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Original Research Article

Clinical characteristics and treatment modalities of vulvovaginal atrophy in genitourinary syndrome of menopause

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ABSTRACT

Background: Genitourinary syndrome of menopause (GSM) causes symptoms such as vaginal dryness, dysuria, repetitive urinary tract infection and urinary urgency may affect daily activities, sexual relationships, and overall quality of life. The aim of the study was to provide the clinical characteristics of VVA patients in South Korea and the effectiveness as well as complications of the currently used low dose estrogen vaginal suppository.
Methods: 52 women who has visited the outpatient gynecology clinic of the National Health Insurance Service Ilsan Hospital from January 2018 to December 2019 were recruited as study subjects. For the analysis of the clinical characteristics, subjective symptoms described by the patient's own words such as vaginal dryness, pain, dysuria, dyspareunia, or no symptoms at all were included. Objective signs such as thinning of vaginal rugae, mucosal dryness, and mucosal fragility and the presence of petechiae were recorded.
Results: Vaginal dryness was the most common complaint (92.3%). Thinning of the vaginal rugae was the most commonly noted objective sign (73.1%). Of the 52 subjects, 31 (59.6%) refrained from using the low dose estrogen vaginal suppository. The most common reason for not being able to use the suppository was the inability to insert the suppository (32.3%).
Conclusions: Although patient-reported symptoms and clinical objectivity through physical examination are two components in diagnosing VVA, further study is warranted for a more objective and discriminatory diagnosis criteria for VVA. As the only available treatment modality was low dose vaginal estrogen suppository, comparison with other treatment modalities were not available.

Keywords: Genitourinary syndrome, Vulvovaginal atrophy, Menopause, Dyspareunia

INTRODUCTION

Vulvovaginal atrophy (VVA) denotes the anatomical and functional changes of the urogenital tissues as the result of hormonal deprivation and aging in women.[1] As the terminology VVA does not specify the presence of associated symptoms, the expert meeting held in 2013 introduced a new terminology called 'Genitourinary syndrome of menopause (GSM)'. GSM is defined as symptoms and signs associated with a decrease in estrogen involving the external genitalia including the labia majora, labia minora, clitoris, vestibule, vagina, as well as urethra and bladder.[2]

GSM affects a wide range about 30% to 80% of postmenopausal women.[3] Symptoms such as vaginal dryness, burning, irritation, dyspareunia, dysuria, repetitive urinary tract infection and urinary urgency may affect daily activities, sexual relationships, and overall quality of life.[4] Treatment options include localized therapy such as vaginal lubricants, vaginal estrogens, systemic hormone therapy and ospemifene.[5]

The aim of the study was to provide the clinical characteristics of VVA patients in South Korea and the effectiveness as well as complications of the currently used low dose estrogen vaginal suppository treatment modality.

METHODS

This was a retrospective study based on patient's medical records. 52 women who has visited the outpatient gynecology clinic of the National Health Insurance Service Ilsan Hospital from January 2018 to December 2019 were recruited as study subjects.

Eligible participants were women in post-menopausal period, defined as the presence of amenorrhea for at least 12 months who consulted the outpatient gynecological clinic of Ilsan hospital under the diagnosis of postmenopausal atrophic vaginitis (ICD-10 code N952).

Exclusion criteria was patients with premature ovarian failure, patients without past history of sexual intercourse (due to the non-applicability of vaginal suppository), vaginal bleeding resulting from sources other than the vulvovaginal atrophy requiring further evaluation and treatment, concurrent postmenopausal hormonal treatment per OS. Patients who have visited the clinic for at least 3 times were included for the accurate analysis of the effect and complication of the low dose estrogen vaginal suppository.

Patient's information gathered based on the medical record include patient's age, height, weight, years since menopause, smoking history, presence of sedentary life style, accompanied medical issues such as osteoporosis, hypertension, diabetes mellitus, psychiatric diseases, and insomnia, sexual activity and accompanied vaginal infections.

For the analysis of the clinical characteristics, subjective symptoms described by the patient's own words such as vaginal dryness, pain, itching, burning, dysuria, dyspareunia, or no symptoms at all were included. Objective signs such as thinning of vaginal rugae, mucosal dryness, pallor of the mucosa, and mucosal fragility and the presence of petechiae were recorded.

As the only available treatment option in South Korea was the low dose estrogen vaginal suppository (Ovestin), the schedule of insertion was divided into daily, every other day, twice a week category.

Reasons for discontinuing the low dose estrogen vaginal suppository were categorized into discomfort due to burning sensation, unable to insert the suppository, annoying vaginal leakage, accompanied vaginitis, and experiencing no effect.

RESULTS

The mean age of VVA patients was 64.3±5.8 years. Sedentary life style (73.1% versus 26.9%) was dominant compared to non-sedentary life style. The most common accompanied medical issue was osteoporosis (96.1%). Most of the VVA patients reported to have no sexual activities (90.1%). About 40% reported accompanied vaginal infection. Atrophic vaginitis was the most common pap result among patients with VVA (84.6%) (Table 1).

