

**Histological manifestations of the Cervix with Chronic Cystic
Cervicitis and Nabothian Cyst: Case Report**

Marwa Jamal Hussain Al Kinani

College of Medicine, University of Sumer, Iraq

Abstract

Nabothian cysts are non-malignant lesions that occur on the cervix and affect a large percentage of reproductive aged women. They usually occur because of childbirth or minor trauma; most of the time, they are small and asymptomatic and require no treatment. However, large Nabothian cysts may vary in appearance and even resemble malignant tumors. Consequently, to rule out malignancy, a biopsy is advised. The greatest valuable imaging modalities for cervical cystic lesions are MRI and transvaginal ultrasonography. Nabothian cysts usually don't need any treatment, but if the lesion's nature is unclear and it hurts, surgery may be necessary. In this case study, chronic pelvic pain is described, and abnormal uterine bleeding needed surgical intervention because of chronic cystic cervicitis and multiple Nabothian cysts accompanied with Leiomyoma accompanied with adenomyosis and endometrial hyperplasia without atypia.

Key words: Chronic Cystic Cervicitis, Nabothian cyst, Cervix

1. Introduction

A Nabothian cyst is a cyst loaded with mucus that manifests as a protrusion on the cervix's surface. Barrigón and his team [1] also refer to it as an epithelial cyst or muco-retention cyst. In addition to mucus, they might also comprise proteinaceous substances, neutrophils, or neutrophil

byproducts [2]. The development of these cysts can be attributed to the accumulation of secretions resulting from a blockage induced by inflammation or trauma [3]. They are situated at the squamo-columnar junction of the cervix, where the squamous epithelium of the cervix undergoes proliferation and envelops the endocervical gland epithelium.

These cysts may be persistently inflamed due to physiological metaplasia or because of the healing progression of chronic cervicitis. After the secretion of mucous, the columnar epithelium generates Nabothian cysts, which are retention cysts [4]. It is variety in dimension from little millimeters to some centimeters [5; 6; 7]. However, on rare occasions, they may enlarge to 4–8 cm, which can result in a range of symptoms and may resemble uterine tumors clinically [8]. As illustrated in figure 1, both transvaginal ultrasound and MRI can assist in the diagnosis of Nabothian cysts [9; 10]. MRI has the capability to differentiate between exophytic and endophytic growth, as well as normal and aberrant conditions [11]. Nabothian cysts have one layer of columnar or flattened epithelium lining, which lacks atypia, as observed under the microscope [12; 13]. Although Nabothian cysts that are asymptomatic and do not pose a malignant risk do not necessitate treatment, it is recommended to undergo therapy for symptomatic cases accompanied by pain [14]. In situations where a diagnosis cannot be established, profound cysts, or large symptomatic cysts are present, excision becomes necessary for histopathological evaluation and to rule out the presence of

other malignant cervical tumors and adenoma [15].

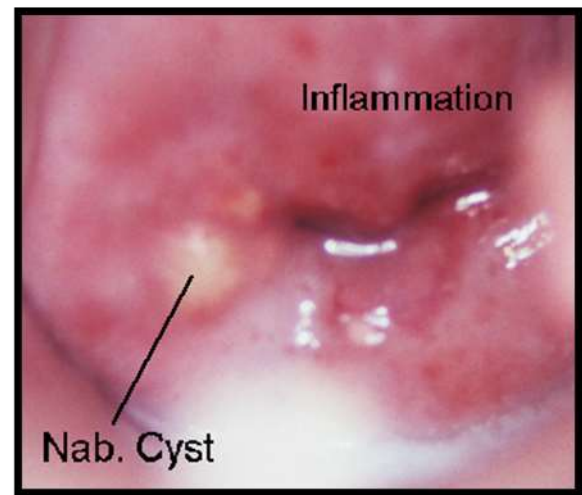
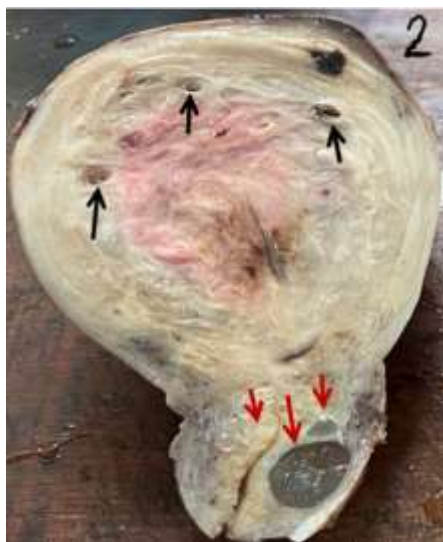


