

Clinical Lectures ON DISEASES OF WOMEN, AS LINKED WITH GENERAL PATHOLOGY.

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LECTURE IV.

ON THE GENITAL MUCOUS TRACT—(Continued).

Dysmenorrhœa by retention; menosepsis; association of stenosis of os externum uteri with dysmenorrhœa and sterility; treatment—dilatation, bougies, leeches, incisions of the os externum, advantage of.

GENTLEMEN,—In the preceding lecture we referred to the pathological consequences of stenosis or closure of mucous canals, discussing particularly the consequences of closure of the genital mucous canal. Glancing at other properties of mucous canals, we dwelt upon the great fact that all mucous membranes secrete, that their secretions must have an outward vent, and that to obstruct this vent is to expose the patient to serious disease or danger. This law applies not alone to the openings of the great mucous canals of the respiratory, alimentary, and urinary organs, to close which is death, but in minor degrees to obstruction of the subsidiary divisions of these great tracts, and even to the glands and glandules which open on their free surfaces. And there are degrees of obstruction from total closure to stricture or narrowing, involving minor but yet not inconsiderable evils.

Another general physiological remark. As elsewhere, the utero-vaginal mucous membrane and its glands are under the influence of the nervous centres. Emotion, we know, causes diarrhœa, salivation. It seems that the nervous centres in their normal static condition exert a regulating and inhibitory control over the glandular system, through the vascular system. When this static balance is lost or overturned, the glands pour forth their secretions with astonishing profusion. This sudden secretion is in marked relation to the dominant play of the emotional and reflex actions. Examples readily occur. I will only stop now to remind you that the influence of emotion and reflex action is not limited to mucous secretions, but that in the case of the uterus it may extend to the rapid outpouring of blood, even in dangerous volume. In this connexion you will not fail to remember that blood finds a normal exodus by the uterine mucous membrane. Let me recapitulate some of the consequences of obstruction to the ready escape of fluids, mucus, or blood, which may thus sometimes slowly, but not seldom rapidly, even suddenly, be poured into the cavity of the uterus. First, there is mechanical distension, exciting colic or spasmodic contraction; secondly, the probability of some of the compressed fluid being driven into the peritoneal cavity through the Fallopian tubes; thirdly, the retained fluids undergo changes by decomposition; fourthly, the thinner parts of the retained fluids, easily charged with septic matter, may be absorbed and carried into the circulation. This last event is seen in a striking manner in cases of concealed or "occult menstruation," with complete occlusion of the vagina, as where the hymen is imperforate; but it may be observed in more or less marked degree in most cases of dysmenorrhœa by retention. This is in accordance with a general pathological law. We have a familiar example in retention of urine from stricture or other cause. There is absorption of urine, causing urinæmia. We might not inaptly fix the fact in the mind by calling absorption of menstrual fluid from the uterus—"menosepsis." Evidence of this absorption may be found in the turbid complexion, in the peculiar fetid odour exhaled by the skin and lungs. Fifthly, the glands of the mucous membrane become irritated, inflamed, sometimes obstructed, hypertrophied. Consequently the mucous membrane itself is affected; its regular development into decidua, and its shedding are deranged, leading at times to the formation and throwing off of membrane in shreds or entire casts of the uterine cavity. Sixthly,

the uterus itself is enlarged by hyperplasia, and in danger of passing into fibrous change. Seventhly, increased bulk and weight, and the reflex pains excited, promote prolapsus and retroversion. Upon these local conditions arise various constitutional disorders—hæmic, nutritive, nervous.

It is not difficult to trace this sequence of ills in many cases starting from stenosis of the os externum uteri. But you must be careful at the onset to avoid the conclusion that they are always and necessarily associated in this and in no other order. Dysmenorrhœa membranacea, other diseases of the mucous membrane, hypertrophy of the uterus, displacement, constitutional disorders, may arise in very different ways and from various causes. We are dealing at present simply with obstruction and its results.

There is another condition frequently associated with obstructive dysmenorrhœa—that is, sterility. So frequent, indeed, is this association, that when a woman has been married some years without having borne children, and has long suffered from dysmenorrhœa, we may predicate with tolerable certainty that there is stenosis or flexion of the uterus. And we may go further, we may assume that the dysmenorrhœa and sterility are both consequences of the mechanical obstruction, and acting upon this conclusion we may hold out a reasonable hope that by removing the obstruction we shall remove the attendant evils.

