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THE EARLY RECOGNITION OF CARCINOMA OF THE CERVIX.*

By Hunter Robb, M. D.,
Professor of Gynæcology, Western Reserve University, Cleveland, Ohio.

In the paper which I shall read to-day I can not boast of any great amount of originality. All the work that has been done of late years upon carcinoma, although it has given us a great deal of additional knowledge as to the pathological changes which occur in the course of this disease, has not as yet taught us the ultimate cause for its existence.

All the vaunted remedies which have been tried, some without harm but many more with the most pernicious results, from the Canadian pine (which seemed when first tried in the hands of good men to give almost miraculous results) down to the various caustics with which innocent patients are still tortured by charlatans who profess to know everything, or by ignorant practitioners who ought to know at least something—all have been laid aside by the best authorities, and it is generally allowed that the only chance of complete cure lies in the extermination by means of the knife of all the neoplasm. But we know to our cost that although in many cases we are able to take away the greater portion of the growth, and thereby afford the patient comparative comfort and give her a respite for weeks, months, or years, yet if the smallest portion of the tumor or of a metastasis be left, a return of the disease is absolutely certain.

In what way, then, have we made any advance? Or are we in the same position as we were twenty years ago? It would indeed be disheartening if all the work which has been done is to go for nothing; and although the number of cases of carcinoma is still considerable in our mortality statistics, the death-rate has undoubtedly been much diminished of late years.

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To what, then, can we attribute this progress? First to our better technique, which has rendered capital operations less dangerous in themselves; but, secondly (and this is the point which I wish to illustrate to-day), we are beginning to save lives because we have learned to recognize the disease in its earlier stages, while it is still possible to remove all the new growth.

The cases which I intend to speak of to-day are those of epithelioma of the cervix uteri.

Cancer of the cervix is one of the commonest of the severe diseases met with in gynæcology, and, according to our present statistics, occurs more than fifty times as often as cancer of the corpus uteri. While as to the ætiology of corporeal cancer we can say nothing, since it comes alike to the married and unmarried woman, of cancer of the cervix we can absolutely affirm that it is intimately connected with the bearing of children or with miscarriages. Taking the statistics of a long list of cases, it was found that the average number of children borne by each patient was four.

If the cancer be recognized before it has obliterated all the ordinary landmarks, we shall frequently notice more or less laceration of the cervix. Is it not more than probable then that in the lacerated cervix with infiltration and eversion of the lips we have a direct prolific cause of cancer? Dr. Howard A. Kelly a year or so ago said that he had seen only three cases of cancer of the cervix in virgins, and that in one of these there had been laceration of the cervix from forcible dilatation.

Schröder distinguishes three forms of cancer of the cervix—(1) the superficial cancroid of the vaginal portion; (2) carcinoma of the mucous membrane of the cervix; (3) cancerous nodule of the cervix.

The first of these may develop from apparently benign papillary growths, and may exist for a long time under the form of polypoid structures or superficial ulcerations. In the second form the pathological process begins under the cylindrical epithelium and grows into the submucous tissues. The third form begins as a nodule of the cervix which has developed as a circumscribed tumor underneath the mucous membrane, the latter showing at first no signs of malignant disease. As the tumor grows, however, it disintegrates internally, and finally perforates the previously intact mucous membrane; then, but not till then, we have loss of continuity of the surface, and an ulcer which would lead even the most unskillful to suspect the existence of a carcinoma.

Extension takes place in all forms in one of two ways: (1) by

contiguity—that is, by gradual infiltration of the surrounding tissues; or (2) the virus can be carried to any portion of the body through the lymphatics and give rise to metastases.

I think it will be conceded that the diagnosis of carcinoma of the cervix is generally easy after the disease has reached a certain point. In the first place, the symptoms, although not always definite, are usually sufficient to arouse our suspicion. The three most important ones are (1) protracted hæmorrhage, (2) excessive secretion, and (3) pain.

But as a matter of fact carcinoma of the cervix can exist for a long time without giving rise to any particular symptoms, and before all I would insist that pain does not generally appear until the process has invaded the tissues surrounding the uterus.

Now, it is well known that the taking away of these tissues so that every metastasis can be removed is an exceedingly difficult and uncertain procedure, and it is exactly this point which I wish to emphasize and, if possible, illustrate to-day—namely, that if we want to do the best for our patient and insure her recovery, we must find some method of making the diagnosis in many cases even before she suspects anything herself. This is not always in our power, because, unfortunately, the patient does not present herself for examination in time. When this occurs the physician must of course be held guiltless; but it is just in such cases that the family physician, who has been in attendance upon the patient in her labors and who has gained her confidence, can institute such procedures as will lead finally, I hope, to a regularly established prophylactic treatment of carcinoma of the genital tract.

For the prophylaxis of carcinoma the following measures have been suggested by Dr. Kelly. They may be arranged under four headings:

(1) Within two or three months after each confinement every woman should submit to a careful examination and the exact condition of the pelvic outlet and of the cervix should be noted. The examiner should particularly observe whether the cervix is lacerated and infiltrated, or whether the lips are everted, and should get a clear idea of the size and position of the uterus.

