

# Large nabothian cyst with chronic pelvic pain: case report and literature review

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## Summary

The authors report a rare case of a large nabothian cyst with chronic pelvic pain in 48-year-old woman. The patient suffered from chronic pelvic pain radiating to the right leg, especially during ambulation. The large cystic mass was found in the cervix. A cystectomy was performed through the vagina. Nabothian cyst was pathologically confirmed and the patient's pelvic pain improved postoperatively.

*Key words:* Nabothian cyst; Chronic pelvic pain; Cervical cysts.

## Introduction

Nabothian cysts are common benign findings of uterine cervix without clinical significance. Most of nabothian cysts do not require any treatment since they are asymptomatic and founded incidentally by gynecologic examination. Its pathophysiology is the blockage of the endocervical glands with trapping mucosal secretion due to inflammation or trauma [1]. Generally a nabothian cyst is small-sized and multiple common lesion in reproductive-age women. However, sometimes nabothian cysts may be treated when it causes vaginal discharge, bleeding or any other symptoms [2-6]. In some cases, it is difficult to distinguish them from cervical adenoma malignum (AM) since they advance to large sized and deeply penetrate the cervical stroma [2]. Chronic pelvic pain can be a significant challenge to both the patient and physician.

The American College of Obstetricians and Gynaecologists defines chronic pelvic pain as “non-cyclic pain lasting for six or more months, that localizes to the anatomic pelvis, anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks and is of sufficient severity to cause of functional disability or lead to medical care” [7]. There are many causes of chronic pelvic pain. Therefore, it is important to evaluate the patient with chronic pelvic pain through a careful history taking and physical examination, not only gynecological but also non-gynecological [8]. Herein the authors report a rare case of large nabothian cyst with chronic pelvic pain and review the literature.

## Case Report

A 48-year-old, gravid 3, para 2, Korean woman presented with over six months of pelvic pain and vaginal discharge. She complained of pelvic pain radiating to the right leg, aggravated during ambulation. She was checked through an orthopedic exami-

nation and there was no specific finding. She had a normal menstrual cycle and had no dysmenorrhea. Her previous medical history was unremarkable, and without previous surgery. She was in good physical health with a blood pressure of 110/70, pulse of 84 beats per minute, and body temperature of 36.6°C. Gynecologic examination revealed an enlarged cervix due to large cystic mass in the cervix. It seemed to originate from the posterior lip of the cervix and the right vaginal wall was pressed. Values from blood tests and other tests were normal. Both chest X-ray and EKG showed normal values. Pap smear results were negative for intraepithelial lesion or malignancy. Transvaginal ultrasonography showed a normal-sized uterus and ovaries with a 6.5×5.0 cm two-chamber round anechoic cyst without solid component in cervical region (Figure 1). The authors performed cystectomy via a vaginal approach. A large cyst filled with mucinous fluid was completely removed by dissecting it from the surrounding tissues of the cervix and simple suture was done after cystectomy. Histopathology examination showed the cyst wall lined with cuboidal epithelium suggestive of nabothian cyst. After the cystectomy, the patient's pelvic pain and vaginal discharge improved (Figure 2). During follow-up period, there was no recurrent symptoms and signs. The institutional review board of the hospital approved the publication of this case report.

## Discussion

Nabothian cysts are common gynecological conditions of women in reproductive age. A nabothian cyst is a mucus-filled cyst on the surface of the cervix. The cervix is composed of columnar epithelium, which lines the endocervical canal, and squamous epithelium, which covers the exocervix. The glandular epithelium consists of numerous ridges and clefts when covered by squamous metaplasia, leads to the appearance of gland openings. The deeper clefts may not be completely replaced by the metaplastic epithelium, leaving mucus secreting columnar epithelium trapped under the squamous epithelium. If some of these glands are blocked by squamous metaplasia and inflamm-

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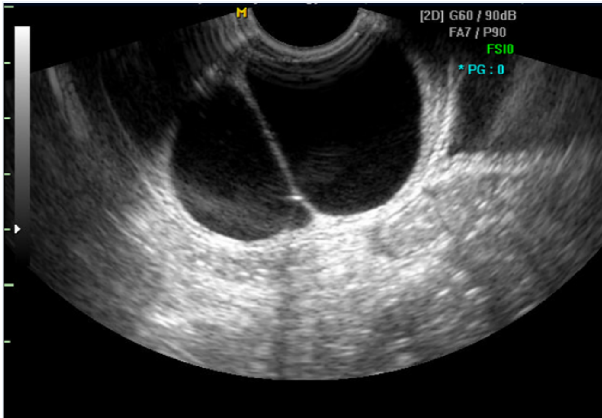


Figure 1. — Transvaginal ultrasound view of a round two-chamber cystic mass on the cervix.

ation with trapping mucosal secretion, a nabothian cyst will form [1].

Nabothian cysts are usually associated with an inflammatory condition like as chronic cervicitis and may also occur after childbirth or minor trauma. They appear translucent or opaque, single or multiple, and vary in size from a few mm to 3 to 4 cm in diameter, and the average diameter is 13 mm [9]. Cystic lesions of uterine cervix need to be differentiated from benign condition such as nabothian cyst, cystic cervicitis, and cervical endometriosis from malignancy because there are different treatment principles and prognoses. Large-sized nabothian cysts can be especially mistaken with malignancy, including mucin producing tumor such as cervical AM. Cervical AM which is a rare subtype of cervical adenocarcinoma often appears as multiple cystic lesions which mimic multiple nabothian cysts [10, 11]. The major symptoms of AM are profuse watery or mucoid vaginal discharge and irregular bleeding [12]. On MRI, cervical AM is characterized by multiple cysts with solid enhancing components which is different finding from nabothian cysts [13].

