

CERVICAL EROSIONS

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THE term cervical erosion, like many other names used in connection with this condition, such as mucous patch, cervical granulations, endocervicitis, cervical catarrh, etc., is not accurately descriptive of the lesion to be discussed. When applied to a pathological process the term erosion has ever suggested a raw or ulcerating surface, but such is not found present in the condition under consideration. Ruge and Veit first called attention to the adenomatous proliferation which takes place in the cervix, and later Eden and Lockyer have suggested that "proliferative adenoma of the cervix" would be a better and more descriptive term. The gross appearance of the cervix when presenting this condition resembles somewhat a granulating surface when viewed through the speculum. This fact has probably played an important part in maintaining the use of the expression.

In the normal cervix the line of demarcation of the external os is sharp between the mucous membrane lining the cervical canal and that covering vaginal portion. The former is composed of connective tissue over which is placed a single layer of columnar epithelium of the mucous type. The free margin of the surface is distended with secretion. Within the deeper portion of the membrane are found the cervical glands lined with the same type cell. These glands secrete a thick tenacious mucus into the lumen of the canal. In the fœtus this columnar epithelium extends beyond the external os and it has been suggested by Fischel that the failure of this to disappear may account for the occurrence of congenital erosion.

Laceration of the cervix during childbirth is the most common cause of erosion. Rarely this condition may follow a plastic operation on the cervix whereby the normal anatomical relation between the mucous membrane lining the canal and that covering the vaginal portion is deranged so that the columnar epithelium is rolled out beyond the normal line of separation. The small abrasion or superficial tear seldom enters into the causation of erosion, since the squamous epithelium readily covers such surfaces. The deeper lacerations of childbirth which are more common than we are wont to recognize, and especially when bilateral or stellate, cause in most instances eversion of the torn lips so that the lining membrane of the canal becomes exposed in the vagina. When unrepaired the cervical membrane in most instances does not return to its former position. This misplaced membrane of the canal, which normally

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is bathed in the mildly alkaline secretions of the uterus, now comes into constant contact with the acid reaction of the vagina. Secondary infection, either acute or chronic, is a most common complication. The friction of the vaginal walls associated with the above mentioned sources of irritation produces an increase of the submucous stroma plus an adenomatous proliferation of the glandular structures. As the condition progresses the columnar epithelium tends to extend beyond the margins of the tear, carrying with it the mucous glands, so that their ducts open on to that portion of the misplaced mucous membrane now exposed within the vagina. The extent to which this occurs varies with the nature of the tear, the presence or absence of infection, and the length of time the condition is allowed to remain untreated.

Gonorrhœal infection of the cervical canal even in the absence of laceration may set up sufficient inflammatory reaction within the submucous structures to produce a swelling and œdema which will tend to push the membrane of the canal past the external os. As this becomes more and more chronic we find a marked increase in the number and size of the glands.

Under the microscope the area of erosion is covered with a single layer of columnar epithelium. The continuity of the surface is interrupted by the ducts of the glands. These glands become greatly enlarged and in some instances extend for a considerable distance into the underlying connective tissue. Very often they are of normal size, but considerably increased in number. In many specimens the glands are found dilated and filled with mucus—the columnar epithelium being swollen and distended with secretion. When this secretion does not find ready exit via the ducts of the glands the lining membrane may become flattened because of the increase in pressure produced with the increase of the material. An inflammatory reaction may or may not be found within the stroma. Eden and Lockyer have applied the term “follicular erosion” to the type of cervix which displays a retention of the secretion associated with a dilatation of the glands. They suggest “papillary erosion” for the type in which the increase in stroma tends to push outward villous or papillary projections covered with a layer of columnar epithelium. It is this type which strongly suggests a granulating surface when examined per vaginam. When both of the above types are found in the same cervix they would use the term “simple erosion.”

Should a section of the cervix be cut for microscopic examination so as to show the junction between the true vaginal portion and the erosion proper, it will be noticed that the misplaced membrane bulges out past a sharp line of demarcation, while on the other end the process fades gradually into the membrane still lining the cervical canal.

The erosion in some instances after becoming more or less chronic tends to heal. The squamous epithelium in some cases extends over the area of erosion overriding the columnar epithelium in such a manner

that it causes these cells to entirely disappear, resulting in a subsequent atrophy of most of the glandular elements. As this change progresses it is associated with a contraction of the stroma and there results a complete obliteration of the channels of exit with the formation of retention cysts, of varying sizes, to which the term Nabothian follicles has been applied.

To the examining finger the irregularity in contour of the cervix when lacerated can be distinguished readily. The erosion feels soft and velvety. This is even more pronounced in the distinctly papillary type which when viewed through the speculum resembles very closely a granulating surface. The surface is covered with a thick tenacious secretion. In the non-infected cervix the leucorrhœal discharge is clear and glistening or whitish and otherwise muco-purulent or purulent. Although the surface bleeds rather freely when manipulated with the finger or instrument, it is never friable. The condition when chronic presents a cervix which is more or less hardened and fibrous. If the attempt to heal has progressed sufficiently to cause the production of Nabothian follicles there is a shotty-like sensation transmitted to the examining finger. To the eye these appear as bluish thin-walled cysts extending beyond the surface of the cervix, and when punctured are found to be filled with thick mucus.

