Original Articles.

CANCER OF THE UTERUS.

REMARKS ON CANCER OF THE UTERUS.¹

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I. *Under what conditions may we expect permanent relief from the removal of a malignant growth?*

Permanent relief by extirpation of the uterus may reasonably be expected when the disease is confined to the uterus. When the disease has invaded extra-uterine tissues, or even when it has appeared at the surface of the uterus, whether cervix or fundus, a permanent cure cannot reasonably be expected, even after the most radical operation. Even when the disease is confined to the uterus and the operation is a radical one, there is always danger of recurrence from infection of the freshly dissected tissues by the cells of the disease. Unfortunately, in a given case it is impossible to predict whether there will be a permanent cure or not, because it will be impossible to tell whether the disease is strictly confined to the uterus. Furthermore, it is impossible in any case to tell whether by dissection healthy tissues have not become infected. When in cancer of the cervix the disease presents in the os, when it has not reached the vaginal mucous membrane, when it has not reached the layers of the broad ligament; when in cancer of the fundus it has not reached the peritoneal surfaces and when there is no involvement of the lymph nodes of the pelvis, thorough extirpation justifies the hope that in a considerable percentage of cases permanent cure will be attained. (See also No. VI.).

II. *Is the removal of a malignant growth advisable, even though a cure is not reasonably to be expected and the general condition of the patient may even be aggravated?*

No; the removal of a malignant growth of the uterus under these conditions is not only not advisable, but it is not justifiable. Unless the attempted extirpation of the growth itself, or of the whole uterus, promises at least amelioration of symptoms, no such operation is justifiable. If such operation, however, promises relief from pain, from hemorrhage, from foul-smelling discharge, the operation is more than advisable, it is demanded.

This question (II) assumes that there are conditions under which the removal of a malignant growth will cause an aggravation of the symptoms. Such a condition of things is, in my experience, not to be expected. The only aggravation of symptoms probable is that following errors in technique: wounding of the bladder, and a vesicovaginal fistula; wounding of the ureter, and a ureterovaginal fistula; wounding of the rectum or intestine, and a recto- or enterovaginal fistula. The operation may be followed by chronic in-

testinal obstruction from adhesions; acute intestinal obstruction from adhesions. These are the only aggravations of symptoms likely to follow the palliative operations upon malignant growths; but such aggravations of symptoms are to be expected in only a small percentage of cases. The benefits of palliative operations are so great that the chances of increasing the patient's suffering may well be risked.

III. *Is the extirpation of the carcinomatous non-prolapsed uterus to be considered as one of the duties of the surgeon?*

Yes; the extirpation of the carcinomatous non-prolapsed uterus should always be considered as one of the duties of the surgeon. The conditions under which such a uterus should be extirpated will be considered under other questions. (See No. I.) Even in apparently hopeless cases the surgeon will be surprised at times to find a permanent cure. In other cases, in which the outlook is apparently more encouraging, he must not be surprised to find an early recurrence. The only contra-indication to the removal of a carcinomatous non-prolapsed uterus is to be found either in local hopelessness of the disease, in abnormal conditions of other viscera, or in the patient's bad general condition. A patient who is tolerably comfortable, and who has perhaps several years of life before her, should not be subjected to a hysterectomy if her general condition is such that she is not likely to recover from the operation itself, or if the condition of special viscera (heart, kidneys, lungs, liver) is such as to make the prognosis distinctly unfavorable.

IV. *If so, (a) what is the best method; (b) how is it to be done; (c) what special precautions are necessary; (d) what are the dangers, and how are they to be guarded against?*

(a) *What is the best method?*—If extirpation is the duty of the surgeon, the best method will depend upon many circumstances. I am in favor of vaginal hysterectomy when the uterus is movable, when the disease is distinctly confined to the cervix, and when the vagina is capacious. The objections to this method are the impossibilities of determining the exact condition of the pelvic viscera, of the broad ligament, of the lymph nodes, and of remote organs of the abdomen; the danger of adhesions between the raw surfaces of the broad ligament and the intestine, with resulting intestinal obstruction; the somewhat greater danger of wounding the ureters; the slightly increased dangers of hemorrhage; the impossibility of intelligent dissection of the ureters, bladder, broad ligaments and intestine.

When the disease is confined to the fundus I prefer abdominal hysterectomy. When the vagina is small, the uterus fixed, the fundus large, I prefer the abdominal route.

When it is necessary to dissect carefully the cervix and the vaginal mucous membrane, and to excise with the cervix a broad margin of vagina, and when the uterus is more or less fixed and

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the vagina small, I perform the combined vaginal and abdominal operation. The cervix is first thoroughly freed from below as far as the peritoneum, and the operation is completed from above.

