ON DILATATION OF THE UTERUS, AND
THE TREATMENT OF SOME OF THE
COMMONER FORMS OF UTERINE
DISEASE.¹By LOMBE ATTHILL, M.D.,
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THE wonderful advance which has been made in abdominal surgery within the last few years—an advance which in no small degree has been due to the efforts of gynaecologists—while conferring the greatest benefits on mankind, has had this disadvantage, that in a very appreciable degree it has diverted the attention of students, and, indeed, that of many practitioners, from the study of those ailments which are of common occurrence amongst women, and are the cause of so much distress, and directed it too exclusively to those which are curable by surgical means only. Abdominal surgery is most fascinating, and it is easy to understand how pupils rush to see the skilful operator perform an abdominal section, and practitioners endeavour to imitate him; but after all, it is granted to but a comparatively few to have the opportunity of performing these often most difficult operations, while, no matter whether specialists or engaged in general practice, all will constantly be called on to treat those other numerous ailments which are peculiar to women, and which, although they may be looked upon as of less importance, are often the cause of the greatest misery to the patient.

When I commenced my professional career, gynaecology as it is now understood did not exist; and even when first attached to the Rotunda Hospital as assistant to the Master, I saw nothing of uterine disease, and it was not till the teachings of Sir James Simpson became generally known that any systematic attempt to study and teach the treatment of those diseases which are peculiar to women was attempted, not alone in this city, but throughout the whole kingdom. To him mankind are deeply indebted; but for him the general use of anæsthetics would have been delayed for years; and it was he who prominently brought forward the practice of dilating the uterus, and taught us that its interior could with safety be thoroughly explored.

Dilatation introduced with the object of facilitating the removal of polypi was soon practised with view of diagnosing and treating other forms of intrauterine disease, and was in the first instance effected by means of prepared sponge tents, which were objectionable, because it was necessary first to introduce a small one, and after it had expanded a larger one, and then a third or a fourth, before the requisite degree of dilatation was effected—a very tedious process, which moreover entailed danger of septic poisoning from the nature of the substance used; and besides, the dilatation was frequently unsatisfactory because while the os externum was widely distended, the os internum would often be hardly so at all.

Compressed laminaria tents were then employed, at first in the same manner as those made of sponge, one only being introduced at a time, till the method of inserting several at once was introduced by Dr. G. H. Kidd. This was a great improvement, and if it be carried out with the necessary precautions, is quite safe.

Subsequently the method of dilating the cervix rapidly, by means of graduated bougies, was practised, and was advocated with his usual ardour by the late Dr. Matthews Duncan. It is a method admirably suited to certain cases, but, without doubt, not to all; and it has therefore never entirely recommended itself to me. Those who care to do so will find Dr. Duncan's paper on the subject in the second volume of the *BRITISH MEDICAL JOURNAL* for 1872, and the subsequent discussion, in which I took part; and, while a more extended experience has in some degree modified the views therein expressed, still I have not altered my opinion that, in not a few cases, rapid dilatation of the cervix is not a judicious proceeding, and that sometimes it is a dangerous one.

Dilatation of the cervix—not alone during parturition, but sometimes also under other conditions—is a natural process,

and, when conducted artificially, Nature should as far as possible be imitated.

If anyone will carefully watch a case of purely natural labour from its very onset he will easily realise that the opening of the mouth of the womb is not effected, so far certainly as its initial stage is concerned, by the forcible pressure of its contents on the os uteri. The cervix softens and relaxes previous to the commencement of labour, and the os not infrequently expands, sometimes days before uterine action sets in, to such an extent as to permit the finger to touch the membranes. Again, when premature labour is induced by the introduction of a catheter, I have observed the os to expand to a considerable extent before any attempt at uterine action was excited, and I am perfectly convinced that the initial steps of labour in general are first relaxation of the muscular fibres surrounding the os, and then their retraction, and it is subsequent to this that the contraction of the body of the uterus comes into play.

When we desire to dilate the cervix by artificial means it is most desirable to induce this relaxation and tendency to retraction. This cannot be done rapidly if therefore dilatation be accomplished by means of bougies alone, no matter what their shape or form may be. Nature's process of effecting that object is ignored.