Table 1: Baseline characteristics of the patients with vulvovaginal atrophy.

Baseline characteristics	N (%)
Age (year) (mean±SD)	64.3±5.8
Weight (kg) (mean±SD)	61.6±10.5
Height (cm) (mean±SD)	158.1±5.8
Years since menopause (year) (mean±SD)	11.8±5.9
Menopausal status	
Physiological menopause	40 (76.9)
Surgical menopause	11 (21.2)
Non-physiological menopause	1 (1.9)
Smoking	
Never	43 (82.7)
Former	8 (15.4)
Current	1 (1.9)
Sedentary life style	
No	14 (26.9)
Yes	38 (73.1)
Accompanied medical issues	
Osteoporosis	50 (96.1)
Hypertension	23 (44.2)
Diabetes mellitus	19 (36.5)
Psychiatric diseases	21 (40.1)
Insomnia	13 (25.0)
Sexual activity	
Once a week	1 (1.9)
Once a month	1 (1.9)
Less than 10 times a year	3 (5.8)
None	47 (90.1)
Accompanied vaginal infections	21 (40.4)
Unknown origin	5/21 (23.8)
Fungal infection	5/21 (23.8)
Bacterial infection	7/21 (33.3)
Trichomoniasis	1 (0.5)
Mixed	3 (14.3)
Pap result	
Atrophic vaginitis	44 (84.6)
Normal	1 (1.9)
Reactive cellular changes	7 (13.5)

Vaginal dryness was the most common complaint (92.3%). Other than vaginal dryness, pain (59.6%), itching (55.8%), burning (28.8%), and dysuria (26.9%) were some of the other symptoms experienced by the patients. Thinning of the vaginal rugae was the most commonly noted objective sign (73.1%). Mucosal dryness (57.7%), pallor of the mucosa (52.0%), and mucosal fragility and presence of petechiae (34.6%) were other signs observed objectively (Table 2).

Only 17.3% of VVA patients used the low dose vaginal estrogen suppository on daily basis. It was used in every other day in 44.2% of the VVA patients. 38.5% of the 52

VVA patients used the low dose vaginal estrogen suppository twice a week (Table 3).

Of the 52 subjects, 31 (59.6%) refrained from using the low dose estrogen vaginal suppository. The most common reason for not being able to use the suppository was the inability to insert the suppository (32.3%). Other reason for discontinuing the treatment was experiencing no effect (22.6%), vaginal leakage (16.1%), and accompanied vaginitis (16.1%) (Table 4).

Table 2: Clinical characteristics of patient with vulvovaginal atrophy.

Clinical characters	N (%)
Subjective symptoms	
Vaginal dryness	48 (92.3)
Pain	31 (59.6)
Itching	29 (55.8)
Burning	15 (28.8)
Dysuria	14 (26.9)
Urgency	5 (9.6)
Recurrent UTI	4 (7.8)
Impaired sexual function	1 (1.9)
Lack of lubrication	1 (1.9)
Dyspareunia	1 (1.9)
No symptoms	4 (7.8)
Objective signs	
Thinning of vaginal rugae	38 (73.1)
Mucosal dryness	30 (57.7)
Pallor of the mucosa	27 (52.0)
Mucosal fragility and presence of petechiae	18 (34.6)

Table 3: Low dose vaginal estrogen suppository regimen for patients with vulvovaginal atrophy.

Low dose vaginal estrogen suppository	N (%)
Daily	9 (17.3)
Every other day	23 (44.2)
Twice a week	20 (38.5)

Table 4: Reasons for discontinuing the low dose vaginal estrogen suppository in patients with vulvovaginal atrophy.

Reasons	N (%)
Unable to insert the suppository	10/31 (32.3)
No effect	7/31 (22.6)
Vaginal leakage symptom	5/31 (16.1)
Accompanied vaginitis	5/31 (16.1)
Burning sensation	4/31 (12.9)

DISCUSSION

VVA denotes the anatomical and functional changes of the urogenital tissues due to the hormonal deprivation and aging in women.[1] As the terminology VVA does not specify the presence of associated symptoms, the expert meeting held in 2013 introduced a new terminology called 'GSM'. GSM is defined as symptoms and signs associated with a decrease in estrogen involving the external genitalia including the labia majora, labia minora, clitoris, vestibule, vagina, as well as urethra and bladder.[2]

Thinning of the epithelium of the vulvo-vagina and lower genitourinary tract, showing loss of vaginal elasticity, vaginal dryness and an increase of vaginal pH are some of the characteristics of VVA.[6] It is associated with a various symptoms, such as vaginal dryness, burning and irritation, lack of lubrication, dyspareunia, dysuria, and urinary urgency that may affect the quality of life.[4] Vaginal dryness was the most common complaint (92.3%). Other than vaginal dryness, pain (59.6%), itching (55.8%), burning (28.8%), and dysuria (26.9%) were some of the other symptoms experienced by the patients. Thinning of the vaginal rugae was the most commonly noted objective sign (73.1%). Mucosal dryness (57.7%), pallor of the mucosa (52.0%), and mucosal fragility and presence of petechiae (34.6%) were other signs observed objectively (Table 2). VVA as a component of GSM is highly prevalent where as many as 64.7% of women in their 1st year of menopause and 84.2% at 6 years postmenopause manifest various symptoms and signs of VVA.[3,7] The mean age of VVA patients was 64.3±5.8 years. Sedentary life style (73.1% vs 26.9%) was dominant compared to non-sedentary life style. The most common accompanied medical issue was osteoporosis (96.1%).