The MRI finding of a nabothian cyst is a round or oval cyst without enhancement after intravenous gadolinium [14]. However, making a specific diagnosis is difficult because both of them are usually hyperintense on T2-weighted images. Therefore, the diagnosis should be confirmed on cervical biopsy [2, 15].

Nabothian cysts are usually asymptomatic and do not require any treatment. However, according to previous reports, women with giant nabothian cysts may develop specific symptoms such as irregular vaginal bleeding, lower abdominal discomfort and obstructing labor passages and require treatment. (Table 1) There are some different clinical manifestations depending on the size, location, and relationship between near organs [2-6, 14, 16-18].

In the current study, the patient suffered from chronic pelvic pain radiating to the right leg due to a large-sized nabothian cyst. Clinicians should carefully assess patient hi-

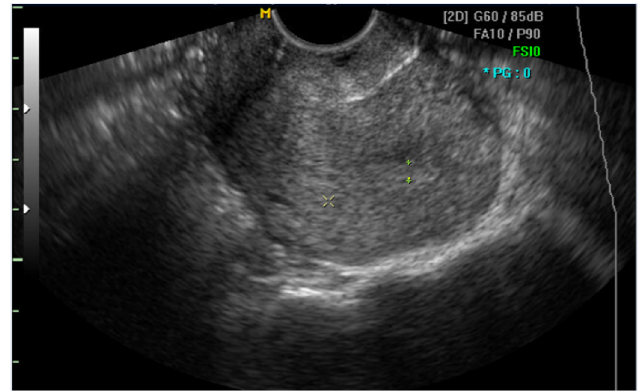


Figure 2. — Transvaginal ultrasound view of postoperative uterus.

story and perform physical examination since numerous etiologic conditions of chronic pelvic pain have been proposed [19-21]. At first, the patient visited an orthopedic clinician because she felt pelvic pain radiating to the leg and the symptoms were aggravated during ambulation. For over six months the symptoms had become severe. The patient underwent various examinations and had unremarkable findings with orthopedics. The orthopedic surgeon advised her to visit the gynecologist. The sforementioned chronic pelvic pain can be caused by multiple factors and multidisciplinary approach to management is important [22, 23].

According to the International Society of Psychosomatic Obstetrics and Gynecology (ISPOG) European Consensus Statement, gynecological disease that causes chronic pelvic pain is described as endometriosis, adenomyosis, pelvic inflammatory disease, pelvic adhesions, gynecologic cancer, and cervical stenosis with hematoma [24].

The current patient had normal uterus and ovaries defined by ultrasonography. She was underwent a Pap smear and the culture of vaginal secretions and the results were unremarkable. Although it is necessary to rule out the malignancy, nabothian cysts can be easily founded by vaginal speculum examination. Therefore, women with chronic pelvic pain should have their cervix examined via vaginal speculum whether there is abnormality or not.

## Conclusion

Nabothian cysts are common lesions of uterine cervix and are usually of no clinical significance. They are only a few mm in diameter and although they may cause enlargement of cervix [25], the vast majority are asymptomatic. Therefore, the classical cases of nabothian cysts do not require any treatment. However, a symptomatic nabothian cyst should be considered with a surgical approach and pathology confirmed as malignancy may be missed. In addition, careful gynecologic examination and ultrasonography is helpful for patients with chronic pelvic pain because the cervical cystic mass can cause pain.

Table 1. — Summary of prior case reports.

	Patient age	Symptoms	Size and location of the cyst	Treatment
Janus <i>et al.</i> [18]	56	Menometrorrhagia	4 cm left side of cervix	TAH with BSO
Oguri <i>et al.</i> [14]	44	Vaginal bleeding	Multiple cysts (5-10 mm)	Deep conization
	38	Vaginal bleeding	Multiple cysts (5-25 mm)	Deep conization
	46	No symptom	Multiple cysts (5-15 mm)	Deep conization
Sosnovski <i>et al.</i> [16]	42	Irregular intermenstrual bleeding	4.2×3.8 cm on right side of the cervix, 4.2×3.2 cm on left side of the cervix	Hysterectomy
Temur <i>et al.</i> [2]	47	Pain and difficulty in defecation	5.6×4.9 cm on the lower lip of the uterine cervix	1 <sup>st</sup> line: cyst removal 2 <sup>nd</sup> line: TAH with BSO
Nigam <i>et al.</i> [3]	21	Prolonged vaginal discharge and third degree cervical descent	4×5 cm	Cystectomy and sling surgery
Vural <i>et al.</i> [4]	38	Obstructing labor passage	4×5 cm	Total excision of the cyst
Torky <i>et al.</i> [17]	44	Lower abdominal pain	6.4×6.3 on the posterior lip of the cervix	Transvaginal excision of the cyst
Chen <i>et al.</i> [5]	52	Massive abnormal uterine bleeding	4.7×4.3×4.1 cm	Simple cervical excision and local drainage
Nassif <i>et al.</i> [6]	44	Dyspareunia and pelvic pain	8 cm on the lateral to the vaginal wall	Laparoscopic removal of cyst

TAH: total abdominal hysterectomy; BSO: bilateral salpingoophorectomy.

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