Early Diagnosis of Cancer of the Uterus; Operative Technic.

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In the various portions of the mucous membrane of the uterus three definite varieties are to be found. The mucosa, covering the vaginal portion of the cervix, is made up of squamous epithelium; that between the external and internal os consists mainly of racemose or branching glands which secrete a varying quantity of mucus; whereas in the portion that lines the cavity of the uterus are numerous tubular glands differing totally from those of the cervix. From each of these types of mucosa cancer may develop.

In cancer of the uterus there occurs an outgrowth from the surface of the mucosa, while at the same time the growth penetrates into the underlying tissue. The cancerous tissue in the beginning is so rich in blood vessels that the slightest disturbance of the growth is liable to cause bleeding, and not infrequently an increased blood pressure is sufficient to bring about a faint show. As the growth advances, the older and more friable portions become necrotic and there results a breaking down which gives rise to a watery discharge, often tinged with blood and frequently fetid. This discharge is usually the first symptom of cancer, but it may be totally wanting until the growth has reached large proportions. Cancer of the uterus is most common between the thirty-fifth and fiftieth years, but it is occasionally noted in patients under twenty-five years of age.

Any bloody or watery vaginal discharge that can not be definitely accounted for demands an immediate and careful local examination. If on bimanual examination the cervix is found to be rough, friable and bleeding, the diagnosis of cancer is usually certain; but if the cervix is still intact, the diagnosis may be very difficult. In early carcinoma of the cervix, when no disintegration has occurred, the surface is usually nodular, and springing from it are fine finger-like outgrowths which bleed readily.

In every case a careful history should be taken but, even after all possible data have been obtained and after a thorough bimanual examination, it will not rarely happen that the physician can not determine to his satisfaction whether malignancy exists or not. In such cases a wedge of the suspicious area (about one cm. deep and two or three mm. broad) should be cut out, dropped at once into a ten per cent. formalin solution and sent to the pathologist, who in the course of a few days will be able to decide with almost absolute certainty whether cancer is present or not.

When the cervix, on bimanual examination, appears normal, the lesion is usually situated in the cervical canal or in the cavity of the uterus. The finding of an enlarged and nodular uterus renders it probable that myomata are present. When myomata are of the submucous variety, the monthly periods are usually excessive, but as a rule no intermenstrual bleeding occurs and no fetid discharge exists, unless sloughing of a submucous

nodule is going on. In the latter case, however, portions of the growth are apt to be found projecting from the cervix, and such sloughing masses are readily distinguishable from cancer of the cervix, because they are tough and not friable, and because the finger can be swept around them, proving that they have originated at a point higher up.

Extrauterine pregnancy frequently gives rise to intermenstrual bleeding and occasionally to a slight menstrual discharge, but in these cases we usually have a history of a missed period or of a period that has persisted, and in addition there is frequently the localized pain caused by the gradual distention of the tube. Finally, the bimanual examination will often reveal the definite, velvety mass to one side of the uterus.

Pelvic inflammatory conditions are at times accompanied by a bloody or watery vaginal discharge. In these cases we can usually learn that there has been some recent local vaginal infection or that an old pelvic lesion has recently been rekindled. In such cases there is often more or less elevation of temperature, whereas in early cancer there is no fever.

When the patient is stout, a satisfactory bimanual examination is often impossible, unless an anesthetic is employed. When the cervix feels normal and we have excluded myomata of the uterus and lesions of the adnexa, the cause of the bleeding usually lies in the cervical canal or in the cavity of the uterus. Whatever the uterine growth, it must drain into the uterine canal, otherwise there would be no vaginal discharge.

In such cases the uterus should be most thoroughly cureted. The mucosa should be brought away from the anterior, posterior and lateral walls and likewise from the cervical canal. If much tissue is obtained, it is probable that malignancy exists. All of this tissue, including the blood, should be thrown into a ten per cent. formalin solution without preliminary washing and sent to the pathologist.