Under certain circumstances this may be a matter of no importance, and if the patient has had a number of children and be one in whom the cervical canal is patulous, or if from any cause, such as imperfect involution subsequent to labour or abortion, the cervix is soft and dilatable, rapid dilatation is justified, and may safely be practised, but in women who have never conceived, or in whom, notwithstanding that parturition has occurred, the os is small or the cervix rigid, it should not in my opinion be attempted.

In all such cases I introduce one or two laminaria tents, or short lengths cut off a laminaria bougie. I never now pack the cervical canal with these as I used to do in former days, for my object is not forcibly to dilate the canal by their expansion, but to soften its structure and set up the tendency to retract I have referred to, and I find this is best effected by the introduction of only one or two pieces of laminaria, which are not to be tightly wedged into the canal. The vagina should be thoroughly disinfected by the free use of a solution of carbolic acid or of the perchloride of mercury before this is done, and if the cervical canal will admit of the introduction of a small-sized Bozman's tube; the uterus also should be washed out with it.

At the end of eight or ten hours the desired effect is produced; the cervix, on the withdrawal of the pieces of laminaria, will be found so softened, and its tissue so relaxed, that in general No. 10 or 12 of Hegar's dilators pass through the os internum readily. Sometimes, indeed, a much higher one will do so, while to dilate the cervical canal so as to permit No. 10 or 12 of Hegar's dilators to pass through the os internum in a case in which the cervix has retained its ordinary degree of rigidity, without the previous use of the laminaria, is a very tedious task, unless, indeed, the operator does not hesitate to run the risk of rupturing some of the muscular fibres of which its tissue is so largely composed, and very possibly also of lacerating the lips of the os, which must be held by a vulsellum, and as this proceeding is painful as well as slow, an anæsthetic must be used, and its influence maintained all the time.

If, however, the patient has, from any cause, a soft and relaxed cervix and patulous canal, specially if she have been recently delivered at the full term of pregnancy or aborted, the previous use of laminaria may be unnecessary, and dilatation by means of Hegar's, or some other of the dilators which are in use, effected, without any preparation further than the thorough disinfecting of the uterus and vagina. Once No. 12 of Hegar's dilators passes the os internum, a small curette can be used, but it is wiser to continue the process till No. 15 passes into the uterus, for then a larger curette can be introduced, and the results will be more satisfactory; but if it be deemed necessary to explore the cavity with the finger, the dilatation must be proceeded with till No. 20, or possibly No. 25, pass freely through the os internum.

It is often wise, in dilating the uterus, especially if any difficulty is experienced in the introduction of the next size dilator, to reintroduce the one just withdrawn, first having

¹ Read before the Royal Academy of Medicine in Ireland.

washed and disinfected it thoroughly, and to leave it *in situ* for a little time, or even withdraw and introduce it a third time, it is surprising how this seems to lessen the resistance of the muscular tissue to the action of the next size dilator, and this strengthens the opinion that the opening of the os internum is not by any means altogether due to the mechanical action of the instrument used.

In the early years of my practice I was much opposed to the use of the curette, and termed it in one of my lectures "an unscientific instrument," and, doubtless, it is so, and I objected to its being used unless the finger were first introduced, and the part to which it should be applied by this means ascertained; but I am now prepared to retract this expression of opinion so far as to say that, in the majority of cases, it may be employed without dilating to the extent needed for this purpose; but it is much more satisfactory to have explored the condition of the cavity, and I have more than once regretted that I had omitted to do so. Still the temptation to shorten the proceeding, and with it to lessen the chance of injuring the patient, often induces us to use the curette at as early a stage as possible. The curette used should not, however, be too small—to use such a one is a great mistake; these miniature curettes are nearly useless, and the facility with which they can be employed induces some practitioners to use them freely, sometimes in the study, and even without the patient's knowledge. This certainly is wrong, and is calculated to injure the patient as well as to bring discredit on a very useful instrument.

