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UTERINE NEOPLASMS.

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Passing hastily in review the progress that has been made in the radical treatment of uterine tumors, both benign and malignant, we find ourselves recalling the history of abdominal surgery mainly for the last decade. It is true that before this time a few abdominal surgeons would now and then remove an immense uterine myoma in some desperate case in which there was no alternative. The fatality of these operations was necessarily great; they were done in too advanced a stage of the disease, when time had surrounded the growth with every possible complication. They were also efforts in establishing an operation that will always be formidable and often difficult to do.

Therefore, at that time, ten years ago, with a fatality approaching fifty per cent., hysterectomy received very little favor or encouragement from the profession at large. But since this prehistoric period of the operation, if I may so call it, abdominal hysterectomy has been applied to a larger range of cases of uterine fibroids and has been done earlier. The technique of the operation also has been constantly improved. For these reasons the marvelous result was attained of reducing the necessary fatality of supravaginal hysterectomy in six years, or up to 1890, from fifty to ten per cent. While the radical treatment of benign uterine neoplasms was thus rapidly advancing and replacing varied and useless palliative measures, another method of removing the uterus, directed to the cure of cancer at the neck, was added. Vaginal hysterectomy in comparison with the supravaginal encountered at first very little opposition. In fact, as soon as experience and practice in removing the uterus by the vagina had cleared away the many difficulties that beset the early operations, and perfected a technique at once uniform and practicable, the operation was welcomed as one of great promise, which it has since partially fulfilled. Vaginal hysterectomy, that has done so



much already, and in the future will do so much more, in saving women from an absolutely fatal disease, had also to a certain extent its period of failure and disaster. The reason for this is at once apparent. The only surgical treatment of cancer in this locality that had before been attempted was amputation of the cervix more or less high, which had been so dismal a failure that the new operation was eagerly welcomed by both surgeon and patient. Consequently most cases of cancer of the cervix that came along were operated upon without much regard as to the extent of the disease. Really, the many disasters and the very considerable fatality of these first hysterectomies were mainly due not so much to a technique not yet perfected as to the fact that in many cases the disease had involved surrounding structures or was complicated by tumors of the body of the uterus or ovaries. But as experience has gradually taught us to avoid operation as hopeless in cases of advanced disease, where the vagina and broad ligaments are involved, and to substitute another operation where other complications exist, the immediate death-rate of the operation has descended to probably less than five per cent.

Thus, one of the two surgical resources at our command for the treatment of malignant neoplasms at the neck of the uterus is being constantly more and more restricted in its application, while, in sharp contrast, our operation for the treatment of benign neoplasms—namely, supravaginal hysterectomy—is being resorted to in a constantly enlarging class of cases.

Following still further the history of our progress in the surgical treatment of these growths of the uterus, we have next to mention not an operation, but an appliance, and that is the Trendelenburg table. This came into general use only about two years ago, and its introduction marks an epoch of progress in abdominal surgery more important, possibly, than any single operation that has recently been devised. At first thought it would hardly seem that the position of the patient on whom we were operating would be a matter of very vital consequence; one would think that we could almost as well remove these tumors in the pelvis in a horizontal position as in the inclined one of the Trendelenburg posture.

But, as a matter of fact, with a fairly long abdominal incision, which can be extended to the pubis, because the bladder recedes from the anterior surface of the abdomen, and with a broad retractor separating widely the recti muscles, and with the intestines out of the way in the large abdominal cavity, the entire contents of the pelvis are within our view and reach. Dr. Sutton says: "Two years of experi-

ence with this posture have taught me that there is scarcely a limit to the possibilities of intrapelvic surgery." And this is absolutely true of that form of pelvic surgery that comes within the limits of our present subject. The great operation of complete abdominal hysterectomy is indebted practically for its existence and entirely for its usefulness to this posture. This is our only resource in dealing with malignant neoplasms of the uterine body, as well as certain forms of benign tumors which remain to be considered.

