Cullen

The Early Diagnosis of Carcinoma of the Uterus.

BY
THOS. S. CULLEN, M.D.
BALTIMORE, MD.

Reprint from The Memphis Lancet, December, 1898

THE EARLY DIAGNOSIS OF CARCINOMA OF THE UTERUS.*

BY THOS. S. CULLEN, M.D.
BALTIMORE, MD.
Associate in Gynecology in the Johns Hopkins University.

[AUTHOR'S ABSTRACT.]

Dr. Cullen spoke first on the normal histological appearances of the uterine mucosa:

(*a*) The squamous epithelium covering the vaginal portion of the cervix; usually ending at the external os, but not infrequently extending to a point midway up the canal, or even as far as the internal os.

(*b*) The cervical epithelium which usually extends from the external to the internal os. This is very high and cylindrical; its nuclei are usually situated on the basement membrane, and are triangular, oval or elongate. The form appears to depend upon the amount of secretion contained in the cell. The cell protoplasm is very pale and tends to imbibe the hematoxylin stain instead of eosin. The racemose glands of the cervix may be looked upon as branching reduplications of the surface epithelium; their cylindrical epithelium is identical and continuous with that covering the surface of the canal. The stroma around the cervical glands is usually rather dense, but offers nothing very distinctive.

(*c*) The uterine mucosa commences at the internal os and lines the entire uterine cavity. It is usually 2–4 mm. thick, is smooth, and has a surface covering of one layer of cylindrical epithelium. The cells are barely two-thirds as long as those of the cervix, have oval nuclei, which are situated some distance from the base of the cell or lie near the middle, and contain a protoplasm which takes the eosin stain; attached to their surfaces are cilia. Thus the cervical epithelium differs in almost every particular from that of the

* Read before the Tri-State Medical Society of Tennessee, Georgia and Alabama, Birmingham, Ala., October, 1898.

body. The uterine glands are tubular and may branch slightly near the muscle; they are lined by one layer of epithelium, continuous with and similar to that covering the surface. This epithelium usually contains several nuclear figures. The tissue between the glands we usually call the stroma of the mucosa. The nuclei of this are oval and vesicular, the cells are usually spindle-shaped, and can be studied to best advantage where they are separated from one another as in edema. A few small round cells are regularly found between the stroma cells. The blood supply of the stroma is rather interesting; the arteries are invariably in small bunches of from three to eight, and are surrounded by considerable connective tissue. The veins are large and merely have their endothelial lining separating them from the stroma.

The classification of carcinoma has been rather complicated, and, to a great extent, indefinite. From a systematic examination of over ninety cases in the Johns Hopkins Hospital, and from a critical review of the literature, the author has made the following simple classification:

(*a*) Epithelioma of the cervix.
(*b*) Adeno-carcinoma of the cervix.
(*c*) Adeno-carcinoma of the body of the uterus.
(*d*) Epithelioma of the body of the uterus (rare).

From this classification it is readily seen that varieties (*a*), (*b*) and (*c*) correspond to the three varieties of epithelium found in the uterus and which have already been described.

The epithelioma of the cervix commences in the squamous epithelium, and starts as small papillary outgrowths and finger-like or branching ingrowths. It is just when the disease is in its earliest stage that we wish to recognize it. Given a patient over 35, complaining of a slight bloody or watery discharge between menstrual periods, insist on making or having an examination made. If the cervix show localized hardness, blue on slight manipulation, and have little masses springing from its surface, the diagnosis is fairly certain, but if one be in doubt, a small wedge-shaped piece should be cut out of the suspicious area and examined at once.

In adeno-carcinoma of the cervix the process is much more insidious, the patient perhaps complaining of a slight bloody or watery discharge. On vaginal examination frequently nothing can be detected. The only accurate means of diagnosis is by the aid

of the microscope. In adeno-carcinoma of the cervix the growth may commence from the epithelium lining the canal, as beautifully shown in one of Cullen's drawings; here the surface epithelium had rapidly proliferated and formed large masses of cells which were, to a great extent, arranged as new glands, but as yet there was no connective tissue between the glands, a condition that speaks conclusively against Ribbert's recently advanced view, that the carcinoma is primarily due to a ripping off of epithelium by the underlying stroma.

Adeno-carcinoma of the body of the uterus is much more frequent than was formerly supposed. In its early stages the symptoms are usually only a slight bloody or watery discharge, and on bimanual examination one finds the uterus little, if any, enlarged, hence without further aids in diagnosis the true condition could not be accurately determined. Before curetting such a uterus it is well to bear in mind that while at times the mucous membrane of the entire cavity is involved in the new growth, frequently the process is limited to one wall or even to a small portion of one wall, hence if the operator curette at random and not in a systematic way, the diseased area may not be disturbed at all, only normal tissue from the surrounding portions being removed; it is, therefore, always wise to thoroughly curette the walls anteriorly, posteriorly and laterally. If carcinoma be present the curettings are usually abundant, the surface of the mucosa has a branching or tree-like appearance instead of the normally smooth and velvety covering, and the tissue is very friable. Histologically the carcinoma is very readily diagnosed from even the smallest amount of tissue, and then from the characteristic gland formation. The widespread idea that the glands must be seen penetrating the muscle is erroneous, as not in one case out of ten do we find uterine muscle in the scrapings, and yet the diagnosis is clear.

Epithelioma of the body of the uterus is exceedingly rare, probably not more than six or seven cases having been reported. This variety is identical with epithelioma of the cervix and it is most likely due to the squamous epithelium having extended abnormally far upward.

The clinical phenomena of carcinoma of the uterus are not satisfactory, so many of those present being common to other diseases. The presence of a bloody or watery discharge should

always arouse one's suspicion and stimulate him to make an immediate diagnosis.

Prognosis. Adeno-carcinoma of the cervix is undoubtedly the most malignant. Epithelioma of the cervix is next in the category, while adeno-carcinoma of the body is the most amenable to treatment.

The treatment in the early cases is of course complete enucleation. It is interesting to note the advance in this line. First we had the amputation of the cervix as practiced by Schröder and others, then hysterectomy as recommended by Freund in 1878; later a distinct advance was made when Pawlik, in 1889, recommended catheterization of the ureter preparatory to removing the uterus. This was not, however, adopted by the profession at large, and it remained for Kelly, who conceived the idea independently, to establish it as a routine procedure. Recently a further step has been taken. This was independently advocated by Reis, Clark and Rumpf. The operation as performed by Clark and Reis leaves little to be added in this direction, and yet where the disease has advanced far, none of these operations are of permanent benefit. Our only hope lies in the early diagnosis.

THE

MEMPHIS LANCET

EDITED BY

R. B. MAURY, M.D.
M. B. HERMAN, M.D.
W. W. TAYLOR, M.D.
WM. KRAUSS, M.D.
M. GOLTMAN, M.D.
E. C. ELLETT, M.D.
S. E. RICE, M.D.
J. M. MAURY, M.D.

PUBLISHED MONTHLY AT $1.00 PER YEAR

ADDRESS ALL COMMUNICATIONS TO—
THE MEMPHIS LANCET
CONTINENTAL BANK BUILDING, MEMPHIS, TENN.