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Assessment Tools in Genitourinary Syndrome of Menopause

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ABSTRACT

Genitourinary Syndrome of Menopause (GSM) is a term used to define the group of symptoms including vaginal pain, vaginal dryness, itching, pain during sexual intercourse as well as urinary symptoms including urinary frequency, urgency, incontinence, blood in urine (haematuria) and recurrent urinary tract infections (UTI) that occur due to lack of estrogen hormone. These symptoms can have a significant negative impact on psychosexual issues, sexual function and quality of life in postmenopausal women [1].

Traditionally such menopausal symptoms have been treated by estrogen creams to suffice for decreased estrogen. Increasing awareness and concern of women towards menopausal symptoms and increasing life span of population has lead to availability of plethora of treatment modalities instead of only estrogen creams and moisturizers. Yet, there is no consensus on how to use them. It is a therefore vital that a well-designed assessment tool is available to precisely evaluate the severity of GSM and its improvement when using any treatment, through either subjective or objective tools. In the absence of a disease specific quality of life questionnaire, a look out for a validated scale is required. The article discusses various assessment tools in an effort to study symptoms, emotions, life impact and sexual impact of GSM in postmenopausal women.

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Definition

Genitourinary Syndrome of Menopause (GSM) is the term used to define the group of symptoms including vaginal pain, vaginal dryness, itching, pain during sexual intercourse, as well as urinary symptoms including urinary frequency, urgency, incontinence, blood in urine (haematuria) and recurrent urinary tract infections that occur due to lack of estrogen hormone [1, 2].

Patho Physiology

The post-menopausal women vaginal microenvironment differs from that of women in premenopausal status. This is due to changes on account of lack of estrogen [3, 4]. In premenopausal women, presence of estrogen not only cause proliferation of the vaginal epithelium cells but also causes production of glycogen, an essential factor for the growth of vaginal lactobacilli. This vaginal lactobacilli play an important role for a healthy vaginal epithelium by maintaining an acidic Ph by producing lactic acid and H2O2 and offering competitive activity to other pathogens, thereby preventing growth of pathogens [5-8].

In postmenopausal women, decrease or absence of estrogen results in decrease in lactobacilli species, rise in vaginal ph above 4.5 and thereby loss of local vaginal defense mechanism against bacterial pathogens. Thus predisposing these women to local inflammation and infections [9, 10]. Disturbance or decrease in Lactobacilli flora results in the increase in pathogenic organisms like Gardnella Vaginalis, Trichomonas Vaginalis, Enterococci, group B Sreptococci, Escherichia coli [11]. As a result, infections like asymptomatic bacteruria and recurrence of UTI in postmenopausal women is a rampant problem.

The international society for the study on woman's sexual health and the North American Menopause society in 2014, proposed the term GSM replacing earlier terminology of Vulvo vaginal atrophy (VVA) [12, 13]. VVA do occur in non-menopausal hypoestrogenic states like chemotherapy, breast-feeding and pelvic radiation, where at times it resolves spontaneously and therefore labeling them as GSM could result in inappropriate treatment [14-16].

Traditionally such menopausal symptoms have been treated by estrogen creams to suffice for decreased estrogen. Increasing awareness and concern of women towards menopausal symptoms and increasing life span of population has lead to availability of plethora of treatment modalities instead of only estrogen creams and moisturizers. Yet, there is no consensus on how to use them [17]. It is a vital issue to acquire well designed assessment tools to precisely evaluate the severity of GSM and its improvement when using any treatment, through either subjective or objective tools. In the absence of a disease specific quality of life questionnaire, a look out for a validated scale is required. The article discusses various assessment tools in an effort to study symptoms, emotions, life impact and sexual impact of GSM in postmenopausal women.

Diagnosis

Signs of GSM include atrophic changes of the external and internal

female genitalia, regression and thinning of the labia minora, retraction of the introitus and prominence of urethral meatus [18]. Tissue changes also occur at a histological level, suggesting thinning of the stratified squamous epithelium, decreased glycogen stores in the epithelial cells and loss of vascularity and dermal papillae [19].

The classical diagnostic modality for GSM has been a 'clinical diagnosis' including clinical suspicion when women in menopausal status present symptoms e.g burning, dryness and dyspareunia in the genital tract and confirmed clinically observing a pale and dry vulvovaginal mucosa with petechiae occasionally. It is essential to differentiate from other bothersome vaginal conditions such as vaginal lichen sclerosis, vaginal lichen planus, hyperkeratosis, contact dermatitis, vulvar cancer, vulval intraepithelial neoplasm, extramammary paget disease and vaginal infections [3].

Over the years, diagnosis of GSM has been under diagnosed, underreported probably due to unawareness and neglect of women. The logical treatment of GSM is use of estrogen products to palliate lack of estrogen. Today, novel therapies such as vaginal laser, prasterone or ospemifene have made way, however no consensus have been made on how to use them due to absence of assessment tools to precisely evaluate the severity of GSM. The implementation of reliable assessment tools would ultimately bring consistency across scientific evaluation of GSM, allowing regulating the various new treatment options.

Assessment Tools of Vaginal Health

Vaginal health as measured in women with GSM using a variety of validated tools. Depending on the target for each assessment tool, a classification of objective (Table-1) outcomes and subjective (Table-2) outcomes may be prepared. It has been seen assessment tools that considered subjective outcomes, influenced by the patient perception of the complaint, are the most widely used in scientific evaluation of GSM (Table-3).