It must not, however, be hastily concluded that constriction even to a marked degree is infallibly attended by distress so great as to give rise to complaint on the part of the subject, or to lead to any obvious inroad upon her health. But I confidently affirm as the outcome of daily observation that in a very large proportion of cases of dysmenorrhœa, with sterility, there is the association with a narrow os externum uteri, narrowed to the extent that it barely admits the uterine sound.

I will make a further concession. It is not desirable in every case at once to resort to the *ultima ratio* of enlarging the os externum by incision. In very young, and single women especially, it is only proper to exhaust what are called "the usual remedies," although I must warn you that they usually fail. You take a careful survey of the system, interrogating all the functions, and do your best to correct whatever you find to be out of order. Thus having removed as well as you can all complications, you apply particular remedies to the relief of the distressed uterus. The complications, as constipation, dyspepsia, anæmia, are best dealt with in the intermenstrual periods. Then, when the period comes, you meet the difficulty in its simplest form. Pain, pelvic at first, frequently especially intense in the left iliac region—and therefore often supposed to signify ovaritis—then radiating to the hips, lumbo-sacral region, and thighs, commonly begins some days before the appearance of the flow. Generally the pain is at its acme on the first day of the flow, but often it goes on for two or three days, and throughout the flow. The pain that attends the flow is different in character from that which precedes. It is spasmodic, like colic, forcing, capulsive, resembling the pangs of labour, and the conditions are very analogous. The uterus is labouring to expel its contents, struggling to overcome a mechanical resistance. As commonly happens when the uterine fibre is put upon the stretch, especially in the cervical region, vomiting may occur. The whole nervous system is disordered. Partly under emotional influence, partly from disturbance of that regulating power which controls and guides in harmonious relation the several functions, diarrhœa may set in. Various other nervous symptoms break out. Hysteria, convulsions even, epileptic or epileptoid, neuralgia are manifest in severe cases and in impressionable subjects. The pain is often described as agony. The subject writhes upon the bed or floor. The mind, in spite of resolute will, loses its balance, and it gives way to delirium. By and by, the menstrual difficulty being overcome, things gradually resume their accustomed order, and the patient may for two or three weeks manifest perfect health. But these monthly blows struck at the nervous centres, these ever-gathering storms, cannot be encountered without leaving traces of damage. It can hardly be expected that the uterus itself, the centre of trouble, should escape unhurt. The seat of repeated and prolonged congestions, far surpassing the ordinary physiological hyperæmia, the mucous membrane of the cervix undergoes chronic thickening, its glands become hypertrophied, secrete in excess, and the secretion, from glairy, bland, and clear, becomes muco-purulent and irritating. This, like the menstrual

blood, is liable to retention; at least, it finds imperfect issue through the narrow os with difficulty and pain.

Now comes the crucial test of treatment—"Curatio ostendit morbum." The old saw never had a more satisfactory application.

Now, having fairly exhausted "the usual means," satisfied that they have failed, we arrive at the conclusion that it is best to remove the mechanical obstruction. How shall we remove the obstruction? By dilating the narrow os externum uteri, and by remedying flexion. If there is flexion only the treatment will, in the first place, be simply limited to restoring the uterus to its proper form and position. The modes of doing this we shall discuss hereafter. We will now consider how to deal with stenosis, and we have first to determine the exact seat of the stenosis. This, I believe, to be almost always at the os uteri externum. You see—every week we see examples amongst the out-patients—a minute round aperture that barely admits the sound, instead of the normal fissure, the classical os tincae, which opens freely into the cervical cavity. When you pass the sound in such a case, two things are generally observed; first, the partial momentary dilatation of the sound allows the escape of a mucus, sometimes like molten glass, clear, viscid, sometimes viscid and turbid from admixture with pus-globules. This is the secretion from the irritated inflamed glands of the cervical canal. It cannot escape freely through the narrow os, more or less of it is long pent up, and becomes a source of irritation, often of pain, felt in the intermenstrual period. Commonly you also see the vaginal portion red, congested, and the minute os looks deeper red, angry, its epithelium partly or wholly shed, so that the slightest touch with the sound causes a little bleeding. And now, if you pass the sound gently to the isthmus or os internum, you may find an arrest at this point, but keeping well in mind the axis of the uterus, guiding the point of the sound by a finger upon the cervix you will rarely fail to pass through the os internum. This is proof that the seat of obstruction is not here; for the natural bore or calibre of the os internum, as you may see by these sections of the uterus, is just large enough to admit the sound. Why should we make it larger? I know of no valid reason. Anatomy and clinical experience alike protest. It is not only superfluous; it may be dangerous. The danger is especially great if dilatation be effected by cutting. If you look at these sections of the uterus and drawings again you will see that bloodvessels, in profusion and of considerable size, penetrate the substance of the uterus at this level. Large veins without valves and small arteries gape, and when divided are apt to bleed profusely, and present a ready entrance for septic matter. Nor can we be secure against dividing them. The incision must be made by a knife cutting out of sight; it must be difficult to regulate to a nicety the depth of the incision, the more so if you use one of those ingenious two-bladed machines, more or less automatic, and in so far out of the control of the operator. The only kind of assent I could give to the incision at the os internum would be to make a very slight nick, so as to divide the mucous membrane and some of the superficial circular fibres of the muscular coat. This may allay spasmodic sphincteric action. But I give even this qualified assent with considerable reserve, believing that the cases where it might be useful are rare. Of course, I am now speaking only of cases of dysmenorrhœa from stenosis. Freer incisions are sometimes eminently useful in severe metrorrhagia with fibrous growths.

