VAGINAL HYSTERECTOMY AND ITS INDICATIONS*

By J. W. Kennedy, M.D., Philadelphia, Pa.

I WOULD be very happy indeed if I could present this subject to our association as it was taught me by probably its greatest advocate and master, the late Joseph Price, who was one of the founders of this association and a former president.

I take it for granted that we are just as remiss in not well practicing what we know by making use of our medical and surgical privileges, as we would be to grow indifferent and lacking in the habits of industry in the pursuit of scientific innovations of the future.

Disparity between privileged results of surgery of the acute abdominal conditions, surgery of the uterus and of the breast, and our everyday results, is so significant that we cry out for better control of these lesions.

Reviewing our results for the past twenty years in the Joseph Price Hospital, we are able to say with as accurate statement as it is possible to make with such review, contrasting our privileged results with those existing, that we are utilizing only about 5 per cent of our surgical privileges in the major urgent conditions. In other words, 95 per cent of our fatalities were due to human errors, possibly such had better be called personal or individual errors, as they are not the shortcomings of scientific attainments.

In spite of such organizations as the great American Medical Association, the American Congress of Surgeons, and associations such as ours which have even transcended in accomplishments the most sanguine expectations, yet we remain a crippled profession as far as our execution goes, even though our scientific privileges are magnificent. We are not in possession of the people. We have not been able to educate them as to our real worth of service. However, I feel that the more recent organization of the Gorgas Memorial Institute of tropical and preventive medicine by Dr. Franklin Martin, is a very

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strong bridge over which we may carry the knowledge of the privileges of our advanced thought and work. Occasion and space do not permit me to go into the workings of this great Gorgas movement, so I can only add that this organization by taking in lay members and through talks by its medical members to lay associations, and further, by the publication of short articles understandable by the masses, such articles being published in the lay press, we have the most forceful method, in my belief, of bringing before our people the great life-saving service of which our profession is capable.

I have given this preliminary discussion because I know of no subject or condition where privileged results are so outraged as those of the offending uterus.

I am forced to speak of vaginal hysterectomy as the method for removing the uterus, as I find that over 90 per cent of the uteri which have been removed during my association with the Joseph Price Hospital, have been extirpated as a vaginal hysterectomy.

In spite of this large percentage of vaginal hysterectomies as compared with the suprapubic route, were it not for the clamps, I would not do vaginal hysterectomy.

ADVANTAGES OF THE CLAMP METHOD

The clamps have increased the operability of the procedure by at least 50 per cent. The clamp is the very best method of controlling hemorrhage. The operation may be done very much more quickly with the clamps, as remote vessels may be easily secured.

The ties being very insecure by the ligature method, I believe, is one of the reasons the operation has never become popular.

In removing the uterus when in procidentia, the clamps have a most important function, as their rigidity holds the vaginal fornix at a high level and does much to correct the cystocele and rectocele. The clamps have a very important function from the standpoint of drainage.

MORTALITY OF VAGINAL HYSTERECTOMY

In comparing the mortality of vaginal hysterectomy with the suprapubic method of removing the uterus in the Price Hospital, we are compelled to endorse the lower route of removing the uterus. Although there have been no deaths from the suprapubic method from either operative or postoperative hemorrhage or from operative infection, during the period that the suprapubic and the vaginal operations were compared, yet the mortality was fifteen to one in favor of the vaginal route.

INDICATIONS

The indications are fibroid tumors which may be delivered by the vaginal route, practically all malignant conditions of the uterus other than the possible malignant degeneration of the large fibroid tumor,

procidentias of the uterus and marked prolapse of the heavy organ where pregnancy is not to be considered, the offending uterus of the large fleshy woman, a condition of the cervix which I choose to call the abused cervix, and the bleeding uterus which has resisted conservative treatment.

FIBROID TUMORS

A comparison of the mortality between the suprapubic method and the vaginal route of removing the fibroid uterus has conspicuously shown the real tragedies of suprapubic hysterectomy.

On account of the sudden deaths which follow several weeks after a perfect convalescence from a suprapubic removal of a fibroid tumor, I have felt for a number of years that the fibroid tumor which has existed for a good length of time evidently produces a toxemia which causes a tissue degeneration. We know the abdominal walls of a fibroid patient grow thick—such tissue is most probably a form of degeneration—and a like condition is evidently taking place in the myocardium and thus accounts for some of the sudden deaths.