The general impression prevails that cancer of the body of the uterus is an extremely rare disease. My own experience, however, for the past three or four years, leads me to an entirely different conclusion. While not as common as cancer of the cervix or breast, still I believe that it occurs as frequently as does cancer of the pylorus or omentum. I have seen within the last year at least six examples. This error has arisen doubtless from the great difficulties of diagnosis that necessarily attend the inaccessible position of the neoplasm. Cancer of the endometrium, however, is easily diagnosticated, and is not a rare affection. The patient first suffers from hæmorrhage. By dilatation and curettement we bring from the uterus granular masses whose malignant or benign character the microscopist can readily determine. Therefore, in one form of malignant disease of the uterine body, we can readily make our diagnosis and act with that promptitude that is always so essential in these cases.

The diagnosis of cancer involving the general structure of the uterine body can be discussed more properly in connection with the consideration of myomata.

Now, summarizing the surgical means at our command for the treatment of malignant neoplasms of the uterus, whether the neck or body, or both, we are confined simply to two great operations—vaginal or complete abdominal hysterectomy. You will all agree with me, I think, that any surgical procedure short of the two radical ones I have proposed is perfectly useless, and that every cancer of the uterus should be removed when it can be done. We have left to consider, therefore, under this branch of my subject simply the following questions: In what cases we should attempt the operation; what results, both immediate and remote, we may hope to obtain; and in what circumstances the one or the other operation is indicated.

Whenever the disease is entirely confined to the uterus the latter can always be removed. Sometimes, with cancer at the os, it is impossible to determine before the operation whether the infection has extended to the lower portion of the broad ligaments. Under these

circumstances vaginal hysterectomy becomes difficult and dangerous, on account of the ureters, and occasionally impossible. When the anterior vagina is even slightly involved the operation again is difficult, and invasion of the bladder is extremely probable if we remove the entire disease. A more extensive infection of the posterior portion of the vagina does not positively contra-indicate the operation; but again the proximity of the rectum is, at best, a very disturbing condition. But in all these cases of cancer at the mouth the fact that the vagina or broad ligaments have become secondarily infiltrated is an unerring indication of either the long existence of the disease or of a very great malignancy. It shows, too, that the local disease has gone a long way toward a general constitutional infection. The after-history of cases of this kind that have been operated upon abundantly sustains this view. They furnished the principal examples that were formerly so frequently quoted to the discredit of the operation.

In these instances, even if vaginal hysterectomy has been performed successfully and without accident, recurrence of the disease is so rapid, as a rule, that we do our patient very little good. Therefore I would restrict vaginal hysterectomy entirely to those examples of cancer where the neck alone is involved, and where the operation can be done very early in the course of the disease.

I am well aware that I have laid down an arbitrary rule, and that there are several instances in which vaginal hysterectomy has been done where the disease had extended much beyond the limits I have indicated, with the permanent cure of the patient. But, on the other hand, for every one of these examples there are ten where these restrictions have been disregarded to the harm of the patient and the discredit of the operation.

In cancer of the body of the uterus we have one single recourse—complete abdominal hysterectomy. What are its indications and limitations?

In malignant disease of the endometrium, the diagnosis having been established in the manner already suggested, the indication for hysterectomy is unquestionable, and is followed by permanent cure in a majority of cases. When there is a malignant growth confined to the body of the uterus, and also other tumors under the broad ligament or in the ovary, the mass of them being fairly movable, the operation, or at least an exploratory incision, should be made.

Any one of the following conditions seems to me a sufficient contra-indication to any attempt at removal:

A marked decline of the general health, with great deterioration not due to hæmorrhage; enlarged glands in the groin, or an immovable cancerous mass nearly or quite filling the pelvis.

I fully realize that there is much of detail and precision lacking in these directions if we were to rely upon them entirely for the separation of the operable from the non-operable cases. Again, the many and varying conditions outside of all rules that individual patients will present will give us many instances of doubt as to whether an operation is advisable or not. Under these circumstances an exploratory incision—a procedure of slight danger with the hope that it may end in a complete operation—should be made.