Figure 1: Colposcopic picture of Nabothian cyst.

2. Case report

A 43-years old woman, she was attending Al Karama Teaching Hospital in Iraq, Wasit province. The patient presented with pelvic discomfort for more than six months, abnormal uterine bleeding and clear discharge as well. A gynecologic examination indicated mucoid discharge, persistent cervicitis, and an enlarged cervix because of many, big cystic masses in the cervix. There was a left salpingectomy. The cut section and gross examination revealed hyperemic endometrium with multiple vacuoles in the myometrium that suggested for adenomyosis (figure 2) and multiloculated, cystic spaces of variable size full of mucinous material (figs 3, 4). Pieces

from endometrium, myometrium and cervix were removed and prepared for routine histological preparations and microscopic examination. Histopathology examination of uterus (endometrium and myometrium) showed endometrial hyperplasia without atypia (figs. 5, 6, 7) associated with invagination of endometrial gland into the myometrium layer of uterus refers to multifocal adenomyosis (fig. 6). Cervix showed chronic cystic cervicitis with hyperplastic change and Nabothian cysts (figs 8, 9). The microscopic examination of the Nabothian cyst presented that the inner wall of this cyst was lining with ciliated columnar epithelium (fig. 10).



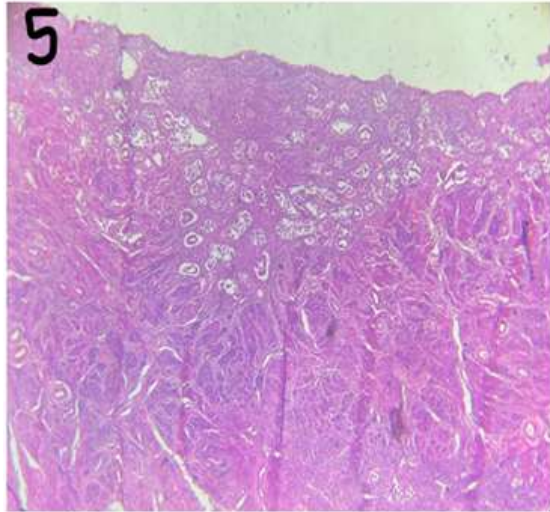
Figures 2: Macroscopic appearance of multifocal adenomyosis in myometrium (black arrows) and enlarged cervix with Nabothian cysts (red arrow).



Figures 3: gross features of multiple and enlarged Nabothian cysts within cervix.



Figure 4: gross features of multiple and enlarged Nabothian cysts within cervix.



Figures 5: microscopic section of uterus showed endometrium hyperplasia without atypia, H&E; 40 X.

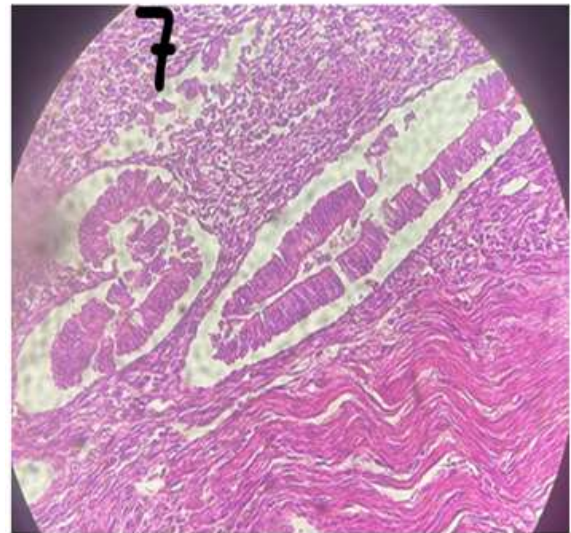


Figure 7: microscopic section of uterus showed endometrial glands without mitotic features, H&E; 200X.