Almost then excluding incisions of the os internum, we may turn back to the modes of dealing with the os externum. And we may first dispose of the alternative method of dilating by bougies, laminaria tents, and various expanding instruments. This proceeding is free from the risk of bleeding. If cautiously pursued there is not much danger of any kind. But if often repeated it becomes exceedingly harassing to the patient; the action of the laminaria tent is commonly very painful, vomiting often attends the expansion. After a time, usually very short, the canal will have returned to its pristine narrowing, and the proceeding has to be repeated again and again. To a certain extent the same objections apply to dilatation by graduated bougies, and other dilators. The pain is less, the regulation is more delicate, but the gain is not more enduring. Thus I have known not a few cases in which this kind of dilatation had been practised, at short intervals, over periods of twelve months or more, without any compensating gain. Then there is the method of rapid dilatation. This is effected

by instruments made with expanding or diverging blades on the principle of similar instruments devised for the urethra. This method is occasionally useful. The objections are that it hardly applies to the cases under discussion; that it is very painful unless anæsthesia be induced; that the gain is transitory; and that it entails no slight risk of metritis. Indeed, no mode of bloodless dilatation is free from this last danger. Instrumental dilatation, whether gradual or rapid, involves some degree of violence, and the penalty may be inflammation—that is, metritis, pelvic cellulitis or peritonitis.

Not rejecting these methods of dilatation, least of all that by bougies, I can only accord them a secondary place. The strictly limited incision of the os externum as I practise it, very nearly resembling the "discission" of the late Dr. Peaslee of New York, is at once less painful, more rapid, more certain, and more safe.

I need not dwell long upon the operation. You have so many opportunities of seeing it done that description is unnecessary. It consists simply in enlarging to a very moderate extent the os externum by help of a pair of scissors constructed *ad hoc*, one blade terminated by a probe-end, which enters the os, the other blade, terminated by a hook, which seizes and fixes the vaginal portion at the point desired. One stroke of the scissors divides the intervening tissue in a straight line. The proceeding is then repeated on the other side of the os, and the operation is completed. Two useful objects are at once achieved—first, the gorged vessels are relieved; you have gone far to cure the congestion and to relieve the chronic endometritis which so commonly attend this stenosis. This incision you have seen is equivalent to scarification, often a most effective remedy in congestion from other conditions. It is infinitely better than leeching, which I have long discarded for several reasons other than its inferiority to scarification—firstly, a leech is not an intelligent animal; it will not always bite exactly where you wish; sometimes it is obstinate, and will not bite at all; and it is not always a clean animal. It is more than suspected that its bite may, under certain circumstances, either inherent in the animal or in the patient, cause unhealthy inflammation. From this danger scarification is wholly free; it is, besides, more expeditious and more accurate. I may here mention that one of the conditions often met with in chronic congestions and inflammations of the vaginal portion is obstructed glands—the so-called ovula Nabothi. These form the foci of little inflamed areas. The cure for this condition is to prick or divide them with the scarifier; and it is remarkable how prompt and efficacious this treatment often is. It is true that these ovula Nabothi are not common in the nulliparous uterus. They most frequently occur in multiparæ, as a consequence of chronic inflammation—hypertrophy—of the cervix. In cases where the division of the os externum is called for, this scarification, or opening of ovula Nabothi, is, however, sometimes useful. It may be done at the same sitting. Now, these things, both essential to cure—the topical bleeding and the cure of obstructed glands—cannot be effected by bougies or other modes of dilating. The other immediate effect of division of the os externum is the letting out of imprisoned irritating mucus.

