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Vaginal Hysterectomy for Cancer, with Reports of Twenty-one Cases (with Nineteen Recoveries).

BY ERNEST W. CUSHING, M.D.

With Plates I and II.

PLATE I.

FIG. 1.

MALIGNANT ADENOMA OF UTERUS, VAGINAL HYSTERECTOMY.

A Fundus: below this the cavity of uterus is laid open.
B Part of thick friable uterine wall, torn away from part at C.
D Cervix, diseased and sundered from body during operation.
E Ovary.

[See Page 4.]

PLATE II.

Fig. 1 (× 50.)

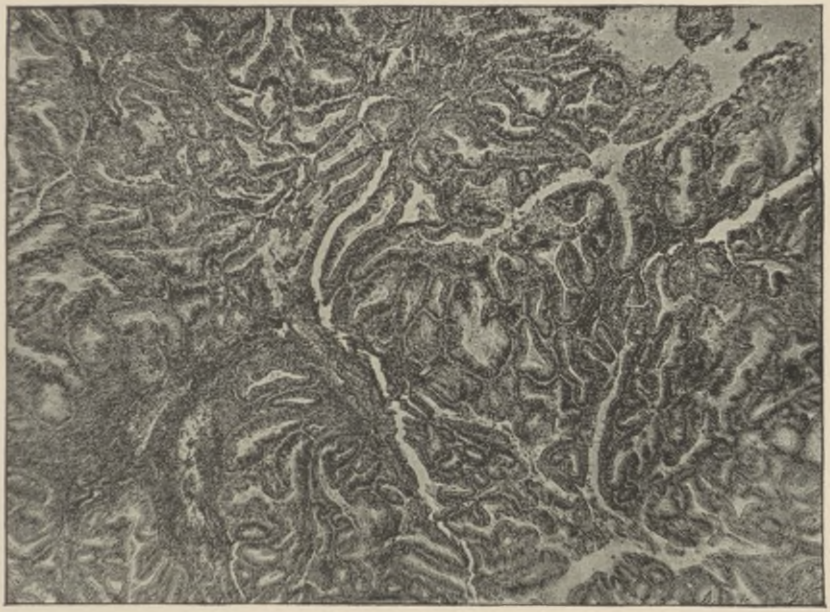
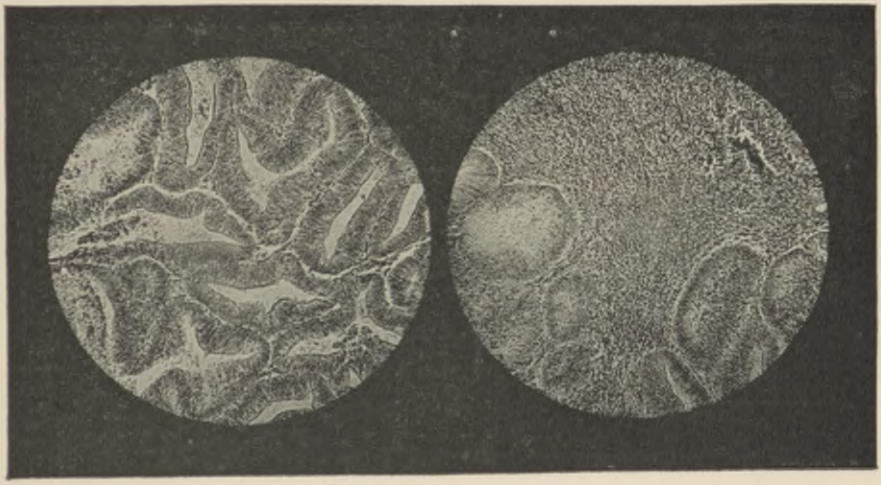


Fig. 2. (× 150.) Fig. 3.



Adenoma of Uterine Mucous Membrane.

From curettings of case shown in Plate I, performed three months before vaginal hysterectomy; four ounces of tissue were removed by the curette.

Fig. 1. New glands with little interglandular tissue.

Fig. 2. The same with higher power, showing columnar epithelium.

Fig. 3. The same, showing budding of glands, in solid sprouts, which afterward became hollow.

[See Page 4.]

Vaginal Hysterectomy for Cancer, with Reports of Twenty-one Cases (with Nineteen Recoveries).[1]

BY ERNEST W. CUSHING, M.D.

With Plates I and II.

I DESIRE, this evening, to call your attention, not so much to the technique of vaginal hysterectomy, as to certain questions concerning the indications for this operation, the choice between total and partial extirpation of the uterus, the limitations within which total extirpation can and should be performed, and the results obtained. I will, therefore, consider these subjects in preference to those of the technique and various methods of the operation.