In some cases the pathologist has considerable difficulty in saying whether a given specimen is cancerous or not, but, as a rule, there is just as much difference under the microscope between cancerous and healthy mucosa as there is between two totally different patterns of wall paper. Although there is always a possibility of error, so exact is the aid obtained from the microscope in the examination of scrapings that in every instance during the last sixteen years in which we have made a microscopic diagnosis of cancer and have later examined the uterus, definite macroscopic evidence of cancer was present. Naturally, a thorough knowledge of the various pictures due to faulty hardening of the tissues, to gland hypertrophy with or without pregnancy, and those peculiar to the normal mucosa, in early life, during menstruation and in old age, is necessary before one can undertake to pass judgment on the character of scrapings.

From no other part of the body is it possible to so easily obtain material for diagnosis. Take, for instance, cancer of the stomach; how thankful the operator would be were it possible to just introduce a straight curet to the pylorus and bring away some tissue for diagnosis, without the necessity of making any incision or of doing any suturing. For the early diagnosis of cancer of the stomach, an exploratory operation is usually necessary. We as general practitioners and surgeons have absolutely no excuse for failing to diagnose cancer of the uterus within one week after the first time the patient comes under our observation.

THE BEST OPERATIVE TECHNIC.

To speak of the operative technic for cancer of the uterus before a Pennsylvania audience is akin to bringing coals to Newcastle when among others of your number

an old friend of mine, Dr. John Clark, has contributed so much to our knowledge of the subject. The operation as elaborated by Wertheim seems to offer the best results. It consists in the removal of the uterus, appendages and parametrium and often also of the pelvic lymph glands.

It is now generally recognized that the greatest dangers of the radical operation are due to the shock that immediately follows. More recent experience has shown that it is possible to lessen this shock in two ways, (1) by shortening the duration of the operation, (2) by keeping the patient warm while she is on the table and afterwards.

With the abundant flood of "sunshine," as furnished by Krönig's light, the operator can often save from fifteen to thirty minutes. This light should be in every operating room where much abdominal work is done.

The chief bleeding encountered in the radical operation is from the vaginal plexus of veins. The long, short-curved, Wertheim forceps enables one to clamp and cut the vessels with great facility, thereby often saving from ten to fifteen minutes. As was said before, this shortening of the operation by even ten minutes is all important.

By means of Krönig's electrically heated table the patient can be kept at an equable temperature and usually leaves the operating room in an infinitely better condition than when the ordinary table is used. The patient is cleaned up on the regular table, and after being thoroughly dried is placed on double blankets laid over the electric table. It is always necessary to have a special nurse or assistant guard against any danger of burning the patient, and the current should be turned on and off as necessary in order that a reasonably equable temperature may be maintained. In the course of a few weeks I operated on six cancer patients in succession and, although in some of them the operation was a most extensive one and the patients were weak, in not one case did there occur the marked degree of post-operative shock so often noted.

In the time at my disposal I have merely sketched the salient features in the diagnosis and treatment of cancer of the uterus and have omitted any consideration of polypi, adenomyoma, sarcoma and chorio-epithelioma.

In conclusion, I can not refrain from quoting an appeal made by the late J. Knowsley Thornton some years ago, at once an appeal to us as medical men and one of the severest arraignments of our profession that has ever been made in our management of cancer of the uterus.

How is an early diagnosis to be made? Clearly by neglecting no menstrual departure from the normal, however trivial it may at first sight appear, but at once to encourage the patient to accurately describe symptoms, and above all to insist in the most determined manner on a local examination. Here it will be apparent that I, as a consultant, appeal for help to the great body of those who are now listening to my remarks, to my professional brethren engaged in general practice. I, in common with those situated as I am, too seldom have an opportunity of diagnosing early, because the majority of the patients come to us too late, when the disease has already advanced nearly or quite beyond the limits of surgical aid. Let me then appeal to all engaged in family practice who listen to me here, and to that larger body who may read my words when reproduced in the medical journals, to sternly cast aside that too great modesty or that tendency to treat as trivial small symptoms, and to at once take alarm about, and carefully investigate, every case in which there is brought to their notice an abnormality in menstruation, or a vaginal discharge of any kind, however trifling. A very grave responsibility lies at the doors of the medical profession for the small progress made in the early diagnosis of uterine cancer and its successful treatment. How constantly is the consultant told: "I mentioned it to my doctor weeks or months ago, but he said, 'Oh, it is nothing; I will send you a little medicine or a little injection' and never even suggested any internal examination, so I did

