

Case Report

Endocervicosis of the Uterine Cervix

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Summary: Endocervicosis is considered a form of Mülleriosis affecting mainly the bladder and is comprised of endocervical-type glands and cysts. It has been rarely described in the uterine cervix where the extensive involvement of cervical and paracervical tissue poses the suspicion of malignancy, mostly minimal-deviation adenocarcinoma. We describe a case of cervical endocervicosis causing a long-term symptoms leading to hysterectomy. We provide evidence that this pathology is associated with cesarean section similar with isthmocele. Its differential diagnosis is discussed. **Key Words:** Glandular lesion—Minimal-deviation adenocarcinoma—Differential diagnosis—Isthmocele—Pseudoneoplastic.

Pseudoneoplastic glandular lesions of the uterine cervix are an important diagnostic entity for the pathologists, as they can be misinterpreted as premalignant or even malignant lesions. They include benign microglandular hyperplasia, papillary endocervicitis, tunnel clusters, diffuse laminar endocervical glandular hyperplasia, deep nabothian glands/cysts, mesonephric remnants, endometriosis, and endocervicosis.

Endocervicosis is an entity rarely described in the cervix, characterized by an uneven arrangement of endocervical-type glands, often cystically dilated, occupying the cervical wall and extending to the paracervical connective tissue; it shows bland cytologic features (1).

Here, we report the fifth case of cervical endocervicosis, in a patient presenting with long-term symptoms for which she underwent a hysterectomy.

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CASE REPORT

A 46-yr-old female presented with a 13-yr history of pelvic pain and dysmenorrhea that started after a cesarean section. She also reported postmenstrual bleeding starting 4 d after the end of the normal menstrual cycle. The ultrasound and the magnetic resonance imaging raised the possibility of an isthmocele in relation to the cesarean section scar. However, the patient decided to undergo a conservative hysterectomy to deal with the chronic pelvic pain. During laparoscopic hysterectomy, an isthmocele-like lesion projecting from the uterine wall was noted in the scar of the cesarean section.

Macroscopically, a multicystic lesion containing mucoid material, occupied the anterior wall of the cervix and isthmus. It measured $3 \times 2.4 \times 1.2$ cm and it extended through the entire cervical wall to the paracervical margin (Fig. 1A).

Histopathologic examination revealed cystically dilated or irregularly shaped endocervical glands filled with mucus. These glands were located in the whole thickness of the endocervix and isthmus extending to the surgical paracervical limits (Fig. 1B). No atypia or mitoses were noted in the lesional glands (Fig. 1D) nor at the adjacent endocervical or exocervical mucosa. Endometrial