But the use of the curette alone should not be relied on. It has to be used to a great extent by guess; at one moment we find that we remove with it perhaps a large portion of thickened and unhealthy mucous membrane, and the next time we withdraw it we find we have removed nothing but some shreds of healthy tissue, so that it is not alone possible but probable that portions of the unhealthy surface may escape the action of the instrument; I therefore always adopt further treatment. Formerly I applied the fuming nitric acid at once, and often with marked benefit, and never—since I introduced the use of the vulcanite cannula to protect the cervical canal—with any disagreeable results. But I now very seldom adopt that treatment, because, if used immediately after curetting at the time when the acid is easy of application, the bleeding from the surface of the cavity is generally so free that it neutralises the action of the acid; and if used some days subsequently, you have generally to pass the probe which carries up the cotton saturated with the acid through so small a cannula that only spots of the surface of the endometrium are cauterised. I therefore now almost invariably inject into it, after the lapse of about three days, a small quantity of iodised phenol, using for this purpose one of Baun's syringes. As I have for the last ten years adopted this method with very satisfactory results, I can speak of it with confidence.

And here again I have to recant an opinion I expressed in some of my former writings. If I formerly objected to the curette while now I advocate its use, I still more strongly objected to the injection of fluids into the cavity of the uterus. Now, as the result of careful observation and lengthened experience, I practise this very treatment which I formerly condemned. Indeed, few days elapse in which I do not inject into the endometrium some tincture of iodine or iodised phenol, or wash it out with a weak solution of carbolic acid, hazeline, boracic acid, or some other fluid, with the best results. The quantity I inject at first varies from 5 minims to 30, increasing it to a drachm if it be well borne. But this practice cannot be rashly undertaken or be unskillfully carried out without risk to the patient. In careful hands, however, it is quite safe.

The cause of this change of opinion on my part is easily understood. My objection to the practice was theoretical. I now advocate the practice which formerly I condemned because I have proved it to be safe as well as efficacious; but to carry on the treatment safely two things are essential: First, that the os uteri and the whole length of the cervical canal be sufficiently patulous, so that the fluid injected can escape freely and without delay; secondly, that the quantity of fluid injected be small in quantity, especially on the first occasion. Unless the cervical canal be abnormally patulous, about 5 minims only should be at first injected, the quantity to

be subsequently gradually increased if it is found to be well borne, but a drachm is the maximum I ever inject of any fluid, and seldom, indeed, more than 15 or 20 minims. The larger the quantity the greater is the danger of its causing trouble, and the quantity much more than the quality of the fluid injected is to be considered. I have met with cases in which very severe pain has followed the washing out of the uterus with a weak solution of carbolic acid, and even with tepid water, when I had injected a larger quantity of the fluid than I had previously done, while no pain of any importance was experienced by the same patient when a small quantity of the strong iodised phenol had been used.

The first patient on whom I practised this treatment was a lady, who, having passed the climacteric period, was attacked with profuse hæmorrhage; I dilated the uterus and removed a mass of soft shreddy membrane, of which a portion seemed to have been hanging into the cavity. I feared that it was malignant, and had it examined with the microscope, but nothing definite could be detected. This lady rapidly improved, was quite well for six months, then the hæmorrhage returned more profusely than before, indeed it was on this occasion so alarming that she was almost pulseless before it could be restrained by plugging. I again dilated, and now found the uterus filled with a soft pulpy mass undoubtedly malignant. Were I to meet with such a case now I would extirpate the whole organ, as I have since done with success, but abdominal surgery was not then in the advanced state it now is, so I contented myself with carefully removing with the curette every portion of the diseased surface, and subsequently injecting about 15 or 20 minims of iodised phenol once a week regularly. I was forced to do this, for the hæmorrhage soon showed signs of recurring, but the injections kept it in abeyance. I continued this treatment for upwards of two years, and though the patient slowly lost ground and finally died, the hæmorrhage never once recurred to an alarming degree, and I have no doubt but that life was prolonged for a year or more in consequence of this treatment. But it is not of its use in such cases that I am now speaking, in them hysterectomy should be performed, but its good effects in this one encouraged me to try it in others. And I soon found it applicable to a variety of cases.