Now you have a patulous os externum, which means that you have secured free exit for uterine discharges, and free access to the interior of the cervical and uterine cavities for topical treatment. But, in truth, the chronic catarrhal state of the mucous tract is frequently soon relieved by the liberation of the os externum. There is a tendency to contract again after the operation. To meet this a variety of intra-uterine pessaries or stems have been devised. A modification of the late Dr. Wright's is the best. The principle of this lies in the divergence of the two halves of the intra-uterine portion by elasticity so as to maintain itself *in situ*. It is made of one piece of vulcanite. The next I should prefer is Meadows' glass stem. Both these are perfectly clean, and little apt to cause foul discharge. The elastic gum pessary is not free from this objection. The use of it entails some risk of causing septicæmia, local or general. But as a matter of experience, I do not find it necessary to use any contrivance of the kind. The simple operation is less painful, and not less satisfactory.

Next, menstruation is precipitated—that is, it sets in before it is due. Sometimes great relief is felt, but perhaps oftener two or more periods are passed without very sensible benefit. But it is in my experience quite exceptional for the operation to fail. It is hardly severe enough to call for

anæsthesia; but as the surgeon cannot always gauge accurately the sensitiveness, mental and physical, of the patient, it is desirable, whenever this sensitiveness is acute, to call in the beneficent ally that for the occasion blots it out.

This operation may be usefully modified in cases of marked curvature forwards of the cervix uteri. Instead of dividing the os externum bilaterally or transversely, Dr. Marion Sims splits the posterior lip—or what should be the posterior lip—in the median line. The effect of this is, in many cases, to make a more direct passage from the new os externum to the os internum, and thus to secure a readier evacuation of the uterine cavities.

We will talk of menorrhagia more particularly another time. This symptom is associated with various conditions. But it is in place here to call to mind that menorrhagia not unfrequently accompanies the form of obstructive dysmenorrhœa we have now been discussing. The intense congestion induced by the difficulty of excretion, and the consequent turgidity of the mucous membrane, lead to hæmorrhages which exceed the physiological intention. Thus a pathological drain is set up, which, whilst it lasts, aggravates the other evils of the stenosis. This evil also is commonly relieved by the operation, or by topical medication to the interior of the uterus, which the operation enables us to carry out.

In some instances, however, the menorrhagia resists treatment for months. When once a woman has become the subject of recurrent hæmorrhages she begets a habit of making blood rapidly; the vascular system is periodically subjected to high tension; then comes the provocation of ovulation, which determines pent-up blood seeking a vent to the uterus, the natural safety-valve, whence it escapes in immoderate proportion.

To control this recurrent menorrhagia something more than topical treatment is called for. The vascular system, its central organ especially, has probably undergone some physical changes; certainly it has grown more irritable, it acts under exaggerated tension. Here, then, we find our indications; we have to moderate the blood-making process by careful diet, by exercise, by avoiding stimulants, especially malt liquors; to counteract the overfilling of the vascular system by careful promotion of due activity in all the excretory organs—lungs, skin, intestines, liver, kidneys; more particularly at the time of the flow to steady the heart's action by digitalis and salines, sometimes aiding this indication by the use of styptics or astringents, as ergot, hamamelis, gallic acid, sulphuric acid, turpentine, and other remedies of this order. But I must warn you that these too frequently fail unless their use is directed by a clear understanding of the time, sequence, and other conditions in their relation to the physiological and pathological principles which govern uterine hæmorrhages.

There is yet another feature we must not forget before closing this subject. After a time, if the stenosis is not removed, menorrhagia may give way to defective menstruation, even to amenorrhœa. The interference with the function gradually induces such changes in nutrition or such perversions of the circulation that the uterus no longer responds to the ovarian excitation. Sometimes relief is found in vicarious menstruation—menoxenia. In short, the obstruction is pretty sure, sooner or later, to bring disordered function here as elsewhere in the economy. To express by a generic term the disorders or perversions of menstruation we may conveniently use the word “paramenia,” introduced by William Farr.

