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ORIGINAL ARTICLE

The experience of genitourinary syndrome of menopause (GSM) among Thai postmenopausal women: the non-reporting issue

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Abstract

Genitourinary syndrome of menopause (GSM) is common among postmenopausal women, but, in general, not all of the patients seek medical advice as this sensitive issue can cause them embarrassment.

Objectives To explore the prevalence of GSM among Thai postmenopausal women and their disclosure of and attitude towards GSM.

Methods A questionnaire was used to obtain information on GSM from 499 Thai postmenopausal women who attended the Menopause Clinic at Maharaj Nakorn Chiang Mai Hospital, Chiang Mai, Thailand, from November 2015 to August 2016.

Results The mean age of the 499 participants was 57.8 ± 7.2 years. It was notable that 87.2% of them had had GSM, and the prevalence increased with age. The most common symptoms were nocturia (77.7%) and vaginal dryness (51.7%). Among the symptomatic patients, 63.0% conveyed their problem to other people, i.e., friends and family, while 52.9% of them never reported to health care providers. The most common reason for not talking about their GSM was the acceptance of it being part of the natural aging process.

Conclusions GSM is common among Thai postmenopausal women. The prevalence of non-reporting is high and underreported.

Keywords Attitude · Genitourinary syndrome · Menopause · Vulvovaginal atrophy

Introduction

Genitourinary syndrome of menopause (GSM) is one of the most common problems of postmenopausal women; the incidence is approximately 10–70% [1, 2]. GSM is a collection of signs and symptoms associated with estrogen deprivation. It involves changes in the estrogen-sensitive receptor in the genital area, which is the cause of dryness, burning sensation and irritation of the vagina, and dyspareunia as well as urinary symptoms of urgency, dysuria and recurrent urinary tract infections. Women may present some or all of these signs and symptoms [3, 4]. GSM has a detrimental effect on female sexual dysfunction and quality of life [2, 4–7]. Treatment of vulvovaginal atrophy improves sexual function and relationships [7, 8]. However, only 24–62% of the women who suffer from vulvovaginal atrophy or GSM report their symptoms to a health care provider [1, 4, 8, 9], and around half of postmenopausal women are unaware that vaginal preparation improves vaginal discomfort [9]. Moreover, embarrassment in talking about genital problems is also an inhibition that prevents GSM patients from confiding in health care providers [4, 10].

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The prevalence and severity of GSM varies according to ethnic group [5, 8, 9, 11]. Few studies of GSM in Asian populations have reported the attitude of postmenopausal women towards the problem of disclosure [1]. This study aimed to explore the prevalence of GSM symptoms among Thai postmenopausal women and assess their attitude towards GSM disclosure in order to guide health care providers in giving appropriate GSM management.

Materials and methods

This was a cross-sectional study using a structured questionnaire, carried out from November 2015 to December 2016. The participants comprised 499 Thai postmenopausal women who were aged > 40 years and attended the public Menopause Clinic at Maharaj Nakorn Chiang Mai Hospital, Chiang Mai, Thailand. They were asked to answer the questionnaire voluntarily. Most of the participants lived in the city of Chiang Mai and had health insurance that covered the expense of their treatment. Women who had difficulty in communicating or any medical conditions that limited their ability to complete the survey were excluded from this study. They also were excluded if they had had urinary tract or vaginal surgery or vulvar/vaginal diseases other than GSM. The study was approved by the Research Ethics Committee of the Faculty of Medicine, Chiang Mai University (ID: 4235).

Basic demographic data of the participants were collected. The questionnaire included GSM symptoms, of which the patients reported whether or not they had experienced more than one, such as dryness, burning sensation and itching of the vagina, dyspareunia, dysuria, urinary urgency, stressful urinary incontinence, frequent urination and nocturia [3, 4, 12]. Impact on quality of life also was reported, with severity scores ranging from zero to ten, where zero is the "null" and ten the "most severe." Data regarding any patient who mentioned their symptoms as well as the reasons for telling others about their GSM were also collected. Five clinicians, who were experienced in treating GSM, were asked to review the questionnaire items to confirm that the questionnaire was related to GSM and easily understood by the patient. Then, a preliminary questionnaire was given to 80 patients, and a Cronbach's alpha score of 0.72 was revealed. The questionnaires in Thai and English are in the supplementary files.