Most of the VVA patients reported to have no sexual activities (90.1%). About 40% reported accompanied vaginal infection. Atrophic vaginitis was the most common pap result among patients with VVA (84.6%). (Table 1). Despite the grave consequences of VVA, postmenopausal women consider it as a normal process of aging. This misconception prevents women from seeking healthcare, leading to underreporting of VVA.[8] Unlike the vasomotor symptoms that often diminish over time, GSM is unlikely to resolve spontaneously, and if not properly treated, it might progress.[9] The clinical consequences of VVA might be compared to that of arthritis, chronic obstructive pulmonary diseases, and irritable bowel syndrome which are known to significantly impact the quality of life.[10] Considering the not so low prevalence and the rather substantial impact on the quality of life, early detection and proper management of VVA should be considered a priority for the optimization of the postmenopausal women's health service.

Treatment options include localized therapy such as vaginal lubricants and moisturizers, vaginal estrogens and dehydroepiandrosterone (DHEA) or systemic hormone therapy and the estrogen agonist/antagonist ospemifene.[5] Long term studies on the endometrial safety of vaginal estrogen, vaginal DHEA, and ospemifene are lacking.[11] Only 17.3% of VVA patients used the low dose vaginal estrogen suppository on daily basis. It was used in every other day in 44.2% of the VVA patients. 38.5% of the 52

VVA patients used the low dose vaginal estrogen suppository twice a week (Table 3).

Of the 52 subjects, 31 (59.6%) refrained from using the low dose estrogen vaginal suppository. The most common reason for not being able to use the suppository was the inability to insert the suppository (32.3%). Other reason for discontinuing the treatment was experiencing no effect (22.6%), vaginal leakage (16.1%), and accompanied vaginitis (16.1%) (Table 4).

CONCLUSION

Although patient-reported symptoms and clinical objectivity through physical examination are two components in diagnosing VVA, further study is strongly warranted for a more objective and discriminatory diagnosis criteria for VVA.

As the only available treatment modality at present situation in South Korea was low dose vaginal estrogen suppository, comparison with other treatment modalities to evaluate the effectiveness and shortcomings were not available.

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REFERENCES

1. Nappi RE, Martini E, Cucinella L, Martella S, Tiranini L, Inzoli A, et al. Addressing Vulvovaginal Atrophy (VVA)/Genitourinary Syndrome of Menopause (GSM) for Healthy Aging in Women. Front Endocrinol (Lausanne). 2019;10:561.
2. Portman DJ, Gass ML, Vulvovaginal Atrophy Terminology Consensus Conference Panel. Genitourinary syndrome of menopause: new terminology for vulvovaginal atrophy from the International Society for the Study of Women's Sexual Health and the North American Menopause Society. Maturitas. 2014;79(3):349-54.
3. Palma F, Volpe A, Villa P, Cagnacci A, Writing group of AGATA study. Vaginal atrophy of women in postmenopause. Results from a multicentric observational study: The AGATA study. Maturitas. 2016;83:40-4.
4. Nappi RE, Palacios S, Bruyniks N, Particco M, Panay N; EVES Study investigators. The burden of vulvovaginal atrophy on women's daily living: implications on quality of life from a face-to-face real-life survey. Menopause. 2019;26(5):485-91.
5. Edwards D, Panay N. Treating vulvovaginal atrophy/genitourinary syndrome of menopause: how important is vaginal lubricant and moisturizer composition? Climacteric. 2016;19(2):151-61.
6. Bride MB, Rhodes DJ, Shuster LT. Vulvovaginal atrophy. Mayo Clin Proc. 2010;85(1):87-94.
7. Wysocki S, Kingsberg S, Krychman M. Management of Vaginal Atrophy: Implications from the REVIVE Survey. Clin Med Insights Reprod Health. 2014;8:23-30.
8. Gandhi J, Chen A, Dagur G, Suh Y, Smith N, Cali B, et al. Genitourinary syndrome of menopause: an overview of clinical manifestations, pathophysiology, etiology, evaluation, and management. Am J Obstet Gynecol. 2016;215(6):704-11.
9. Shifren JL. Genitourinary Syndrome of Menopause. Clin Obstet Gynecol. 2018;61(3):508-16.
10. Lang K, Alexander IM, Simon J, Sussman M, Lin I, Menzin J, et al. The impact of multimorbidity on quality of life among midlife women: findings from a U.S. nationally representative survey. J Womens Health (Larchmt). 2015;24(5):374-83.
11. The NAMS 2020 GSM Position Statement Editorial Panel. The 2020 genitourinary syndrome of menopause position statement of The North American Menopause Society. Menopause. 2020;27(9):976-92.

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