For a number of years we thought these sudden deaths were due to embolus or thrombus, but in more recent years I feel many of these sudden deaths following removal of the fibroid tumor of the uterus are due to a diseased myocardium. I have never seen such sudden death follow vaginal hysterectomy.

As the operative time of vaginal hysterectomy is about one-tenth that of the suprapubic method, operative shock is practically never seen. I have seen but one instance in several thousand operations. I have never seen postoperative pneumonia follow the vaginal operation. As vaginal hysterectomy is practically an outside procedure, all of the units of operative depression and trauma are reduced to the minimum.

If one cares to resort to morcellation, there is scarcely a limit to the size of a fibroid tumor which may be removed from below.

MALIGNANCY OF THE UTERUS

Other than the malignant degeneration of the large fibroid tumor of the uterus, all malignant conditions of the uterus are met by vaginal hysterectomy.

It must be remembered that probably 90 per cent of uterine malignancy occurs in the cervix, so that the big end of the malignant cone is at the cervical location and most accessible to vaginal work.

The clamp method of vaginal hysterectomy not only greatly enlarges the percentage of operability but also much increases the amount of tissue which may be removed.

Much of the vaginal fornix may be removed with ease by the clamp method, which would be quite impossible by the ligature method of operation.

It must be kept in mind that all the tissue which is within the clasp of the clamp sloughs away, so that the operation is more extensive in tissue removed than would appear.

Many malignant cases much too late for ligature operation from below are still easily managed by the clamp method. We are constantly operating upon patients for malignancy of the uterus from six months to a year after they have been refused by good operators who do not use the clamp method for hysterectomy. We much regret the fact that these patients are too often turned over to the x-ray operator when they are still good risks for a permanent cure by the vaginal hysterectomy clamp method.

Before we begin to do the vaginal hysterectomy, we most thoroughly cauterize the cervix, which not only prevents malignant operative implantation but also cleans up the field of operation.

It is my opinion that the vaginal hysterectomy clamp method is our solution at this hour for malignancy of the uterus; the only missing link is early diagnosis.

We must teach the student not to dismiss the possibilities of malignancy of the uterus simply because the cervix seems uninvolved. He must be taught the three zones of uterine malignancy, namely, the cervix, the fundus, and the middle portion of the organ near the location of the internal os. The student should also be made familiar with the relative dangers of such locations of malignancy and also the relative frequency of each, etc.

PROCIDENTIA

Procidentias are clear cut indications for vaginal hysterectomy and yet several recent graduates from our big universities have informed me that they had not seen a vaginal hysterectomy.

The clamp method for removing the uterus in procidentia has a most important function in correcting much of the rectocele and cystocele. I know of no more miserable condition than the patient with a completely prolapsed uterus with big, painful ulcerating areas. Many of these patients are told nothing can be done, whereas, removal of the organ by the clamp method, which may be followed by repair of the cystocele and rectocele, has given the most brilliant results of my experience.

THE ABUSED CERVIX

We are often confronted with a pathologic condition of the cervix which I choose to call the abused cervix. The cervix is very large, even larger than the fundus of the uterus; it has been badly lacerated; its lips are everted and hypertrophied and covered by large eroded areas of granulating tissue. The entire surface may be studded with nabothian cysts, very tender to the touch and adding materially to the size

of the organ, and there may be beginning malignancy. So the cervix has been abused from the standpoint of laceration or injury, and abused from the standpoint of pathologic growth.

Many of these patients with such a cervix are nervous wrecks and fit subjects for the asylum. I have seen such a patient pass into a paroxysm from the mere touch of the cervix. Certainly vaginal hysterectomy is here indicated, as the organ is beyond repair or salvation.

THE BLEEDING UTERUS

We occasionally see a small uterus with no evidence of tumor, which has resisted all conservative means of treatment. Such organ may have to be removed. We often refer to such condition as a fibrosis of the uterus, although there is in reality no fibroid tumor—indeed the organ is often small. Such conditions can best be met by a vaginal hysterectomy.

I have felt for a number of years that in the case of a patient forty years of age or older, the uterus with a polypus protruding from the cervix should be removed, for the reason that very often the fundus of such an organ may contain one or more polypi and malignancy may always be lurking near.

HYSTERECTOMY IN THE FLESHY WOMAN

For the patient forty-five years old or older, who weighs from 180 to 250 pounds (and there are many of them), who is carrying an offending uterus, I feel vaginal hysterectomy is by all odds indicated. These cases are poor subjects for any kind of surgery, their hearts are participating in the fatty degeneration, and their deaths are often the acute tragedies seen by all of us.