A sample size calculation to estimate the least number of women revealing a reliable prevalence of GSM was assessed by the $n = Z_{\alpha}^2 P(1-P)/d^2$ formula, when P was a number based on a previous study that revealed a 44.3% prevalence of vaginal atrophy among postmenopausal women [6]. Therefore, a sample size of at least 379 women from a clinic for menopausal women was needed to explore the prevalence of GSM, with a type I error at 0.05 and maximum allowable error at 0.05.

The Statistical Package for Social Sciences (SPSS, Chicago, IL, USA) version 22.0 was used for data analysis. Continuous data were expressed as mean and standard deviation (SD), while categorical data were reported using frequency and percentage. Comparison of data between the two groups was carried out using the $\chi 2$ test for categorical data and *t*-test for continuous data. A p value < 0.05 was considered statistically significant.

Results

Four hundred ninety-nine postmenopausal women with a mean age of 57.8 ± 7.2 years participated in this study. The majority of the participants were married (71.7%). Of all the participants, 31.7%, 28.7% and 39.7% were using, had used or never used hormonal treatment, respectively. None of them had used androgen supplements. The prevalence of GSM experienced among all of the participants was 87.2%. The prevalence rates were higher among older women, while those in women who had never used hormonal treatment (86.9%), had used it (92.3%) and currently used it (82.9%) were similar, with a p value of 0.051 as shown in Table 1.

The most common complaints among 435 women affected by GSM were nocturia (77.7%), vaginal dryness (51.7%) and stress incontinence (52.2%). Around half of those patients had combined vaginal and urinary symptoms (54.1%). The mean severity scores of vaginal, urinary and combined vaginal and urinary symptoms were 3.7 ± 2.5, 3.4 ± 2.3 and 4.3 ± 1.9, respectively. The number of complaints for each GSM symptom is shown in Fig. 1.

The majority of GSM patients (62.5%) reported adverse impacts on their quality of life, which had mean scores of 2.5 ± 2.5, 2.8 ± 2.8 and 3.9 ± 2.5 for vaginal symptoms, urinary symptoms and combined problems, respectively.

Subgroup analysis in each age group revealed that all women aged > 70 years experienced GSM. The prevalence for women aged < 70 years was 86.5%, 89.6% and 77.8% among ages 61–70, 51–60 and 40–50 years, respectively; $p = 0.013$. The mean severity and quality of life scores in the women aged > 60 years were 3.71 ± 2.1 and 2.87 ± 2.6, respectively, which were less than those in women ≤ 60 years of age (4.14 ± 2.1, $p = 0.048$ and 3.75 ± 2.7, $p = 0.001$). Around two-thirds of the women < 60 years of age who had had GSM were still sexually active (59.1%), while only around one-fourth (26.2%) of those aged > 60 were still sexually activity ($p = 0.000$). However, the prevalence of GSM among sexually active and non-active women was 85.6% and 88.7%, respectively, which was not statistically different ($p = 0.35$).

More than half of the women (62.5%) with GSM revealed their symptoms to others, and the first person they reported to was most likely their partner or the general practitioner. Figure 2 shows the proportion of people the patients disclosed their

Table 1 Demographic data of women with and without GSM

	GSM		*p* value
	Yes, 435 (%)	No, 64 (%)	
Age group (years):			0.01*
40–50	63 (14.5)	18 (28.1)	
51–60	223 (51.3)	26 (40.6)	
61–70	128 (29.4)	20 (31.3)	
≥ 71	21 (4.8)	0	
Mean age (years) ± SD	58.1 ± 7.1	55.4 ± 7.0	0.004*
Marital status:			0.79
Single/ separated/widowed	122 (28.0)	19 (29.7)	
Married	313 (72.0)	45 (70.3)	
Educational status:			0.92
Under graduate	174 (40.0)	26 (40.6)	
Graduate and higher	261 (60.0)	38 (59.4)	
Sexual relationship:			0.30
None	227 (52.2)	29 (45.3)	
Active	208 (47.8)	35 (54.7)	
Menopausal status:			0.4
Peri-menopause	34 (7.8)	7 (10.9)	
Post-menopause	401 (92.2)	57 (89.1)	
Hormone use:			0.051
Current use	131 (30.1)	27(42.2)	
Vaginal estrogen	5 (3.8)	0 (0.0)	
Systemic estrogen	126 (96.2)	27 (100)	
Previous use	132 (30.3)	11(17.2)	
Vaginal estrogen	7 (5.3)	1 (9.1)	
Systemic estrogen	125 (94.7)	10 (90.9)	
Never used	172 (39.5)	26 (40.6)	