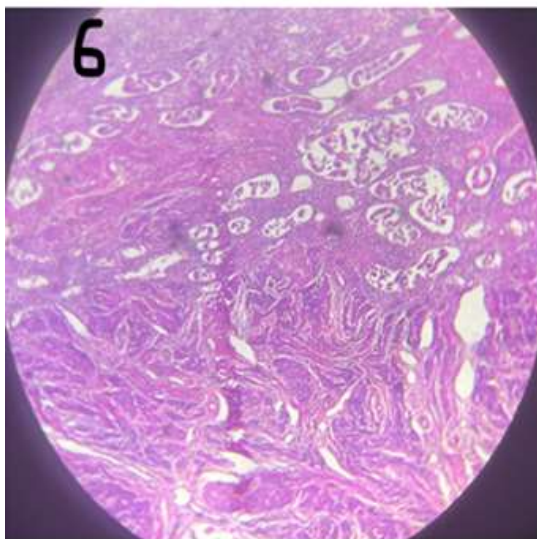


Figure 6: microscopic section of endometrium and myometrium of uterus showed endometrium hyperplasia without atypia and adenomyosis H&E; 100X.

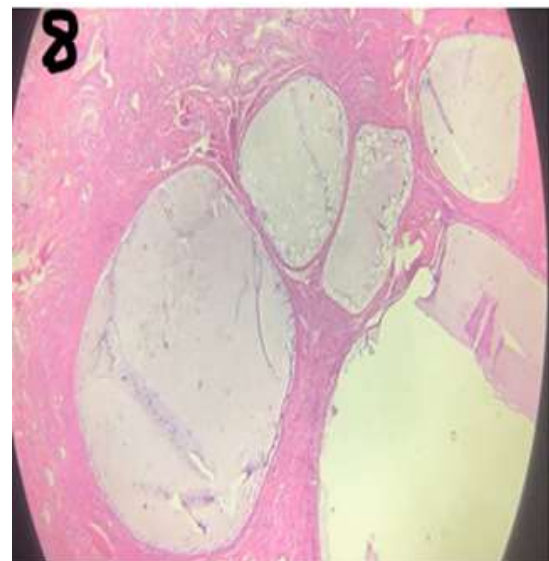


Figure 8: microscopic section of cervix showed different sizes of cervical cysts , H&E; 100X.

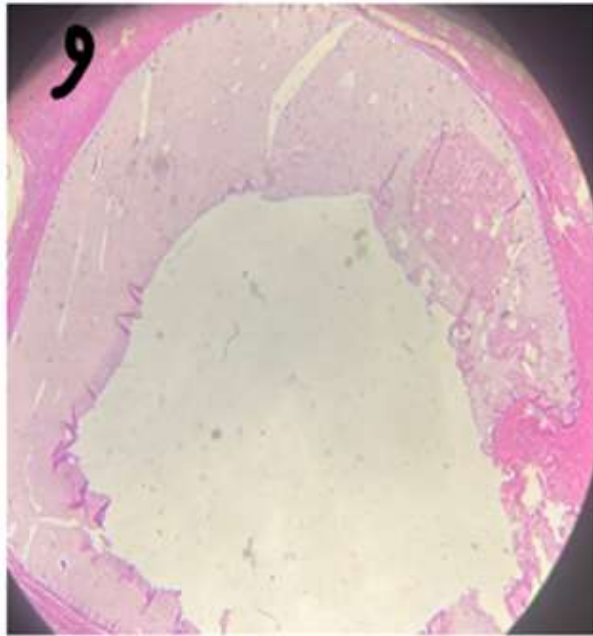


Figure 9: microscopic section of cervix showed large cervical cysts , H&E; 200X.