Their size does not interfere with the vaginal route; the quick operation and the absence of all elements which contribute to shock and postoperative pneumonia are overwhelmingly in favor of the vaginal hysterectomy clamp method.

Vaginal hysterectomy has been considered a difficult operation. I am sure any operator with ordinary ability can master every detail of the procedure if he will adopt the clamp method of doing the operation and observe one or two technical points in the hysterectomy.

The method used in the Joseph Price Hospital differs from popular teaching in a number of essential features which I believe have made the procedure much more simple, safe, and manageable. Space does not permit me to go into the technical operative steps; such has been illustrated in full in a monograph entitled, *Practical Surgery of the Joseph Price Hospital.*

I have not gone into the relative merits of thoroughness of the vaginal

hysterectomy clamp method as compared with the very radical suprapubic method as advocated by Wertheim.

Some years ago I made a study of the radical suprapubic method of removing the uterus, and I found in examining the specimen removed, after the operation, that my most radical attempt in removal of the uterus and the periuterine structures had often consisted in more of a dissection than the real extent of tissue removed; and further, that a great amount of tissue which I supposed had been removed, remained in the pelvis in the periuterine area.

With the exception of removal of the abdominal glands, I believe that the vaginal hysterectomy clamp method is as radical an operative procedure from the standpoint of potential malignant tissues removed, as it is possible to do.

If we compare the number of patients who die from extension of uterine malignancy through continuity of structure, with those who are lost from involvement of the abdominal glands, much light is thrown on the subject.

Most operators have found the primary mortality of the Wertheim procedure prohibitive, etc.

I will conclude by saying that vaginal hysterectomy has the broadest field of usefulness, the lowest operative mortality, and the best postoperative history of any major operation to my knowledge.

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DR. JAMES W. KENNEDY, Philadelphia, Pa., read a paper on **Vaginal Hysterectomy and Its Indications.** (For original article see page 506.)

DISCUSSION

DR. CHAS. L. BONIFIELD, CINCINNATI, OHIO.—In the first part of the paper the doctor said that many patients do not come to us at the right time, that they go out after strange gods, until it is too late to give surgery the chance to which it is entitled. I think the medical profession is much to blame for this state of affairs. One of the main causes is that hospital care has become so expensive and surgeons have become so mercenary that a man of moderate means regards it as a luxury he cannot afford, and tries other means of cure until in desperation he is driven to the hospital and surgery. The medical profession, I very much fear, has become commercialized, and until we get back to our traditions and put service before remuneration, we cannot expect to have the confidence of the laity that the self-sacrificing old family doctor at one time commanded.

Vaginal hysterectomy came into vogue and for some years was the operation of choice by the great majority of operators, but it has gradually passed from popularity almost to desuetude. There must be some reason for this. There can be no argument that there is less shock following vaginal hysterectomy than there is following abdominal hysterectomy, and it is true that clamps put on the broad ligaments and left there furnish good drainage; but no one can convince me that the pelvis can be cleaned out as thoroughly through the vagina, as through the opened abdomen.

It has been my experience, and I believe that of most operators, that one cannot always tell which patients with cancer of the uterus are going to do well after they

have recovered from the operation. We sometimes get good results when we least expect them.

DR. THOS. B. NOBLE, INDIANAPOLIS, IND.—I do not think there is any debate between vaginal hysterectomy and abdominal hysterectomy any more than there is between cholecystostomy and cholecystectomy. A vaginal hysterectomy should be done when it is indicated. The pathology, the anatomic character of the organs, and the condition of the patient, are the things to be considered. When it can be performed I would always choose a vaginal hysterectomy over the abdominal route for the reason that I believe it is primarily safer; and secondly for the reason that you are not so liable to have postoperative morbidity.

I used clamps for a while when I began the work but I have long since given them up and I feel just as safe in doing a vaginal hysterectomy, depending upon suture, as I do with clamps.

DR. JAMES N. WEST, NEW YORK CITY.—There are several points that the reader brought out in his paper with regard to vaginal hysterectomy that are at variance with my experience and my teaching at the Post-Graduate Hospital in New York. With regard to amputation of the cervix, I consider this one of the most valuable procedures we have for the prevention of cancer. A number of years ago I found on investigation that cancer developed six times as frequently in lacterated as in unlacerated cervixes. I also found that cancer of the cervix developed about six times as frequently as cancer of the body of the uterus.