We have now to consider the results we may claim for our two operations—vaginal and abdominal hysterectomy. Statistics furnish us only an approximate means of estimating the present death-rate of vaginal hysterectomy, for if we were to rely upon the reports of different operators of their cases, the aggregate would certainly give a higher percentage of fatality than actually belongs to the operation, because these various lists contain the earlier work of the different men. Boldt reports forty-four cases of vaginal hysterectomy with an immediate mortality of six— $\frac{81}{100}$ per cent. He reports, however, in 1892, twelve cases with no death; Price, of Philadelphia, reports his mortality as below five per cent.; Montgomery reports twenty-four cases with one death; Byford, thirty-seven cases with one death. My personal experience is comparatively small and recent—much too small to be of value statistically in estimating the death-rate of the operation. I have done vaginal hysterectomy eighteen times with no immediate fatality.

One patient, however, died six weeks after the operation and probably in consequence of it. There was left a fistulous opening into both bladder and rectum, and death was from exhaustion. The loss of this case, therefore, although occurring after six weeks, was fairly chargeable to the operation.

My cases of vaginal hysterectomy, aside from their small number, are at fault for the purposes of this discussion, because eight of them were done, not for cancer, but for complete prolapse.

Of our other operation—complete abdominal hysterectomy—the precise results can only be approximately estimated. You will recall that this operation is absolutely dependent for its existence upon the Trendelenburg posture, and that the latter has been in general use for only about two years. Therefore complete abdominal hysterectomy has been done only a comparatively few times. We are there-

fore still unable to speak with precision as to its direct mortality, but from what has been done we may safely say that it is about as successful as supravaginal hysterectomy—that is, that the inevitable percentage of mortality is not more than ten per cent.

Hence in the treatment of malignant neoplasms of the uterus we have two operations of choice: one with an immediate fatality of five per cent.—if my estimates be accepted—and the other a fatality of ten per cent.; each a means of treatment that abdominal surgery of the last ten years has put into our hands. And when we remember that so short a time ago, in the presence of uterine cancer, even in its commencement, we were completely helpless, we can not yet fully realize the great promise of these additions to our surgical resources. The remote results of ablation of the cancerous uterus, in one way, at least, are very gratifying. No unpleasant sequelæ of the operation are left. Our patients entirely recover and suffer no serious inconvenience from having submitted to the operation.

When we come to inquire into the question of the recurrence of the disease, we open up a sad chapter of surgical history. Taken as a whole, the after-history of vaginal hysterectomy would indicate fewer permanent cures and an earlier return of the disease than follows excision of the cancerous breast. This bad showing is not at all an inherent failure of the operation, but is due to the error of operating on many cases past all hope of surgical aid. Again, in many instances, the operation is done for more advanced disease than is now the case in amputation of the breast.

Really, removal of the uterus for malignant neoplasms by either method that has been described should give a better percentage of cures than operations for cancer in most other parts of the body. The uterus and its annexæ are so much isolated from the rest of the organism that malignant germs are disseminated slowly, as a rule; and when we come to operate we can go very wide of the disease. It is simply a question of early operation. The specialist, therefore, appeals to the physician to aid him in securing for vaginal and abdominal hysterectomy the fullest measure of success of which they are capable.

If I may be permitted to step aside from my subject one moment, I will give two suggestions as to diagnosis. However trite they may seem, they are still very important. Whenever there is found at the os an ulcer, or a hard, irregular nodule, a section should immediately be sent to the microscopist. When a patient in middle life suffers from menorrhagia, or especially from metrorrhagia, investigate the

case at once. This symptom always indicates a departure of the uterus from a normal condition, and frequently the advent of malignancy. Unfortunately, many women are living in a "fool's paradise," in the belief that this hæmorrhage is a natural attendant on the approaching menopause.

The choice between vaginal and abdominal hysterectomy for removal of cancer at the mouth of the uterus will be largely a matter of preference with different operators. In the hands of one man the former operation will give the better results, while to one who has had much experience in abdominal work the latter operation will be more satisfactory. For myself, in all cases where the vagina is narrow, or the uterus high up in the pelvis, and not very movable, or where there is any suspicion of involvement of the broad ligaments or other complications, I prefer the abdominal operation. I simply reserve vaginal hysterectomy for those cases in which the vagina is very roomy and where the uterus can be brought well down to the vulva. During the past six months I have done complete abdominal hysterectomy four times for cancer at the mouth, and vaginal hysterectomy three times. The abdominal operations were not so difficult for me as the vaginal were. The convalescence of the four patients in which the abdominal operation was done was more rapid and uncomplicated than is usually the case in removal of the uterus by the vagina.

