

Evaluation of Nabothian Cysts With Transvaginal Sonography

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The purpose of this study was to evaluate the sonographic features of the nabothian cysts which were encountered during transvaginal sonography. A total of 263 patients were examined and 82 patients in whom nabothian cysts were found were included into the study. The size of cysts varied from 3 to 26 mm. 55 of 82 patients had multiple cysts and the remaining had solitary cysts. The location of the solitary cysts was low in 4 patients and high in 23 patients. The locations of the cysts in patients with multiple cysts were low in 2, high in 35, and both high and low in 18. As a conclusion most of the nabothian cysts were multiple and in high location, and the size of them was below 3 cm. [Journal of Turgut Özal Medical Center 1997;4(2):222-224]

Key Words: Nabothian cysts, transvaginal ultrasound

Naboth kistlerinin transvajinal sonografi ile değerlendirilmesi

Bu çalışmada transvajinal ultrasonografide karşılaşılan naboth kistlerinin sonografik özelliklerini değerlendirmeyi amaçladık. Toplam 263 hasta incelendi ve naboth kisti tespit edilen 82 hasta çalışma kapsamına alındı. Kistlerin boyutları 3 ile 26 mm arasında değişmekteydi. Kistler, 82 hastanın 55'inde multipl geri kalanlarında soliterdi. Soliter kistler 4 hastada aşağı, 23 hastada yukarı yerleşimliydi. Multipl kistler 2 hastada aşağı, 35 hastada yukarı ve 18 hastada hem aşağı hem de yukarı yerleşimli olarak tespit edildi. Sonuç olarak, değerlendirdiğimiz naboth kistlerinin çoğunluğunu multipl, yüksek yerleşimli ve boyutları 3 cm. 'nin altındaydı. [Turgut Özal Tıp Merkezi Dergisi 1997;4(2):222-224]

Anahtar Kelimeler: Naboth kistleri, transvajinal ultrason

Nabothian cysts are endocervical glands which are filled with infected secretions and are frequently seen together with chronic cervicitis. The ducts of these glands become occluded because of inflammation and reparative processes. Characteristically they are located submucosally. On ultrasonographic examination they are seen as anechoic structures which are clustered in the midline. They can be solitary or multiple and their

size shows considerable variations (1). There are a few reports on sonographic evaluation of nabothian cysts in the literature (2, 3). In this study we aimed to define transvaginal sonographic features of nabothian cysts.

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SUBJECTS AND METHODS

A total of 263 patients between the ages of 21 and 50 years who were referred to our department due to various gynecologic complaints (i.e. pelvic pain, leukorrhea, dysparonia, infertility, dysmenorrhea etc.) between December 1996 and January 1997 were examined by transvaginal ultrasonography using 5 - 7.5 MHz dual probe. All patients were evaluated in longitudinal and transverse planes. 82 patients in whom nabothian cysts were found were included into the study. The size, localization and number of nabothian cysts were assessed.

RESULTS

Out of 263 patients 82 had nabothian cysts. The size of cysts varied from 3 to 26 mm (mean 15.2 mm). Of 82 patients 55 (67 %) had multiple cysts and 27 (32.9 %) had solitary cysts. The majority of the patients with multiple cysts had 2 cysts (39/55), and the remaining patients had 3, 4,5, and 7 cysts (6/55, 4/55, 5/55 and 1/55 respectively). Cysts within 1 cm of the external os were classified as "low" and above 1 cm were "high". The location of the solitary cysts was low in 4 patient and high in 23 patients. The location of the cysts in patients with multiple cysts were low in 2, high in 35, and both high and low in 18. There were 182 cysts in 82 patients. Most of the cysts were found in the 21-30 mm interval from the external os (n=85) (Table 1). Pelvic pain, dyspareunia and leukorrhea were among the most common complaints.

DISCUSSION

Cervix constitutes a short transition zone between uterine corpus and vagina. A part of cervix can be seen in vagina during speculum examination and is lined with vaginal epithelium, i.e. stratified squamous epithelium, and this part of cervix is called as portio externa. Cervical canal is about 2.5-4 cm. in length in menstruating women but personal variations may be seen. The inner side of cervix is lined with columnar epithelium, that contains mucus in varying amounts, or pseudostratified columnar epithelium. The glands, that penetrate deeply and showing tubular branching, also covered with

Table 1. The distribution of cyst locations according to external os.

	Solitary	Multiple	Total
Low (0-10 mm)	4	20	24
High (11-20 mm)	3	38	41
(21-30 mm)	16	69	85
(31-40 mm)	4	26	30
(41 mm and above)	-	2	2
Total	27	155	182

columnar epithelium. There is usually an abrupt change from columnar epithelium of endocervix to stratified squamous epithelium of portio externa. Columnar epithelium sometimes can extend from external os to vaginal part of cervix. Changes due to chronic inflammation can usually be encountered in the region of external os. These changes are usually associated with the loss of epithelium in the region of external os and extension of stratified squamous epithelium into the endocervical canal (4).

Transvaginal sonography also affords a mean to evaluate several types of cervical masses and disorders. For this application, the transvaginal probe is usually placed a few centimeter into the vagina so that the cervix itself can be delineated (5).

Ultrasonographically cervix is seen as a soft tissue structure in different size and thickness. An echogenic line delineates endocervical canal and it represents mucus in the cervical canal. Endocervix can be used as a landmark for orientation of ultrasound beam along the length of cervix. In some of the cases the echogenic line in cervical canal is absent, thin or discontinuous most probably due to loss of mucus plug (6).

Nabothian cysts generally develop as a result of a reparative reaction in the form of upward displacement of stratified epithelium due to chronic inflammation of the cervix and as a consequence of this reaction some of the ducts of endocervical glands narrow. The retention of mucus and other fluids in these glands leads to the development of nabothian cysts (1). On the portio vaginalis of the cervix their presence serves as an indication that the portio was at one time the site of ectopic endocervical epithelium that has been replaced by squamous epithelium. The nabothian cysts farthest away from the external cervical os on the portio indicates the extent of the "transformation zone" (7).

Nabothian cysts are frequently visualized near the endocervical canal by transvaginal

ultrasonography. Generally these cysts are equal to or less than 1 cm in diameter and can be seen as thin walled cystic structures (8). They may reach to the diameters of 2 to 4 cm and resemble cystic adnexial masses (9, 10). They are frequently multiple and in high position. Thus, many of them could not be seen on speculum examination. In a similar fashion most of the nabothian cysts in our study were multiple and in high position. We did not encounter any nabothian cyst which is greater than 3 cm in diameter..

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