Then it occurred to me that if by any means we might convert a lacerated cervix again into a healthy organ we might prevent five out of six of our cases of cancer of the cervix, cancer of the cervix developing perhaps on account of the chronic irritation produced through laceration. Undoubtedly that is one of the proofs that cancer is due to chronic irritation. The amputation which I perform is the Emmet method which gives a smooth cervix. I have repeatedly had patients confined after this amputation of the cervix. About one-third of an inch below the internal os should be left. If amputated too high these patients cannot carry a child. After three months there being no circular fibers they would abort.

In regard to vaginal hysterectomy for malignant growth of the body of the uterus, I cannot agree with the reader because when we do an intraabdominal operation, the line of dissection is well out toward the side of the pelvis. We do not necessarily have to expose the ureters or to incur the great primary danger that exists in the complete operation of Wertheim.

In regard to the use of vaginal hysterectomy for complete procidentia, I have been able to cure the most extensive case of longstanding by means of the interposition operation and the plastic work on the posterior vaginal wall and the perineum.

DR. MAURICE I. ROSENTHAL, FORT WAYNE, INDIANA.—As to sudden deaths after hysterectomy for fibroid: There must be a definite pathology back of these sudden deaths and myocarditis is not the answer. These patients do not die from shock or the immediate effects of the operation. They die four, six, nine days or later.

I have had such an experience several times. Now, why do these cases have a tendency to develop embolism? It occurred to me that injury to the intima of the pelvic veins during the course of the operation might account for the formation of the embolus. In abdominal hysterectomy for fibroid tumor the ordinary procedure is to slip in a corkscrew or grasp the tumor with other instruments and deliver the tumor from its position, sometimes deep in the pelvis, into the abdominal wound, placing the broad ligaments to such a degree of tension as to cause injury to the inner lining of the veins.

Having come to this conclusion, I make it a practice to divide the broad ligaments before delivering the tumor into the wound. I believe it is because of this change in

technic that I have had no case of pulmonary embolism following abdominal hysterectomy for fibroid tumor.

DR. RUFUS B. HALL, CINCINNATI, OHIO.—I do not agree with the essayist about total extirpation for procidentia. If you take the uterus out, you may not have a recurrence of the cystocele afterward, but those cases in which you do,—and they are not a few,—will give you more trouble, and are really worse than before your operation. You cannot repair that patient and make her comfortable with any operation; therefore, I abandoned total extirpation for procidentia years and years ago. The most satisfactory operation I have found for procidentia, is transposition of the uterus and repair of the perineum. So far I have not had a recurrence of a cystocele or rectocele or other complications.

DR. WALTER T. DANNREUTHER, NEW YORK CITY.—Many years ago Baldy, of Philadelphia, published some statistics on sudden death following gynecologic operations, consisting of a series of 3,413 cases, 366 of which were hysterectomies for fibroids. In this series of more than 3,000 cases there were sixteen of these sudden postoperative deaths. Thirteen of them occurred in the 366 cases of hysterectomy for fibroid, and three after the 3,047 operations for other conditions. In the last two cases of sudden postoperative death in my own practice, I was fortunate in getting autopsies. We discovered in each instance that the antemortem diagnosis of pulmonary embolism was correct, and further dissection showed the primary clot to be in the femoral vein in both patients.

I have recently had the opportunity of discussing the Wertheim operation personally with Weibel, of Vienna, Warnekros, of Dresden, and Bonney, of London, each of whom has done hundreds of these extensive hysterectomies. They were unanimous in the contention that their operative mortality was only 6 to 8 per cent, despite the fact that they refused to operate on comparatively few cases of carcinoma of the cervix. At first I thought that the extremely low mortality could be explained by the universal use of spinal anesthesia and the unusual technical skill of these surgeons. I soon appreciated, however, that all three emphatically stressed the desirability of leaving the vagina wide open in all complete hysterectomies, packing iodoform gauze laterally above the vaginal stump, and filling the vaginal canal with it. This procedure restricts capillary oozing and the accumulation of blood in the pelvis, both of which are potential sources of postoperative morbidity. Most immediate deaths after wide abdominal hysterectomy are due to pelvic sepsis or shock. In listening to Dr. Kennedy's paper, it struck me that his unusually low mortality after vaginal hysterectomy may probably be attributed largely to the fact that he leaves the vagina open much the same way that the continental operators do after abdominal hysterectomy.