At the very outset we are met by the question of the diagnosis of cancer of the uterus, and of the differentiation of the various forms of the disease in this organ. Although in many cases it is very easy to make a diagnosis, simply by gross appearances, which are sufficiently familiar to all physicians of experience, yet unfortunately, when the affection has reached a stage where recognition is easy, it is often impossible to perform total extirpation, at least with any prospect of success, and our whole endeavor should be, therefore, to seek a definite diagnosis as early as possible. In the incipient stages of malignant disease total extirpation is easy, and not very dangerous, and it gives excellent prospects of permanent recovery, while if delayed too long, not only does the operation become far more formidable and difficult of accomplishment, but the recurrences are so frequent as to discredit all such operations. It may be said, and by many it is claimed, that when cancer is discovered early, and is limited to the cervix, a partial operation is all that is necessary, and great importance has been attached to the results of Schroeder and Hofmeier. The statistics published by the latter show that a far larger proportion of the cases operated on by Schroeder and himself by high amputation of the cancerous cervix remained freer from relapse than was the case after those operations where the whole uterus was removed; from this fact many writers have jumped at the conclusion that a partial amputation was not only an easier and safer operation than total extirpation, but that it gives the greater security against relapse. To understand this question properly, however, it is necessary to remember that the cases which Schroeder and Hofmeier treated by high amputation of the cervix were those of cancroid (epithelioma), in which the disease was entirely limited to the vaginal portion of the cervix, and were, therefore, cases where the cancer was detected and removed at an early stage, and where it was of a nature tending to remain localized. On the other hand, the cases which Schroeder and Hofmeier operated on by total extirpation were those in which the cervix itself was involved, or where there was malignant disease of the body of the uterus; therefore it is very evident that in their hands the chances of re-

[1] Read, by invitation, before the Obstetrical Society of Boston, March 14, 1891.

lapse after total extirpation were much worse than after the high amputation of the cervix. In other words, they selected for the lighter operation cases of extremely limited and incipient disease, and in such there was, nevertheless, a very large percentage of recurrences, *i. e.*, over fifty per cent. It seems hardly doubtful that there would be fewer recurrences if the whole uterus were removed, even in cases where the disease is merely cancroid of the vaginal portion, and the consensus of opinion among continental observers is now decidedly in favor of removing the whole organ whenever the diagnosis of malignant disease is clear. This view of the case I accept without hesitation. It should not be forgotten that the high amputation of the cervix is a difficult and somewhat dangerous operation, requiring a great deal of technical skill. In any case in which this operation can be performed, the total removal of the uterus can be accomplished with little additional difficulty or danger, and affords greater security against hæmorrhage, as well as greater immunity from relapse. The customary classification of malignant disease of the cervix, as established by Schroeder, is (1) cancroid of the vaginal portion (corresponding to what is frequently known as epithelioma); (2) carcinoma of the mucous membrane of the cervix; (3) carcinomatous nodule of the cervix. The specimens here presented and the preparations exhibited under the microscope show these various forms, and it is to be remembered that it is only in the first and rarest of these three varieties that there is any claim of the efficiency of partial removal of the uterus. In both the other varieties, common by consent, total extirpation should be performed immediately on discovery of the disease, if haply it is not already too late to accomplish it.

It must not be forgotten that where carcinomatous disease of the cervix is present, even when the affection is limited to the vaginal portion, it is always possible that the malady may also extend to the fundus, and for this reason alone, if for no other, total extirpation is indicated in all cases. I am aware that Hofmeier contends that there are but very few authenticated cases of simultaneous affection of the fundus and vaginal portion, except where the process is primary in the fundus, and secondary in the vaginal portion. Although, however, this view may be maintained academically, and as a matter of rigid microscopical diagnosis, rejecting all cases where the description of the microscopical preparations is not entirely satisfactory, yet practically it is certainly possible, in a given case of malignant disease of the cervix, that portions of the tissue above the internal os may be affected with similar disease, either secondarily or primarily, whether by continuous spread of the degeneration or by the formation of an independent focus; such a possibility is sufficient to make total extirpation preferable to high amputation, for the slightly increased risk of the operation is much less important than the terrible danger of relapse, or rather of the continued existence and progress of an undiscovered focus of disease. What surgeon would be content to excise a carcinomatous nipple with the adjacent parts only? Do not conscientious operators try to remove not only all portions of the mammary gland, but even the contents of the

axilla, because by doing so, although the primary mortality of the operation for cancer of the breast is largely increased, the chances of relapse are diminished in a much greater proportion?

