Hernia or Schirrus, and pass a trocar into it —how unpleasant the mistake! I have more than once been called to operate for Hernia, and upon examination discovered that the tumours contained pus. They were opened, and the patients did well.

One further observation will conclude these remarks. Within a few years three female patients have been sent to me for the extirpation of their breasts. On minute examination I found that the tumours contained a fluid. They were situated in the centre of the breast, and rather under the glands, which gave them a formidable appearance. On making an incision down to the tumours, they were found to be sacculated, and were healed in a few days by adhesive inflammation.

It would have been very unkind, through inattention to the true nature of the complaint, to have subjected these young ladies to painful operations; and what would have been more to be regretted, to have lost those *useful an beautiful organs.*