The most common symptom is leucorrhœa, varying in amount and color. The congestion attendant with menstruation tends to increase this discharge just prior to the appearance of the flow. Many patients complain of menorrhagia, which is due in most instances to an associated subinvolution of the uterus. The chances of the patient becoming pregnant are lessened. However, should this occur, abortion is not infrequent. When questioned the patient will usually state that she suffers from a sensation of weight in the pelvis together with one or more of the reflex disturbances encountered during the course of uterine pathology.

In differentiating this condition from malignancy it should be remembered that while erosion of the cervix bleeds rather freely, it is never friable excepting in those cases in which actual malignant change has occurred. When doubt exists a diagnostic section should be removed prior to performing a radical operation. Tuberculosis of the cervix is not of frequent occurrence, and when it does occur the lesion is softer, bleeds less readily, but has a tendency toward hemorrhage in the absence of examination. There may also be complete destruction of tissue with excavation of the cervical canal and vaginal portion of the cervix. During the later stages of tubercular infection the discharge becomes very profuse, purulent and offensive. The history and general appearance of the patient together with the findings in the gross lesion should render the differentiation comparatively simple. When syphilis is suspected the Wassermann and the history of the case should aid in clearing up the diagnosis. Here, as in tuberculosis, the tendency is toward destruction of tissue and not proliferation as seen in most cases of erosion.



FIG. 1.—Low power.—Cervical erosion of "follicular type" showing marked dilatation and accumulation of secreted material.



FIG. 2.—Low power.—Cervical erosion "papillary type" showing projections of stroma covered with a single layer of columnar epithelium.

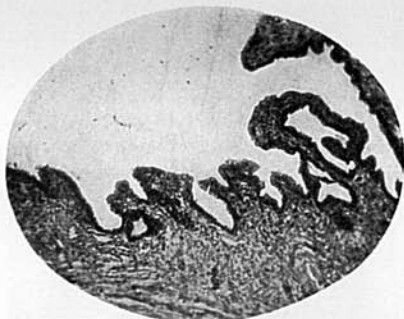


FIG. 3.—Low power.—Cervical erosion, "simple type," showing small papillary projections with dilatation of glands.

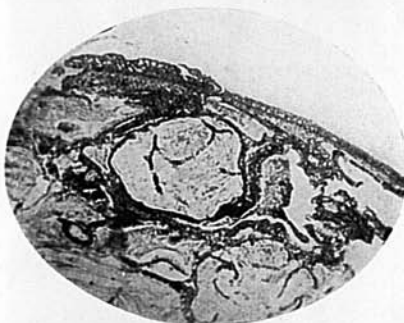


FIG. 4.—Low power.—Cervical erosion. Marked "follicular type" with beginning formation of retention cysts.

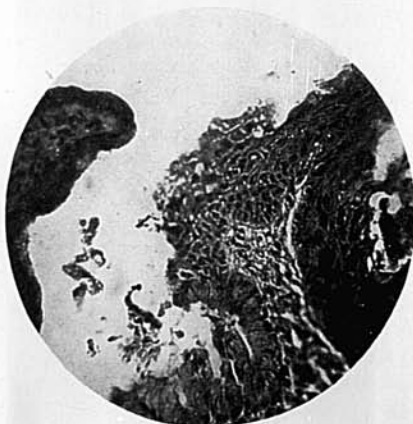


FIG. 5.—High power.—Cervical erosion showing attempt to "heal." Squamous epithelium is seen dipping down the side of duct in attempt to close over the area.

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The treatment of cervical erosion when seen early is rest. The patient is instructed to refrain from coitus. The local medication consists in combating whatever infection is present. In some instances it is advantageous to render the vaginal secretions less acid by the institution of some mildly alkaline douche as a daily routine. In certain cases chemical cauterization may be used with some improvement. Curettage has improved the condition in many patients. This procedure must be thorough and succeed in removing all of the damaged tissue so that the normal relationship of the structures entering into the formation of the external os is obtained. In some instances when the condition is of long standing associated with considerable tissue change, plastic repair of the laceration is indicated. When the process is markedly chronic and the cervix is fibrous and the clefts formed by the old lacerations are partially filled and surrounded with dense connective tissue, the treatment of choice is amputation with the formation of a new external os.

SUMMARY

1. The term cervical erosion, like many other names similarly used, does not adequately describe the condition.
2. "Proliferative adenoma of the cervix," as suggested by Eden and Lockyer, would seem to be a better and more descriptive term.
3. Three distinct types are encountered—the follicular, papillary and simple.
4. Nabothian follicles are formed when the process is undergoing an attempt to "heal."
5. Rest, local medication, plastic surgery and amputation of the cervix all have their indications in the treatment of the cervix.

REFERENCES

- ¹ Eden and Lockyer: *New System of Gynecology*, vol. 2.
- ² Moore, G. A.: *Tuberculosis of the Cervix Uteri*. *Surgery, Gynecology and Obstetrics*, vol. xxix, July, 1919.