not like to trouble him again till the pain became so bad or the discharge so troublesome, and then he examined me and said I must have special advice at once"? Invaluable weeks or months gone, and then the verdict of the consultant, "It is not a case for operation," which really means "You have come too late," but can not be so candidly expressed, because he must guard the reputation of his professional brother. I admit that the false modesty of the patient, especially in some classes of society, makes the position a difficult one, especially for the young family doctor, but let me implore you all to awake to what is at stake, and to be firm in your demand for an examination, and if you have any doubt after such an examination, to urge that the patient should at once seek the advice of some one who has larger opportunities than yourself for forming a sound opinion. I will go one step further, and ask you, if there should be any to whom such a temptation comes, never to go on treating a case in which there is a shadow of doubt, either because you doubt or because you want practice; if the case is susceptible of treatment at all, it is only surgical treatment which can avail, and that of so severe a kind that it requires the knowledge of the specialist if ever any disease did or does require special knowledge and special skill in operative treatment.

EARLY TUBERCULOSIS OF THE CERVIX

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EARLY TUBERCULOSIS OF THE CERVIX [1]

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A FEW weeks ago, when taking up diseases of the cervix with my class in Gynecological Pathology at the Johns Hopkins Hospital, we encountered the following striking example of very early tuberculosis of the cervix:

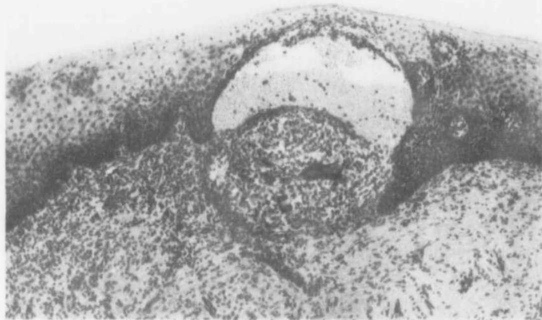
Gyn. Nos. 19,534 and 20,660. The patient, a healthy looking colored woman, 25 years of age, was admitted to the Johns Hopkins Hospital on October 16, 1914, complaining that she had been discharging fæcal matter through the vagina for two years. She had been married six years but had never been pregnant. Her menses had begun at 19, but for the last five years she had had no periods.

At operation Dr. J. Craig Neel, the resident gynecologist, found the uterus in retroposition and the bladder adherent to it above the internal os. The sigmoid was adherent to the vesico-uterine reflection just above the level of the internal os. The right tube and ovary had become twisted over the anterior surface of the uterus.

The bladder and tube were freed and the fistula between the vagina and rectum was cut across. The small opening in the sigmoid was closed. The uterus which contained several myomata was now removed, a complete hysterectomy being done.

The laboratory diagnosis was: *bilateral follicular salpingitis, uterine myomata, tuberculosis of the endometrium, tuberculosis of the cervix.*

The photograph of an area from the section of the cervix shows at each outer portion of the picture normal squamous epithelium with a normal underlying stroma. In the center, the superficial portion of the squamous epithelium is still intact; the underlying layers of epithelium are missing, and a crescentic space is seen filled with blood. Immediately beneath this is a tubercle, occupying partly the epithelial layer and partly the underlying stroma. It is sharply circumscribed, consists of epithelioid cells and contains several types of giant cells. The stroma on the left shows small round-cell infiltration.



Gyn. Nos. 19,534 and 20,660; Gyn.-Path. No. 20,640. The tuberculous process was much more advanced in the mucosa lining the cavity of the uterus than in the cervix. The cervical mucosa is intact. In the center of the field is a well-defined tubercle consisting of epithelioid cells and containing giant cells of various types. Between the tubercle and the overlying squamous epithelium is a crescentic space filled with blood. The stroma to the left of the tubercle shows some small round-cell infiltration.

Tuberculosis of the cervix is rare, and such an early stage as is here depicted I have never seen before.

[1] From the Gynecological Department of the Johns Hopkins Medical Schooland of the Johns Hopkins Hospital. Read before the Southern Surgical and Gynecological Association, Cincinnati, December 13-15, 1915.