HOSPITAL AMUSEMENTS.—About 150 selected patients, the officials, a few families, the nursing “sisters” and the gentlemen attending the Medical School were recently invited to an afternoon performance in the Netley Recreation Room, when the Reverend Mr. Bateman, Lieutenant Condon, R.M.L.I., Surgeons Cottell, Polden, and Twiss delighted the audience with attractive songs, both grave and gay, for instance, “Cleansing Fires,” “The Midshipmite,” “The Trooper,” and “Hearts of Oak.” Clever reciters and amusing Ethiopian Minstrels belonging to the Army Hospital Corps also did their best to enliven the invalids. The manager (Dr. Hogg) announced that Surgeon-Major Boileau was preparing the next concert, and that every effort would be made to carry on a series, if people in the neighbourhood would only co-operate in volunteering to assist.

SUBSTANCE OF A

Clinical Lecture

ON

CASES OF ACUTE ATROPHIC PARALYSIS IN INFANTS AND ADULTS

(ACUTE ANTERIOR POLIO-MYELITIS).

Delivered at the National Hospital for the Paralysed and Epileptic, on Dec. 2nd, 1880,

By THOMAS BUZZARD, M.D., F.R.C.P.

LECTURE I.

GENTLEMEN,—Within a comparatively recent period the disease of which I shall show you some examples was called “infantile paralysis,” or “essential paralysis of children,” from its being thought to be peculiar to early life. It is now known to occur not at all unfrequently in adults, as Duchenne (to whom we owe an admirable description of the disease in children) was one of the first to point out. It is a form of “systematic” myelitis, to use a convenient term, suggested by Vulpian and adopted by Charcot, for lesions which are circumscribed within certain well-defined limits, without involving neighbouring parts. In this case the lesion is concentrated (to a great extent) in the anterior horns of grey matter of the spinal cord. Hence the term acute anterior polio-myelitis (πολιός, grey; μυελός, marrow; ιτις), has become applied to the disease, whether occurring in infants or adults. (To illustrate this subject reference was made to an excellent classification of different forms of systematic myelitis from Dr. Grasset's “Maladies du Système Nerveux,” and also to a diagram from Dr. Charcot's lectures, showing the position of the various strands of fibres in the transverse section of the cord, copies of which hung in the hall.)

As it occurs in infancy (and it is peculiarly apt to attack children under two years of age) the essence of the disease is this, that after a varying amount of febrile movement, one or more or all of the limbs are observed to be paralysed. The muscles of the trunk also are sometimes involved, and very exceptionally some of those supplied by the medulla oblongata. There may have been convulsion, coma, some transient loss of cutaneous sensibility, and a temporary trouble with the bladder or rectum, but to a great extent (though not exclusively) the brunt of the disease falls suddenly, or at least very rapidly, upon the motor power of a limb or limbs. After the first day or so any change which takes place in the power of movement is a change for the better. The limbs do not become more paralysed. On the contrary, after a few weeks, or sometimes days, there is a gradual clearing off of the difficulty as regards some of the limbs, one or more perhaps remaining unimproved. There is a remarkable feature in this form of paralysis. Many of the muscles paralysed lose their faradaic excitability entirely within a week, and rapidly waste. But although they fail to respond to the strongest induced currents they react to slow interruptions of the constant current (reaction of degeneration). The nerves to the muscles, on the other hand, lose their excitability to both forms of electrical excitation. Some, again, of the muscles whose faradaic excitability has been lowered, but not lost, are not long in regaining the power of contraction to voluntary impulses. (Duchenne felt able, from his experience, to say that any muscles retaining some amount of faradaic excitability after the eighth day would recover.) The muscles paralysed are flaccid. This constitutes what is called the first period. The second begins a few weeks, or may be delayed for several months, after the attack. It is called the period of regression, for in it there is a gradual return of power in more or less of the muscles, and their excitability to faradism again appears. The amount of recovery differs extraordinarily in cases, so that it is impossible to say more than this that when several limbs are attacked at first it is much more common than not for some of them to recover, but rare for all to do so. In the sequel of the disease atrophic changes are marked