The fluid I usually employ is the iodised phenol as recommended by the late Dr. Batty. It is made by dissolving one part of pure iodine in two parts of carbolic acid by the aid of a gentle heat, a small quantity of methylated spirits should then be added to keep it sufficiently thin for use; the effect of this when injected into the cavity is to cause the surface with which it comes in contact to shrivel up, and in a day or two to peel off, in fact it acts primarily as a mild caustic; some of the iodine no doubt is also absorbed and many patients complain of the taste of the iodine in the mouth. In cases therefore in which there is reason to believe the lining membrane of the uterus to be unhealthy, and where the symptoms are not sufficiently grave to induce us to decide on dilatation and curetting, the injection of the iodised phenol is indicated. I have also on several occasions employed it when patients for some cause could not or would not submit to curetting, and in a considerable number of them found it effect a cure, or at least be productive of marked benefit.

In two cases in which menstruation continued to be so profuse some months subsequent to abortion, at an early period of pregnancy, and the uterus remained so large and soft as to lead to the belief that a portion of the membranes might be retained, the injection has been followed by the expulsion of a mass which I believe to have been the remains of the ovum shrivelled up by and then expelled, in consequence of the action of the phenol. In both these cases recovery was perfect without further treatment.

In all cases in which I dilate and use the curette I inject the iodised phenol several times, at intervals of from four to six days according to the nature of the case, commencing on the third or fourth day after the operation. I have several times been consulted by patients who have been curetted without deriving permanent benefit therefrom, and believe that this has been in general due to neglecting to adopt this practice or some such after-treatment, and I have generally found, if the interval since the operation has not been very long, that the injections of the iodised phenol succeeds in effecting a cure in them.

The number and frequency of the injections must vary with the nature of each case, and therefore must be decided by the practitioner at the time, but it is necessary to bear in mind the fact that the first, and possibly the second, injection is often followed after the lapse of a few hours by some bleeding. This is specially the case if the curette has not been previously used, and it is probably due to the action of the phenol causing the superficial layer of mucous membrane to peel off rapidly, leaving a vascular surface exposed, which bleeds sometimes freely. This bleeding is of no importance, but sometimes alarms the patient, and she should be told that it may occur. If it continue after the injections have been repeated three or four times, it generally indicates that patches of large and vascular granulations exist, which, if the curette has been used, have escaped its action, and, whether it has been used or not, proves that the further use of intrauterine injections will be useless.

I am far from wishing it to be understood that I deem this treatment applicable to even the majority of cases of disease of uterine cavity, but I believe that it will frequently render the use of the curette unnecessary, and that, if not always essential, it is so in the majority, and useful in all those in which curetting has been practised, while in cases where uterine catarrh is present great benefit will often be derived from the practice.

TOTAL DISAPPEARANCE OF A FIBROID TUMOUR AFTER DR. APOSTOLI'S TREATMENT.

By SKENE KEITH, M.B., F.R.C.S. Ed.

THE history of the following case of fibroid tumour of the uterus is of interest, as not only has there been the symptomatic cure which is aimed at by the use of the galvanic current, but there has been also the much less important physical cure, the disappearance of the tumour itself. It is well known that the passage of the galvanic current does not cause the total dispersion of tumours of large size, and in this it resembles the treatment by removal of the ovaries; as, in many cases treated by this operation, the tumour remains, more or less, while the symptoms are cured in the great majority of cases. There is, however, this great drawback, that, after successful operation, the patient has lost something; she has still, as a rule, a tumour, she has a scar which may stretch, extending through the thickness of the abdominal wall, and she is not the perfect woman she was, because she has lost her ovaries. She has, therefore, been cured symptomatically, but at the expense of a grave mutilation. When a patient has been treated successfully with galvanism, she has still, as a rule, a tumour; she does not have any weak spot in the abdominal wall, and she is still a perfect woman. Now, as an attempt has been made to hang the fate of Dr. Apostoli's treatment upon the question of the total disappearance of tumours, it is necessary to repeat that this is not an essential accompaniment of the treatment, though it does sometimes happen in the case of small tumours; and it may be, that, when those growths are treated more frequently in the early state, we shall find that it will occur more often. Whether this be so or not is of little importance, so long as the symptoms are cured and the growth arrested.