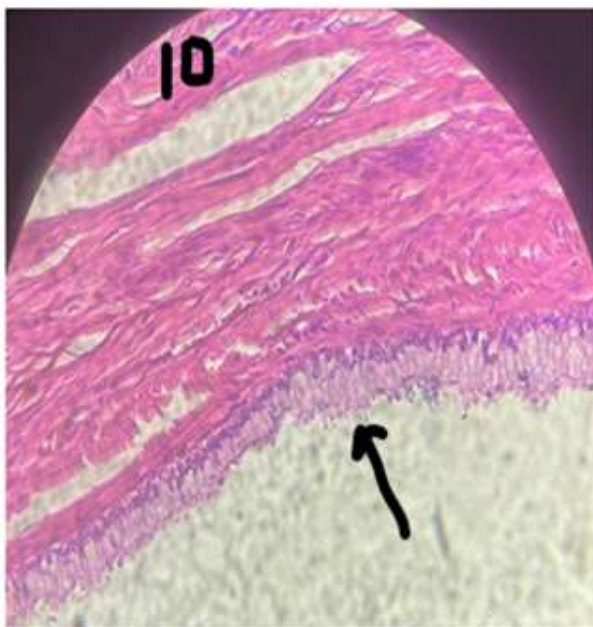


Figure 10: microscopic section showed simple ciliated columnar epithelium lined the inner cyst wall (arrow) H&E; 400X.

3. Discussion

As a part of the physiologic metaplasia or in state of cervicitis, Nabothian cysts are thought to be caused by the cervical squamous epithelium proliferating and cover the columnar epithelium of the endocervical glands [2], leading to a blocked opening of the gland and the subsequent accumulation of mucosal secretion in minor subdermal sacks [16].

Nabothian cysts often do not require cure, however they might become troublesome if the patient experiences symptoms or the lesion lacks a strong defining trait and malignancy cannot be ruled out. Cystectomy, electrocautery, and cryocautery are all viable options for cyst removal [17]. This cyst is typically asymptomatic unless it is sizable and manifests secondary symptoms, which is the case in this instance. In such cases, hysterectomy may be necessary to alleviate the symptoms, like cases reported by [12; 4; 17] .

Hysterectomy was necessary to alleviate the patient's enduring symptoms, which were attributed to Nabothian cysts resulting from uterine prolapse, rectum compression, chronic pelvic pain, and persistent copious per vaginal thin watery secretion, respectively. most cases are

identified inadvertently through pelvic checks and ultrasound. However, patients with greater cysts involve stark pain in the cervical area.

This bigger cyst has the potential to obstruct the cervical opening, leading to abnormal bleeding and vaginal discharge. as patient in this case and case reported by [17].

Nabothian cysts are frequently related to inflammatory disorders such as chronic cervicitis. cysts may look gleaming or cloudy, single or in groups and vary in diameter from a few mm to three to four centimeters, with an approximate 13 mm average [18].

It is necessary to distinguish between some benign states such as cervical endometriosis, Nabothian cyst, cystic cervicitis from malignancy in cystic lesions of uterine cervix because of variations in diagnosis, treatment, and prognosis [3]. It can often be challenging to discern between adenoma malignum and benign lesions like Nabothian cysts, however a solid substance next to or separating several cysts is thought to be a sign [19].

4. Conclusion

Nabothian cysts are extremely frequent uterine cervix lesions that are usually asymptomatic. However, large Nabothian

cysts can cause symptoms like abnormal vaginal bleeding, lower stomach pain, and the obstruction of labor passageways. Because these cervical cysts can change in appearance over time, diagnosing them can be challenging. There is a risk of missing cancer in a symptomatic Nabothian cyst without a surgical line and proven pathology.

5. References

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