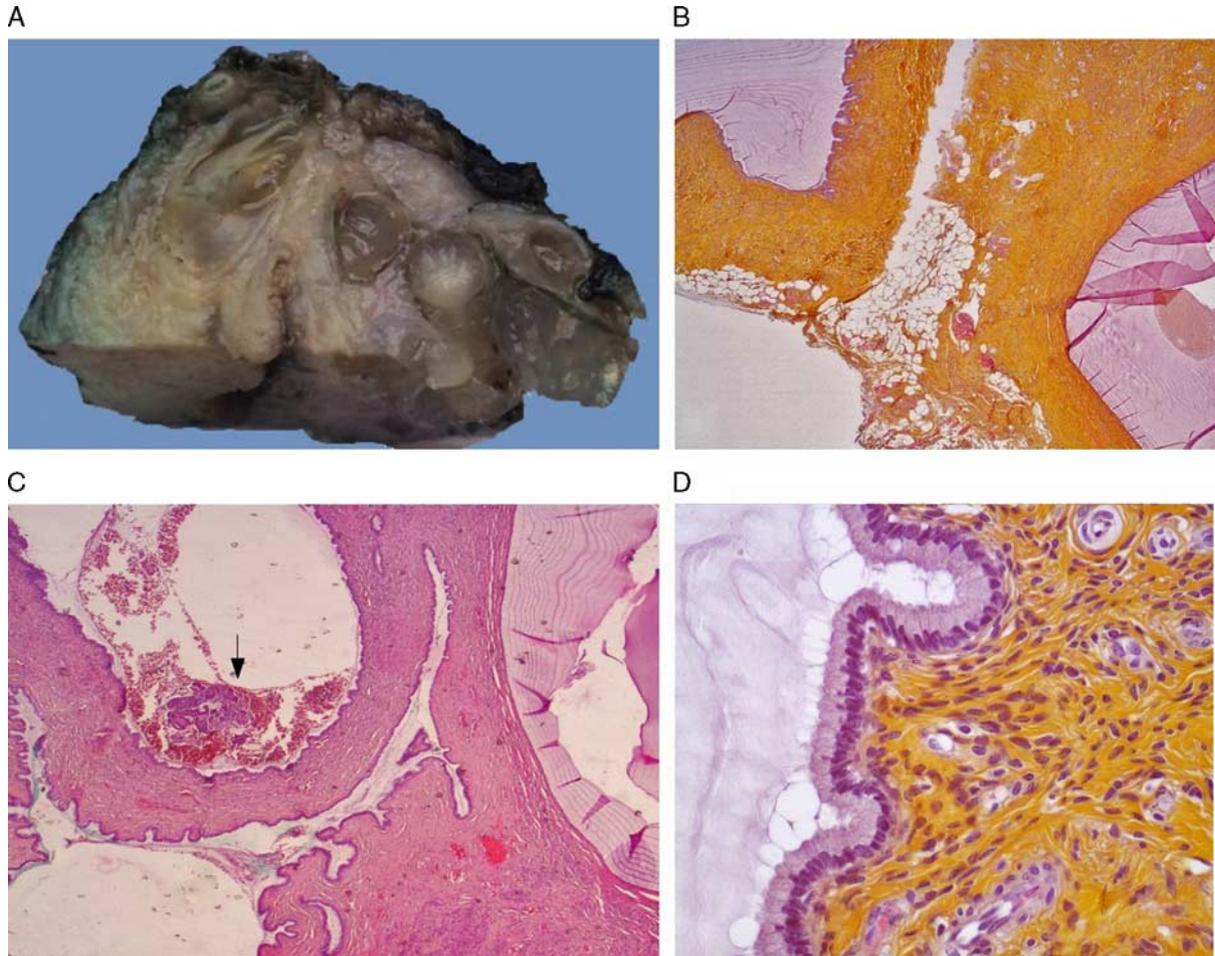


FIG. 1. (A) Macroscopic section of the uterine cervix showing cystic lesions occupying the whole thickness of the wall. (B) The cystic lesions extend to the paracervical tissue (HSE: 25 ×). (C) The cystic lesions contain entrapped endometrial tissue (arrow) (HE 25 ×). (D) Bland cytology of the endocervical-type epithelium lining the cystic lesions (HSE 400 ×). E indicates eosin; H, hematoxylin; S, saffron.

tissue and hemorrhagic elements were entrapped in some of the glands (Fig. 1C). No desmoplastic reaction was found.

Immunohistochemical studies showed that the cells of the cystic glands expressed estrogen and progesterone receptors but were negative for P53, P16, and CEA. There was a lack of cell proliferation as measured by MIB1 (Ki67) immunohistochemistry.

DISCUSSION

Endocervicosis is thought to share a Müllerian origin with endometriosis and endosalpingiosis, showing an endocervical type of differentiation (2). It is primarily encountered in the urinary bladder (2), but it can rarely show other sites of involvement like axillary lymph nodes (3), rectum (4), vagina (5), and small intestine (6). Our case documents an endocer-

vicosis that affects the wall of the uterine cervix and the paracervical connective tissues. This wide extension of the lesion gives rise to an initial diagnostic concern of neoplastic conditions, primarily that of minimal-deviation adenocarcinoma (adenoma malignum) a glandular proliferation with focal cytologic atypia and periglandular desmoplastic stromal reaction (1). The most important distinguishing feature between them is the distribution of glands which, in minimal-deviation adenocarcinoma, originate from the mucosa, whereas in endocervicosis they are usually limited to the outer cervical wall; when, however, endocervicosis involves the whole thickness of the wall, abutting normal glands, it is the uniform cytologic features of the glands of endocervicosis that make the distinction (1). Furthermore, the glands of endocervicosis are cystic having irregular sizes and shapes and are filled with mucus (1,2). Immunohis-

tochemically, in contrast to the glands of endocervicosis, minimal-deviation adenocarcinoma does not express the hormonal receptors, it expresses CEA and p53, and MIB1 is usually high (7).

Other benign endocervical glandular lesions, like microglandular hyperplasia, diffuse laminar endocervical glandular hyperplasia, and lobular endocervical glandular hyperplasia, do not extend deeply and their distinction from endocervicosis is probably of no clinical significance with the exception of lobular endocervical glandular hyperplasia. This lesion has been proposed to represent a precursor form of non-HPV-related adenocarcinoma (8), it can be seen in Peutz-Jeghers syndrome and it harbors *GNAS*, *KRAS*, and *STK11* mutations (9). The glands, however, seem hyperplastic with a lobular architecture comprising central duct-like structures and surrounding lobules, and they are hormone receptor negative (10).

As for its histogenesis, endocervicosis is supposed to be a form of Mülleriosis, and this is probably true when extrauterine tissues are involved. Yet, in the cervix, it is difficult to establish an ectopic origin, especially if considering that deep endocervical glands/Nabothian cysts have been described (11). In the latter case, however, these cysts are few in number, if multiple at all, and they do not reach paracervical tissue (1). Considering the 5 published cases including the current one, we believe that the association with the cesarean section and the continuity with the normal mucosa give evidence of a mechanical etiology, like the one seen in isthmocele, rather than that of Mülleriosis.

The clinical presentation of cervical endocervicosis is not well documented as endocervicosis-related symptoms were only established in 2 of the 4 cases described. They were pelvic pain and dysmenorrhea, as in the present case. A history of cesarean section in also reported in 2 of the 4 cases (1). After imaging, a clinical diagnosis of endometriosis, isthmocele or even of a tumor is possible. An isthmocele is a diverticulum on the anterior wall of the uterine isthmus or of the cervical canal at the site of a previous cesarean section scar (12). It causes postmenstrual abnormal uterine bleeding, pelvic pain, and occasionally secondary infertility (12). Histologically, it is a diverticulum made of a fibrous scar and containing endometrial tissue which accounts for the

postmenstrual bleeding (12). We propose that the entrapment of endometrial tissue in the cystic glands may account for the postmenstrual bleeding in endocervicosis as it similarly does for isthmocele.

To conclude, we describe the fifth case of cervical endocervicosis—an entity characterized by endocervical glands and cysts occupying the entire cervical wall and as such raising the suspicion of malignancy, clinically and pathologically. It is associated with cesarean section and therefore it is possible to be the result of local mechanical pressure. It can not only cause pelvic pain but also postmenstrual bleeding through entrapment of blood. This pseudoneoplastic lesion should always enter the differential diagnosis of symptomatic cystic lesions of the uterine cervix and isthmus.

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