

<http://dx.doi.org/10.35630/2199-885X/2020/10/3.24>

IDENTIFICATION OF BENIGN URETHRAL LESIONS IN FEMALE PATIENTS

Received 10 July 2020;
Received in revised form 18 August 2020;
Accepted 21 August 2020

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ABSTRACT — AIM: Our study was aimed to identify the types of benign urethral lesions in 92 women of reproductive age.

METHODS. We performed a physical examination and assessment of the external and internal genitals employing laboratory diagnostic methods, ultrasonography (transvaginal and transperineal scanning), and magnetic resonance imaging (MRI) in all women.

RESULTS. Asymptomatic benign urethral lesions of the paraurethral region were detected in 22.8% of women. The remaining 2/3 of the patients complained of dysuria and a sensation of a foreign body in the perineum. The most common complaints and clinical manifestations were predominantly observed in the women within one year after childbirth (72.8%).

CONCLUSIONS. Our findings on the types of benign urethral lesions were 56 urethral diverticula (60.8%) and 34 paraurethral cysts (37.1%). Most such lesions are more likely to occur in the first years after childbirth, so it is necessary to invite women for a pelvic exam during this period.

KEYWORDS — benign urethral lesions, urethral diverticulum, paraurethral cyst, dysuria, dyspareunia.

INTRODUCTION

Diseases of the urethra are common in women [1]. Most common among them are disorders of inflammatory and tumor-associated origin, such as urethritis, cysts, diverticula, polyps, etc. [1, 2, 3]. Special attention should be paid to benign urethral lesions. However, their incidence is difficult to assess due to a high proportion of asymptomatic patients and the absence of specific signs [4]. Such lesions normally have a small size (from 2 to 15 mm), which also makes it difficult to diagnose them [2, 5]. According to foreign and Russian literature they refer to 1% to 8% of cases [1, 2, 6]. Benign urethral neoplasms are often detected in women aged 30–60 years [6]. Their etiology in women in most cases is unclear. Some authors claim that cystic lesions may grow when the periure-

thral glands are blocked during traumatic childbirth, or when there is frequent infection of the lower urinary tract [5, 7, 8].

Difficulties in diagnosing the benign urethral lesions affect the quality of their treatment. [9, 10]. Incorrect interpretation of their clinical symptoms may lead to development of serious complications: formation of an abscess, urethro-vesicovaginal fistulas and a risk of recurrence.

Aim:

to identify and analyze the types of benign urethral lesions in the cohort.

METHODS

The study included 92 women with detected cystic urethral lesions. We have obtained the consent of all patients for the examination. The complaints of all the women (n=92) were carefully collected and recorded. We also employed a physical examination and assessment of the external and internal genitalia, laboratory diagnostic methods (blood, urine and vaginal discharge tests). The exclusion criteria for participation in the study were 1) age under 18 and over 45 years; 2) inflammatory diseases of the lower urinary tract; 3) diseases of reproductive tract.

For the visualization of benign urethral lesions in the women, we were helped by diagnostic imaging techniques such as ultrasound and MRI. We used methods of vaginal and perineal scanning with a 7 MHz sensor for ultrasound examination. Ultrasound scanning was done in different planes, which allowed us to detect the connection of the paraurethral cyst cavity with the urethral lumen. Magnetic resonance imaging (MRI) was performed within the pelvis using an endorectal coil.

Statistical analysis was performed using Excel and STATISTICA 6.0 spreadsheets. Mann–Whitney U test was applied to assess the significance of differences between quantitative indicators. The differences were considered significant at $p < 0.05$.

RESULTS

The average age of all women was 29+7 years. The majority of women had a history of childbirth — 63 (68.4%). 21 (22.8%) women had asymptomatic BPN. The most frequent complaints in patients were: a foreign body sensation in the perineum — 71 (77.1%),

dysuria — 59 (64.1%), pain in the perineum — 26(28.2%), dyspareunia — 24(26%), urinary retention — 13(14.1%). The most frequently mentioned complaints were reported in women within 1 year — 67(72.8%), under 5 years — 19 (20.6%), within 10 years — 6(6.5%) after childbirth.