This paper has already occupied so much of the time which the courtesy of this Society can give to it that the discussion of the treatment of benign neoplasms must be very brief and imperfect.

At this moment, using the words of Dr. Boldt, the treatment of uterine myomata is in an experimental stage; and this utterance is truer to-day than it would have been three or four years ago, for our resources then consisted practically of a multitude of palliative and semi-surgical procedures and the one radical operation—supravaginal hysterectomy—while to-day we have discarded some of our palliative measures and are employing the others much less than formerly. On the other hand, we still have our first operation, supravaginal hysterectomy, with the pedicle fastened in the lower part of the wound, extraperitoneally, and several other operations that have been recently introduced; or rather, perhaps, speaking more correctly, modifications of the old supravaginal operation.

First, fixation of the pedicle below the abdominal wound, but still outside of the peritonæum (Kelley).

Second, Byford's method of making an incision through the vagina

in front, beneath the bladder, and turning the pedicle down through that incision.

Baer's method, or rather the one with which Dr. Baer's name is especially identified—ligating the broad ligaments and uterine arteries, and leaving the pedicle within the abdomen without any constriction. He depends, of course, upon ligature of the uterine arteries to sufficiently control all hæmorrhage.

I simply refer to these several modifications, because so far, in the skillful hands of their advocates, they have already given excellent results. They also obviate two great defects of the extraperitoneal treatment of the pedicle—namely, the long convalescence and the danger of subsequent hernia.

Some one of them indeed may, in the future, become the operation that will entirely supersede the old one. For myself, I prefer complete abdominal hysterectomy rather than any of these modified operations I have mentioned. I have had considerable experience with the latter, and the results have been so satisfactory, and the technique has seemed to me so simple in comparison with the procedures mentioned, that I shall continue to substitute this operation in place of the original one under certain conditions. Therefore at this time, for the radical treatment of uterine fibroids, my own surgical resources consist of supravaginal hysterectomy with the pedicle outside, and complete abdominal hysterectomy.

Calling your attention for a moment to the palliative methods of treatment for uterine myomata, probably the most valuable is curettage for the relief of hæmorrhage—a single one of the many evils that this neoplasm inflicts upon its possessor. This procedure fails in a majority of cases precisely as does electrolysis, and for the same reason. Neither the sound attached to the battery nor the curette in the surgeon's hands can reach the whole diseased endometrium in the tortuous uterine canal. In every other respect electricity, after a trial of seven years, has disappointed the great expectations of its advocates.

Removal of tubes and ovaries as a treatment of fibroids I have now entirely discarded. The operation does not always arrest hæmorrhage or stop the growth of these tumors, nor does it prevent the malignant degeneration to which they are liable, while, on the other hand, the operation is almost as difficult and dangerous as hysterectomy is at the present time.

Dr. Martin, of Chicago, has recently introduced as a palliative operation ligation of the uterine arteries through the vagina. The

value of this operation is still for the future to determine. But in the future treatment of uterine neoplasms I believe that palliatives will have a small place. Palliative treatment belongs to incurable diseases.

The addition of complete abdominal hysterectomy renders the means at our command for the removal of uterine myomata well-nigh perfect. Practically there are no longer any cases in which the operation is impossible. The future, therefore, in this direction has for us no advance except in details of operation. Complete abdominal hysterectomy is especially indicated in those cases of small fibroids extending under the broad ligaments or growing from the lower segment of the body of the uterus or neck, and packed deeply within the pelvis. It is precisely in this class of tumors that supravaginal hysterectomy has been very difficult to do, and frequently impossible. This operation should be selected also in other instances, in which, from thickness of the abdominal walls or rigidity of the pelvic floor, it is difficult to bring the pedicle out at the lower angle of the wound. On the other hand, in those instances of delayed operation—which, let us hope, will become rapidly less and less—where the patient's strength has been seriously exhausted by hæmorrhage, the size and pressure of the tumor or septic infection of a degenerating myoma, supravaginal hysterectomy will be the operation of choice. Under these circumstances the length of time that the operation occupies is a very important factor in the result, and our old operation can be done much more rapidly and easily than the new. In ordinary cases we may choose at will the one or the other. The advantage of supravaginal hysterectomy is its great simplicity; the advantages of abdominal hysterectomy are the shorter convalescence and diminished danger of subsequent hernia.