When laceration or infiltration is found, the condition should be treated either by puncture and depletory packs or else the lips should be freshened up and the laceration should be united by means of sutures; (2) every woman with a deeply lacerated and enlarged cervix should be operated upon; (3) every woman with a family his-

tory of cancer who presents a laceration of the cervix, no matter of how slight a grade, should present herself to a competent physician about every six months in order that the cervix may be carefully inspected ; (4) every woman over thirty-three years of age who has borne a child at any time during her life should be advised to submit to an examination, and she should be guided by the physician's statements about the condition of the cervix as to whether it is advisable for her, even in the absence of symptoms, to present herself at stated intervals in the future for further examinations.

If these rules were followed, the physician would at least have the opportunity of diagnosing the disease in its incipient stage and while it is still curable.

Now as to the making of this diagnosis certain in the incipient stage, it is very hard in many cases where the growth is confined strictly to the cervix and the mobility of the uterus is not interfered with to distinguish this form of malignant disease from a harmless eversion of the lips or ectropion. When we see an elevated area differing a little in color from the sound mucous membrane and tending to bleed freely upon the slightest touch, we should look upon it with grave suspicion, and if it feels hard and nodular, and upon a second or third examination at short intervals shows a tendency to extend, it should be removed without delay. Yet in our anxiety to guard against all possible danger we should not be too anxious to submit our patient to a serious operation, and, fortunately, we now have within our reach the means of clinching our diagnosis.

The microscopical examination of scrapings from the uterine and cervical canal is by no means so satisfactory as was at first hoped. One might think that this would be an easy way of deciding whether malignant disease existed or not. We now know that it is possible to have an increase in the number and size of the glands and even the presence of more than one layer of epithelium without any coexisting malignant disease. And it is only when we have certain proof that the subjacent tissues have been invaded by the epithelial elements that we can be sure of our diagnosis.

In the same way, when the suspicious condition is limited to the vaginal portion of the cervix, it is of but little value to merely scrape off a portion of the superficial tissue. But we need not confine ourselves to this procedure, for with the help of cocaine we are now able, without giving the patient any pain worth mentioning, to excise a portion of the deep-lying tissues ; from this sections can be made and examined under the microscope, and, if any signs of malignancy are

seen, we can not only advise an operation with a good conscience, but also may confidently hope that we have eradicated the disease.

In order to illustrate my point I will quote one or two cases:

Case I.—Mrs. C. G., aged forty-six, was admitted to Dr. Kelly's ward in the Johns Hopkins Hospital on the 18th of June, 1894, complaining of constant pain in the left ovarian region and of what she termed "a sense of fullness in the womb." The family and personal history were excellent, except that seventeen years and a half before she had suffered from some disease, which was probably gonorrhœa, since which time she had always felt weak in the left ovarian region. The present sickness dated from about five months before, when she had some discharge of blood from the vagina which was continuous, but not profuse; the feeling of fullness in the womb began at about the same time. On entrance the patient showed no signs of cachexia. The vaginal examination showed a somewhat relaxed outlet, the cervix rather low; scar tissue was found running from the posterior lip down upon the posterior vaginal wall. Cervix very irregular, nodular and greatly indurated; the os could not be made out. Uterus enlarged, filled up posterior part of pelvis, fixed. After examination under anæsthesia a diagnosis of double pyosalpinx with retroflexion of the uterus and dense adhesions was made.

This was therefore all that could be absolutely made out even at this time, and I must go back to what had been discovered as early as April in this case. On April 20, 1894, as a preliminary procedure, the cervix had been dilated and the uterus curetted. At this time the scrapings were examined, and portions of the tissue of the cervix removed at the same time were also examined microscopically with the following results: "The specimen contained a moderate number of glands with high cylindrical epithelium; the lumina are empty; in a few places, springing from the margin of the glands, are large alveoli filled with epithelial cells having large nuclei; these alveoli also occur independently of the glands; in none of them has any degeneration taken place. The stroma is made up of cells having round or oval nuclei, and appears to be of connective-tissue origin. Along one margin is seen non-striped muscular tissue." A diagnosis of probable epithelioma of the cervix uteri was made. On June 24, 1894, the major operation was performed, and the uterus, tubes, and ovaries were removed, the diagnosis of endocervical carcinoma being confirmed. In this case, therefore, it was of the utmost importance to the woman that the uterus as well as the tubes and ovaries should be removed in time. Even up to the month of June the clinical

symptoms were not clear enough to warrant so radical an operation, whereas the indications from the microscopical examination were almost positive.

It must be insisted again, however, that in these cases it is not enough to examine the scrapings. In every suspicious case a portion of the cervical tissue must be cut out and submitted to microscopical examination. I have in my mind a case (of which I have not the exact data) in which the uterine scrapings were examined and a diagnosis of "apparently normal mucosa" was made. A section from a portion of the cervix was cut out and showed signs of carcinoma. The uterus was accordingly removed and the diagnosis was verified, an epithelioma of the cervix being present, whereas the uterine mucosa of the fundus appeared perfectly normal.