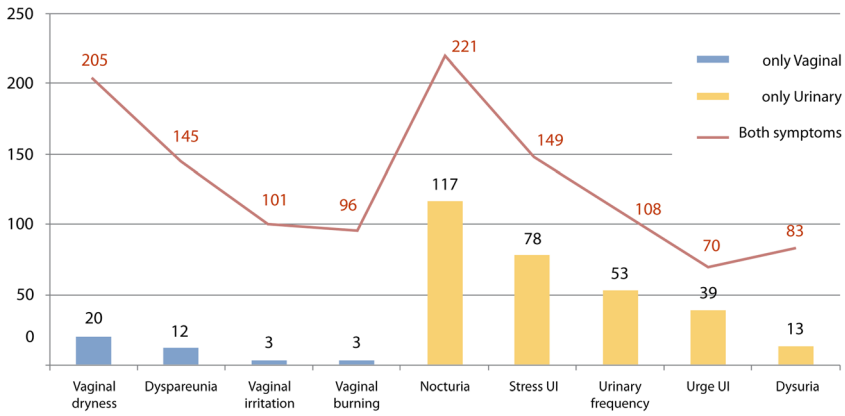
GSM = genitourinary syndrome of menopause

symptoms to and the first person they usually talked to. A considerable 52.9% of the women reporting GSM did not do so to health care providers. The main reasons why 147 women did inform a health care professional were because of concerns about GSM symptoms (69.1%), because health care providers had asked them about their GSM (26.8%) and because some of the women wanted treatment (15.1%). On the other hand, 82.6% of the women who did not report GSM symptoms simply believed that the problem was part of the natural aging process, while 48.4% thought that it was a private issue. In addition, 17.4% of them wanted the health care providers to question them first because they were too embarrassed to initially mention their problem. Most of the GSM patients in this study (94.2%) were of the opinion that the health care provider should initiate the question about GSM.

The mean severity of GSM and awareness of quality of life scores were higher in patients who reported their problems to health care providers than in those who kept the problem to themselves, as shown in Table 2. It was found that age was not a factor affecting disclosure of GSM to the health care provider: Among the GSM patients who disclosed the symptoms to others, 76.8% and 72.6% of the women aged ≤ 60 years and > 60 years, respectively, discussed their GSM problem with health care providers, with $p = 0.76$.

Discussion

This study found that the prevalence of GSM was quite high (87.2%) compared with other studies that reported a prevalence of around 10–70% [1, 2], which may be due to the difference of study design. The participants might have felt relaxed and not really embarrassed to complete the self-report questionnaire in this study compared with encountering questions posed face to face with a health care provider, as in other studies. The participants in this study also were recruited from women attending a menopause clinic who might be concerned about their health or have more symptoms than the general population. Moreover, studies that focused only on vulvovaginal atrophy revealed a lower prevalence, as vulvovaginal atrophy is only a part of GSM [13]. Both lower urinary and genital organs originate from the urogenital sinus and have estrogen receptors [3, 4, 14, 15]. Therefore, hypoestrogenism somehow affects both lower urinary and genital problems [3, 4, 14, 15]. However,



Abbreviations: GSM = genitourinary syndrome of menopause; UI = urinary incontinence