It has been said that a living and healthy woman with a tumour is a more satisfactory sight than a dead woman after hysterectomy; and how many of the latter there have been in the past twenty years no one will ever know, simply because the surgeons, except Dr. Keith, have never dared to give their results, for the mortality is too great for publication, at least in the early cases.

The following are the notes of a case of total disappearance of a fibroid tumour of the uterus after Dr. Apostoli's treatment; and, what is of far greater importance, the complete restoration to health of the patient. Dr. Keith first saw the lady in consultation with Dr. Butt in July, 1889. She was 29 years of age, and said that since the birth of their only child, now ten years of age, she had not felt quite well. There had not been any difficulty with the labour, but the lady did

not recover her strength after it, and in addition to the debility there was some increase in pain at the time of the monthly periods. She has suffered from dysmenorrhœa all her life. After a time the monthly flow became increased, both in quantity and in duration, until it never lasted for less than two, and sometimes for three, weeks. Three specialists had been consulted, but any relief had been only of a temporary kind.

In July, 1889, this young married lady was useless; she could scarcely walk, she suffered constantly from pain in the back and pelvis; the monthly periods never lasted for a shorter time than two weeks, and she required to use fifty, sixty, or seventy diapers. On examination, the pelvis was found to be filled by a fibroid tumour of the uterus; the sound passed with a backward curve for 4 inches.

A few years ago, but one course of treatment could have been recommended—namely, removal of the ovaries. This operation would almost certainly have resulted in a complete, though not in a perfect, cure; for it cannot be said that any treatment which leaves a woman in a mutilated condition is perfect. It is a decidedly retrogressive step, and an acknowledgment of failure, when we have to cure one disease by the removal of an organ or organs, unless they be already hopelessly destroyed. Instead of this mutilating process, treatment by electricity was advised, in the hope that by this means the lady might be restored to health, a physically whole and not an unsexed woman. Removal of healthy ovaries for the purpose of curing a disease in a different organ is on an entirely different footing from that of removing disorganised ovaries, the woman being already unsexed by the disease. In the first case such a procedure mutilates her; in the second the disease has already done so.

The treatment by Dr. Apostoli's electrical method was completed by the end of the year, half before and the remainder after the autumn vacation. The number of applications made was thirty; the average strength was 88 milliamperes, and each sitting lasted for five minutes. The treatment was begun at the patient's house; before it was finished she was able to drive two miles before and the same distance after the applications. By the time that the course was finished there was marked improvement in every respect, and the tumour had become reduced in size.

Six months afterwards the lady was much better; she did not have any pain, she could walk well, and the number of diapers required was reduced to twenty. The tumour had become smaller. In February, 1891, the patient called to see if everything were right, as the quantity of blood lost every month was steadily becoming less. On examination, a small, healthy, retroverted uterus was found, with a cavity $2\frac{1}{2}$ inches in length. As the backward displacement of the uterus did not give rise to any symptoms treatment was not required.

Now, in the beginning of 1892, the lady writes that she is perfectly well, and that she uses three or four napkins every month.

It has been suggested that it is sometimes not possible to diagnose a fibroid tumour of the uterus, even with the help of an exploratory incision; and, of course, it will ever be impossible to bring conviction to the minds of those who provide this loophole for holding to their disbelief, with some show of plausibility, in any and every case treated by electricity. It is, however, a matter of minor importance whether they do or do not believe that tumours may sometimes disappear; because the treatment is directed to the symptomatic cure only, and not to the disappearance of the growths themselves; and it is in this respect exactly parallel with the operation of removal of the ovaries for fibroid; a good procedure, just so long as we had nothing better to offer, and which we can always fall back on, under special circumstances, if it be not advisable to use Dr. Apostoli's treatment, or should it fail in any case favourable for this operation. No one plan of treatment is the best for every case.

A PROPOSAL is now before the Paris Municipal Council to change the name of the Lourcine (Female Lock) Hospital to the Hôpital Broca. The object of the proposed change is apparently not so much to do honour to the memory of a distinguished man, as for the sake of certain supposed "moral advantages," to hide the nature and purpose of the institution under the shadow of an illustrious name.