(b) *How is it to be done?*—The methods of performing the vaginal operation, the abdominal, and the combined vaginal and abdominal, are beyond the scope of the present communication. I have already described in detail in this journal my methods of operating.

(c) *What special precautions are necessary?*—The special precautions in hysterectomy, by whatever route, are the avoidance of injury to bladder, rectum, and, more particularly, the ureters. In broad dissections about the cervix in cancer, full demonstration of the ureter is, in my opinion, essential, in order, first, that it may be avoided; and secondly, that the dissection may be as thorough as the ureteral contiguity can possibly permit. It is essential in every case that the ureter be uncovered far above the disease, and that it be followed through the pericervical tissues to the bladder. Avoidance of injury can be insured only by this method. Wounds of the bladder and rectum are likely to occur only in rapid and careless dissections.

Another essential precaution in cancer of the uterus, is the avoidance as far as possible of contaminating the field with the foul discharges of the disease. This is always accomplished best in vaginal hysterectomy, for the surgeon is all the time working away from the abdominal cavity. It is more likely to occur in abdominal hysterectomy, for in that operation the surgeon is always working toward the abdominal cavity. As a rule, however, infections are very rare, even in the foulest cases.

A final precaution is absolute hemostasis. Time spent in complete control of the blood is time well spent. Complete hemostasis should always be insisted upon unless the patient's condition is too bad to justify spending the time to establish it.

(d) *What are the dangers? and how are they to be guarded against?*—The dangers of hysterectomy have already been suggested in the special precautions just mentioned. In my experience the cause of death has almost always been uremia. Occasionally patients have died of exhaustion without any evidence at autopsy of local or general peritonitis. In two instances death from pulmonary embolism has followed hysterectomy for fibroids. The dangers of embolism can not be guarded against. There is, in my opinion, no known method by which phlebitis can be anticipated or avoided. The other dangers—those of dissection, of hemorrhage, of infection—may be avoided by extreme care.

V. *What cases, considering location and extent of the disease, are to be operated upon?*

For radical cure only those cases should be operated upon in which the disease is confined to the uterus, if in the uterine body; to the cervix, if in the cervix, though cure may be attempted if a very limited area only of the vaginal mem-

brane is involved. Thickened masses in the broad ligament, remote metastases, infiltrations about the ureters, infiltrations of the vagina, the rectum, and the bladder—all are distinct contra-indications to hysterectomy. The number of cases suitable for this operation are therefore extremely small. Not one case in ten—I have sometimes thought not one case in fifty—justifies the radical operation. No case should be operated upon in which there are contra-indications in the patient's general condition or in other viscera.

VI. *Can a satisfactory diagnosis be made in the individual case as to the feasibility and successful issue of the operation?*

In the majority of cases—in at least 90%—a satisfactory diagnosis can be made that the operation is not feasible, and that the issue will not be successful. Of the remaining 10% which seem favorable, dissection will show that in a considerable number extirpation is not feasible, and a successful issue is not to be expected. In others everything will favor both feasibility and successful issue. In some, however, in which success and feasibility seem unquestionable, failure and disaster will follow. In still others in which the outlook is not so favorable, unexpected success will result. A satisfactory diagnosis as to feasibility and successful issue can always be made by the abdominal route. Exploration in many doubtful cases will show that the prognosis is more favorable than was anticipated; in others less favorable.

VII. *Is the cure complete with the successful issue of the operation and healing of the incision, or are further therapeutic measures indicated?*

This question seems a little too absurd for answer. No operator of experience would look upon convalescence from the operation and healing of the incision as a successful issue of the case. So far as I am aware, however, no further therapeutic measures are indicated, there being, in my judgment, no possible prophylaxis by medication or by medical treatment. The patient should be frequently observed. If there is the least recurrence it should be at once dissected out, when dissection is possible. Unfortunately, in the great majority of cases recurrence of the disease is imperceptible, the inflammatory exudations of the healing process being indistinguishable from the infiltrations of a recurrence. If after the inflammation has thoroughly subsided and everything is soft and lax, small nodules can be felt, these may be removed, though, as a rule, operations for recurrences are difficult and unsatisfactory. If at the end of three years there is no evidence of recurrence, a permanent cure seems probable. If at the end of five years there is no recurrence, the disease may be looked upon as permanently cured.

A CHILD is born every three minutes and a death is recorded every five minutes in London. — *Philadelphia Medical Journal*.