In regard to the diagnosis of cancer of the cervix I shall say little, as the subject is elaborately discussed in all the text-books. In many cases the diagnosis is perfectly simple, but in others it can only be made by the microscope. I will only emphasize here the manifest duty of the general practitioner, to make a careful physical examination of women who complain of irregular hæmorrhages; especially when they are over 30 years of age is the existence of cancer to be considered, and many valuable lives would be saved if physicians would examine their patients carefully instead of prescribing for menorrhagia and metrorrhagia, as if these were diseases in themselves, and not mere symptoms, imperatively demanding an accurate diagnosis. When examination, however, is inconclusive and merely shows a raw and angry condition of some part of the os externum, usually the site of a laceration from some previous labor, particularly if the condition is intractable under treatment, and if the place bleeds easily when touched, a sufficient piece should be removed to permit of a microscopic examination by an expert. For this purpose a wedge-shaped fragment should be excised with scissors, going rather deeply into the tissues of the cervix. If bleeding is severe, and is not controlled by styptic cotton, a stitch may be necessary to stop it. When the tissues are friable, so that a considerable portion can be removed with a sharp spoon or with the finger-nail, the affection is almost certainly malignant.

In regard to malignant disease of the body of the uterus, I suppose that there is no question but what total extirpation is imperatively indicated, whenever it can be accomplished, and as soon as a diagnosis can be made. Here again the microscope is of the greatest advantage, for the hæmorrhages are usually such as to call for curetting, and diagnosis of malignancy can be made without difficulty from the masses removed by the curette, not only by the aid of the microscope, but often by their gross appearance, the fragments being whitish, thick and friable, and quite unlike mucous membrane. Here again the greatest service can be done by our profession, by teaching the women who are under their care that irregular hæmorrhages at the time of the menopause, especially when protracted and severe, are not to be simply considered as almost necessary phenomena of the change of life.

The beliefs of the laity in medical matters are not mere superstition, but usually reflect pretty accurately those theories which were current in the medical profession from twenty to forty years previously. The women of the present generation are vastly better informed about their generative organs and functions than were their mothers or grandmothers. It is very probable that they know a great deal more about these subjects than is good for them; but, at any rate, one thing should be assiduously taught and insisted on by the profession, and that is that irregular and profuse hæmorrhages, especially after the menopause, are of very serious import. In this connection I wish to call atten-

tion to a condition which is not very uncommon, and which is not usually well understood, viz., to a transition state of adenomatous thickening of the mucous membrane of the body of the uterus in elderly women, which finally degenerates into carcinoma. (Plate I.) In these cases, after the menopause has been established perhaps for several years, irregular hæmorrhages begin, which are usually relieved by curetting; this operation has to be repeated many times, at intervals of a few months, very considerable masses of tissue, resembling mucous membrane, being removed, which, under the microscope, are found to be composed almost entirely of glands with very little intervening connective tissue. (Plate II, Figs. 1, 2, 3.) All these cases eventually terminate in carcinoma, and therefore total extirpation should not be delayed, although I have known the radical operation to be discountenanced by a pathological expert who misinterpreted the microscopical appearances as implying a benign hyperplasia of the uterine mucous membrane.

I have now performed the operation for vaginal hysterectomy twenty-one times, in every case for cancer or malignant adenoma of the uterus; the youngest patient was 26, the oldest 66 years of age. All the patients recovered from the immediate effects of the operation, except one, who was operated upon in another State, and was not seen by me after the operation, and who died at the end of a week, with symptoms of peritonitis, with very obstinate vomiting. Another patient, one of the early cases, where the disease had invaded the left broad ligament so that the clamps had to be applied in unhealthy tissue, did very well for ten days, so that she was considered out of all danger. She felt so well that, without permission, she sat up in bed to take her supper. The same night the patient in the next bed heard her make a strange sound, and saw her make a convulsive movement; the night nurse, who quickly went to her bedside, found her dead. No autopsy was made, but it was thought probable that death was attributable to embolus from the detachment of a clot in the stump. All the other cases recovered, having a remarkably easy convalescence. One case was operated on ten months ago in Providence, Rhode Island, where the disease had advanced in the anterior and posterior cul de sac so far that the removal of what remained of the uterus was performed as the best means of taking away as much of the disease as possible, and of giving security against hæmorrhage, although it was certain that all of the carcinomatous tissue was not removed. This patient, however, was able to get up, and did well for several months after the operation, and is still living. Subtracting from the whole number of twenty-one cases the one which died from the operation, and three cases, including the two above mentioned, where the whole of the diseased tissue could not be removed, and one of whom died, there remained seventeen cases where, with greater or less difficulty, the whole uterus was removed and the clamps applied to apparently healthy tissue. Six of these operations have been performed within the last six months and are, therefore, unavailable as far as regards the question of recurrence. At any rate, the patients are doing well so far. Of the eleven other cases which recovered and which have been