The types of benign urethral lesions detected in all the patients (n=92) are shown in Fig. 1. In most cases, we diagnosed urethral diverticula — 56 (60.8%). Also, in 2 (2.1%) patients, we suspected a malignant degeneration of the cyst based on the signs: a bumpy surface, limited mobility, and compaction of the walls. The remaining 34 (37.1%) women had paraurethral cysts.

We found quantitative differences in the localization of the lesions in the women (Table 1). The most frequent localization is the distal part of the urethra (84.7%).

Volume masses in the paraurethral region (Fig. 2) were detected by ultrasound in all women. Ultrasound signs showed clear contours of the cyst, a homogenous thin wall, and a hypoechoogenic (without inclusions) internal environment.

DISCUSSION

The occurrence of benign urethral lesions in young and middle-aged women leads to a significant deterioration in their quality of life and reduced ability to work [11]. The frequency with which the lesions may occur seems difficult to estimate due to many missed or misdiagnosed cases. Many studies show a certain number of asymptomatic women although they may have a growth located in the periurethral area [1, 7]. Only in 23% of patients benign urethral lesions cause any symptoms [10]. Laudano M.A. et al in diagnosis of benign urethral lesion and urethral diverticula in particular offer to rely on a triad of symptoms: dysuria, dyspareunia and postvoid dribble [6]. The results of the study by Blaivas J. G. et al show that urethral diverticula is the most common of all periurethral masses (84%) [2].

BPN may assume the guise of various diseases: ectopic ureterocele, pelvic organ prolapse, leiomyoma, adenocarcinoma, etc. [12]. The frequency of malignant neoplasms of the paraurethral zone according to the literature is from 3–6% [6]. For this position, our data almost match the statistics, we found a suspicion of malignization of the lesions in 2.1% of cases.

Our study showed that most patients had a history of childbirth. This means that labor is a risk factor for the development of periurethral lesions. 21 (22.8%) women had asymptomatic benign periurethral lesions. This means that doctors should be active in visualizing BPN in women of reproductive age.

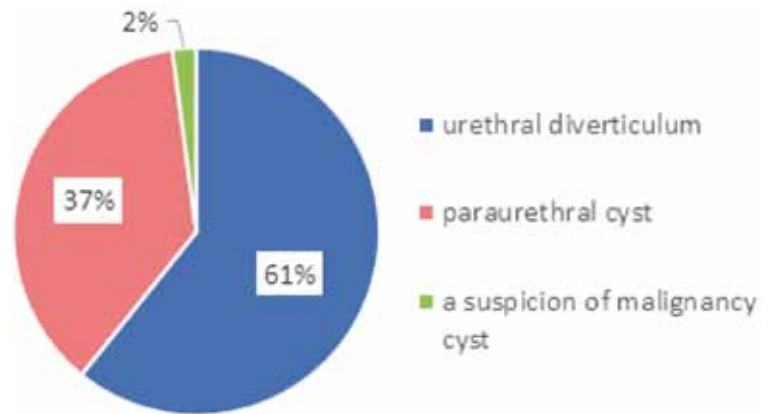


Fig. 1. Types of benign urethral lesions in all patients (n=92)

Table 1.

Localisation of benign urethral lesions	Examination's number (n=92)	
	n	%
Distal part of the urethra	78	84,7
Middle part of the urethra	11	11,5
Proximal part of the urethra	3	3,8



Fig. 2. Ultrasound examination of the cyst of the proximal part of the urethra

The issues of diagnosis and treatment of periurethral entities in women deserve exceptional attention from the point of view of the practical work of a doctor. There is currently no single algorithm for examining patients with these diseases and, often, the entire examination is reduced to collecting anamnesis and routine physical examination.

CONCLUSIONS

Benign periurethral entities often occur under the guise of dysuria, which is characteristic of diseases

of many pelvic organs. Therefore, their diagnosis largely depends on the activity and professionalism of the doctor. Since most benign urethral lesions are more likely to occur in the first years after birth, it is necessary to invite women to a pelvic exam during this period. In 84.7% cases they are identified by a routine examination of the external genitalia. A comprehensive approach to imaging of the urethral lesions using ultrasound, CT, and MRI is also required.

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