Finally, what are the indications for hysterectomy in the treatment of uterine myomata? Not long since, the existing or prospective large size of the tumor was the main indication for removal that was recognized. The logical deduction from the teaching that these neoplasms were benign, and always remained so, would be, that they could do no harm, except from their size or their direction of growth. The attendant accident of hæmorrhage was simply a symptom to be treated by palliatives. But latterly more careful and long-continued observations of the clinical histories of myomata in large numbers have corrected many errors and given us new data from which to formulate our rules of treatment. Only a very small proportion ever reach a size sufficient to make them dangerous to the life of the patient.

Secondly, we are not dealing with a self-limited disease—limited by the menopause, as has been so generally taught. On the contrary, the approach of the climacteric, instead of affording relief to patients with myomata, is really the most dangerous period in their lives. A record of ninety-four cases of uterine fibroids shows that forty-three of them developed dangerous and formidable symptoms in patients between the ages of forty-two and fifty. But the greatest danger with which they are attended comes from their liability to various retrograde changes, among which may be mentioned calcareous, necrotic, pus-forming, cystic, and malignant degenerations, the latter the most important because the most frequent and insidious of all. Out of one hundred and ninety-six cases, in thirty-eight, Martin, of Germany, found changes in the tumor which, he said, certainly represented the opposite of that which could be called benign. Another danger comes from pus-tubes and tumors of the ovary, with which they are often attended. When these complications occur they are fully as dangerous as are pus-tubes and ovarian cysts in other patients that have no fibroids.

From these few facts we may at once infer that any rule as to operation based on the theory that we are dealing with benign and consequently harmless growths can be nothing else than an incorrect and dangerous one. Again, small fibroids are quite as likely to become malignant as the large ones, and when they involve the body of the uterus we can only make a probable diagnosis as to their malignancy. In fact, it is impossible to determine with any precision whether these small outgrowths from the uterus were fibroid in the beginning or cancerous; or whether or not, beginning as fibroids, they have degenerated into cancer. The clinical history and general aspect of the patient will afford us some diagnostic aid. If she is pale, cachectic, debilitated, and progressively losing in strength and weight, malignancy of the tumor may certainly be suspected. Still, other forms of degeneration often produce a similar train of symptoms. At any rate, the indications for removal of the tumor are urgent, whatever its pathological character. Remove the growth first, and make the diagnosis afterward. Whenever the general health of a patient by reason of a uterine neoplasm descends greatly from the normal standard, she is ever afterward an invalid until the abnormal growth is removed.

It is undoubtedly true that many myomata produce no symptoms. There are no means of knowing how frequent such cases are, but we may, however, dismiss them as of little interest in the present con-

nection, for there would be no question in such instances of an operation. But whenever a uterine myoma, large or small, begins to impair the general health, or produces pain enough to seriously demand relief, I would advise hysterectomy as our only means of cure. The operation, with its present death-rate of ten per cent., is less fatal than the disease, while in nine cases out of ten it brings perfect health in place of chronic and hopeless invalidism.

In short, with the exception above noted, I would apply to uterine fibroids the general surgical rule that Mr. Bland Sutton has well indicated in the following words: "It is a noteworthy fact that most pathologists, who have taken comprehensive views of tumor formation and have made it a serious and prolonged study, are of opinion that tumors, innocent and malignant, are in the beginning local troubles, and that the safest and most effectual method of dealing with them may be expressed in one short sentence: Thorough removal of the tumor, whenever this is possible, at the earliest possible moment "