operated on for a year or more, three are dead, and one will soon die from recurrence of the cancer. The other seven are in excellent health, as well as the six recent cases above referred to. With a single exception, already mentioned, the convalescence was extremely easy and uneventful. There was no elevation of temperature or any sign of peritonitis. The scars left in the vagina were smooth and painless. One patient has since married, and another proposes to commit matrimony at an early date. In two cases the bladder was injured at the time of the operation, and in three others the patients began to "leak" a few days after the operation. In all these cases, however, I had no difficulty in repairing the fistula at a later date. In two it closed of itself. In one the opening into the bladder was complicated by a section of the ureter, which emptied into the vagina; I succeeded, however, in passing a sound through the urethra and bladder out into the vagina and then into the contiguous opening of the ureter. Then by a plastic operation I covered the sound in with mucous membrane, so that the ureter was turned into the bladder and gave no further trouble.

The original operation in this case had been a very difficult one, and the cervix had already been curetted and cauterized in another hospital.

In regard to the technique of the operation, I will not occupy much of your time. I always use clamps instead of ligatures, not only because thereby the operation is shortened, and hæmorrhage more safely controlled, but because the weight of the handles of the clamps insures thorough drainage, and the tissues seized by the clamps can be crushed, and the lymphatics obliterated, before the scissors are used, thus diminishing the chances of cancerous infection of the lymphatics of the stumps and broad ligaments, and permitting the severance of the latter further from the uterus than would be possible by the use of the ligature alone.

I have brought here for your inspection the uteri removed by total extirpation in the case above referred to; an inspection of these will give, better than any description, an idea of the condition of the cancerous uterus; of the tendency of the affection to extend above the internal os; of the varying distance, both in front and behind, at which the peritoneum is reflected from the body or neck of the uterus; of the adhesions which may tie down the fundus or hold the tubes and ovaries fixed, thereby greatly complicating the operation and rendering it extremely difficult. Of all the twenty-one cases, I can remember only five where the organ could be easily drawn down and the clamps applied with the facility described in some accounts of the operation; in two cases there were present small ovarian tumors, which were removed through the vaginal opening; one was a dermoid, one a multilocular cyst. Besides the cases reported above, I have twice opened the abdomen from above, and once from the posterior cul de sac, to decide as to the feasibility of total extirpation, but have found the disease spreading to such an extent as to contraindicate any attempt to perform such an operation. All of these three patients recovered from the exploratory incision without any difficulty.

The preparations exhibited under the microscopes, and others which I

have brought to-night, show very well the appearances of carcinoma of the uterus. Some of them I made myself, and some were kindly made from my specimens by Drs. Haddock, of Beverly, and Cottrell, of Boston. I call particular attention to the preparations showing the carcinomatous degeneration of the uterine gland,[1] and to those displaying the peculiar structure of malignant adenoma.[2] In regard to the limitations of this operation, they are well defined, and the results as to recurrence have been much better since the operation has been refused in unsuitable cases. The main point is to be sure that the disease has not invaded the broad ligament to such an extent that cancerous tissue would have to be left within or beyond the grasp of the clamps. This can usually best be determined by examination through the rectum, especially when the uterus is drawn down with the bullet forceps or tenaculum. Of course, cases where the disease has spread over the vagina, or has involved the tissues about the rectum or bladder, or where there are deposits in the pelvis, or metastases in other organs, are unsuitable for operation. Secondly, the uterus must be reasonably movable, so that it can be drawn down, as the presence of old adhesions, even when not of a malignant nature, is a very serious complication, which can only be overcome by carefully separating the adhesions with the fingers in the space of Douglas, as was done in some of the above cases, or by making an abdominal incision for this purpose, which, of course, greatly increases the severity of the operation.

Thirdly, the vagina and the space between the pelvic bones must be wide enough in comparison with the size of the tumor to allow the removal of the latter. This condition applies particularly to women who have never had children, and in whom malignant disease generally attacks the body of the uterus, whereas in women who have borne children the cervix is usually affected.

Operation may also be contraindicated by the presence of serious disease of other organs, or by great weakness from cachexia, or from loss of blood, although in the latter condition a preliminary operation of scraping and burning out the diseased mass, followed by rest in bed, attention to cleanliness, liberal food and tonics, will sometimes bring the patient into a condition which permits the performance of radical operation.

[1] See micro-photographs in Martin, Diseases of Women, 2d Am. Ed. Plates XVII-XXVIII.

[2] Plate II.

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