Table 1: Potential Assessment Tools (Objective Tools)

1.	Vaginal epithelial thickness on Biopsy (VTB)
2.	Vaginal lamnia propria characteristic on biopsy (VLP)- suggesting increased number of fibroblasts, collagen, vascularization and increased Ki 67
3.	Vaginal Thickness on abdominal ultrasound measure (VTU)
4.	Vaginal Compliance on Biopsy (VC) – Assess tensile strength

Table 2: Questionnaires used in Non-Surgical Procedures to Treat GSM

Questionnaire	Validated	Aim of Questionnaire
Female Sexual distress Scale Revised (FSDS-R)	Yes	Distress with sexual function
Female Sexual Function Index (FSFI)	Yes	Multiple Domain of sexual function
Vulvovaginal symptom questionnaire (VSQ)	Yes	Quality of life impact from vulvovaginal symptoms, emotional and sexual concerns
Urogenital Distress Inventory (UDI -6)	Yes	Assess frequency of micturition, urgency, incontinence
Incontinence Impact Questionnaire (IIQ-7)	Yes	Impact on urinary leakage on quality of life
Sexual Satisfaction Questionnaire (SSQ)	No	Sexual Satisfaction
Vaginal Laxity Questionnaire	No	Degree of patient reported vaginal laxity

Table 3: Summary of Current and Potential Assessment Tools

Subjective Tools	Objective Tools	Both Subjective & Objective
DIVAS	VAS	SF 2
FSF1	VHI	
VSQ	VMI	
PISQ12	Cotton swab test	
PROM		

There is a possibility that some therapies present only subjective improvement that if not evaluated result in proclaiming the treatment option as a placebo effect. Therefore, the use of assessment tools to measure the efficacy, safety, success or benefits of a treatment remain a hot topic, underlying the lack of consensus among researchers on how we are assessing clinical relevant changes in women with GSM.

Conclusion

On account of paucity of assessing GSM, different methods of assessment of GSM need to be explored to understand the outcome and credibility of plethora of modalities of treatment in the market. There is a possibility that some therapies present subjective improvement. The article emphasis the need of evaluation of both subjective and objective tools to assess improvement in symptoms of GSM, thereby opening the door to complementary unconventional therapies.

Conflict of Interest: Nil

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References

1. Gandhi J, Chen A, Dagur G, Suh Y, Smith N, et al. (2016) Genitourinary syndrome of menopause: an overview of clinical man-ifestations, pathophysiology, etiology, evaluation, and management. Am J Obstet Gynecol 215: 704-711.
2. Portman DJ, Gass ML (2014) 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. Climacteric 17: 557 563.
3. Peters KJ (2021) What Is Genitourinary Syndrome of Menopause and Why Should We Care. Perm J 25: 200-248.
4. Ginkel PD, Soper DE, Bump RC, Dalton HP (1993) Vaginal flora in postmenopausal women: the effect of estrogen replacement. Infect Dis Obstet Gynecol 1: 94-97.
5. Farage MA, Maibach H (2006) Lifetime changes in the vulva and vagina. Arch Gynecol Obstet 273: 195-202.
6. Hawes SE, Hillier SL, Benedetti J (1996) Hydrogen peroxide-producing lactobacilli and acquisition of vaginal infections. J Infect Dis 174: 1058-1063.
7. Sobel JD (1999) Is there a protective role for vaginal flora? Curr Infect Dis Rep 1: 379-383.
8. Boris S, Suarez JE, Vazquez F, Barbes C (1998) Adherence of human vaginal lactobacilli to vaginal epithelial cells and

interaction with uropathogens. Infect Immun 66: 1985-1989.
9. Osset J, Bartolome RM, Garcia E, Andreu A (2001) Assessment of the capacity of Lactobacillus to inhibit the growth of uropathogens and block their adhesion to vaginal epithelial cells. J Infect Dis 183: 485-491.
10. MacBride MB, Rhodes DJ, Shuster LT (2010) Vulvovaginal atrophy. Mayo Clin Proc 85: 87-94.
11. Panda S, Das A, Singh AS, Pala S (2014) Vaginal pH: A marker for menopause. J Midlife Health 5: 34-37.
12. Portman DJ, Gass ML (2014) 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. Menopause 21: 1063-1068.
13. NAMS (2020) The 2020 genitourinary syndrome of menopause position statement of The North American Menopause Society. Menopause 27: 976-992.
14. Vieira-Baptista P, Claudia Marchitelli C, Haefner HK (2017) Deconstructing the genitourinary syndrome of menopause. Int Urogynecol J 28: 675-679.
15. Pérez-López FR, Vieira-Baptista P, Phillips N, Sacher BC, Susana CAV, et al. (2021) Clinical manifestations and evaluation of postmenopausal vulvovaginal atrophy. Gynecol Endocrinol 26: 1-6.
16. Sarmento ACA, Fernandes FS, Costa APF, Medeiros KS, Crispim JC, et al. (2021) Microablative fractional radiofrequency for the genitourinary syndrome of menopause: protocol of randomised controlled trial. BMJ Open 11: e046372.
17. Donders GG, Bosmans E, Dekeersmaecker A, Vereecken A, VanBulck B, et al. (2000) Pathogenesis of abnormal vaginal bacterial flora. Am J Obstet Gynecol 182: 872-878.
18. Hutchinson-Colas J, Segal S (2015) Genitourinary syndrome of menopause and the use of laser therapy. Maturitas 82: 342-345.
19. Zerbinati N, Serati M, Origoni M, Candiani M, Iannitti T, et al. (2015) Microscopic and ultrastructural modifications of postmeno-pausal atrophic vaginal mucosa after fractional carbon dioxide laser treatment. Lasers Med Sci 30: 429-436.

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