Fig. 1 Number of women affected by the various GSM symptoms

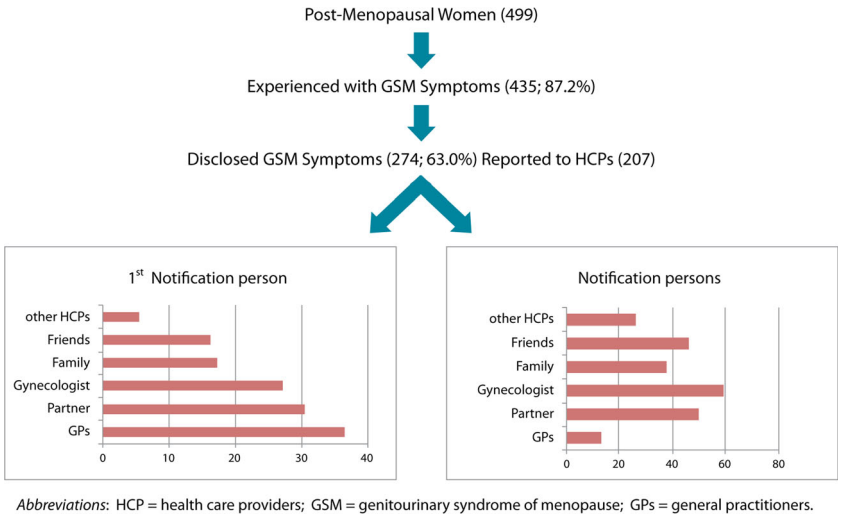


Fig. 2 GSM awareness and disclosure of GSM symptoms

Abbreviations: HCP = health care providers; GSM = genitourinary syndrome of menopause; GPs = general practitioners.

urinary problems also have many causes including structural and neurogenic ones [16, 17]. Assessment and treatment of these issues should be of concern in combination with GSM to help detect women with both a vaginal and urinary problem, who seem to suffer more than those with only one of them. This study also found it easier for patients to express their problems, as shown by the prevalence of combined urinary-genital issues being 54.1%, which is similar to the findings of previous studies that revealed the relationship among vaginal, urinary and pelvic floor disorders among postmenopausal women [2, 10, 18]. The most common GSM complaints also included vaginal dryness and nocturia [1, 2]. It was revealed that GSM problems among postmenopausal women impaired their quality of life. Although the scale in this study was quite broad, there are studies that confirm the impairment of quality of life among GSM patients [2, 5]. GSM also affects sexual function, which in turn affects family relationships [7].

The mean age of the participants in this study was 57.8 years, which is similar to that in a previous report [2]. This study also found a higher prevalence of GSM in the higher age group, which is explained by a prolonged decrease in the estrogen hormone level [3, 4] or more chance of having the co-incidence of other degenerations [16, 17]. However, the older women in this study reported less severity and less impact on their quality of life. This may be due to decreased sexual activity or its accompaniment by other unknown factors [19]. Sexuality is an intimate issue, and its perception, attitudes and beliefs are different in each ethnic group [20–22]. The prevalence of sexual dysfunction among mid-life women generally ranges from 42 to 88% [21, 23] and that in mid-life Thai women was 82.2% [24]. The high prevalence of sexual dysfunction increased with age [21, 23], which is the same trend in GSM prevalence [3, 4].

Some current hormone users also reported having GSM, which means that systemic estrogen might not be potent enough for vulvovaginal atrophy treatment in some patients with vaginal atrophy [10, 25]. There is little evidence of vaginal estrogen in urinary treatment, especially among aging women, when estrogen deprivation might be only a minor part of an explanation [16, 17, 26–29]. While health care providers pay attention to hormonal treatment of women to alleviate early menopausal vasomotor symptoms, GSM symptoms should not be neglected, as the same applies to women in late menopause.

Even though the prevalence of GSM was high in this study, the percentage of patients that reported their GSM problem to other persons was only 63.0%. The most common reason for not reporting was a feeling that GSM was part of the natural aging process. Only 24–62% of GSM patients reported their symptoms to health care providers [1, 4, 8, 9], while only 40% of health care providers routinely asked patients about sexual problems [30]. An appropriate GSM evaluation should start by patients being asked about this issue at every visit and

Table 2 GSM severity score and quality of life score among women who reported symptoms to health care providers

Group	*n*	GSM severity score		QoL severity score	
		Mean ± SD	*p* value	Mean ± SD	*p* value
Reported to HCP	207	4.57 ± 2.1	0.000	4.31 ± 2.6	0.000
Did Not report to HCP	228	3.46 ± 2.1		2.66 ± 2.5	

HCP = health care provider; GSM = genitourinary syndrome of menopause
QoL = quality of life

promoting GSM health education among the patients to help them understand the problems of GSM clearly and lessen their embarrassment in taking the initiative in talking about them.

Conclusion

GSM is common among menopausal women, with its prevalence increasing with age. It is an under-reported problem in Thai postmenopausal women. Health care providers should play an active role in asking postmenopausal women privately about this sensitive issue to help improve their quality of life.

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Compliance with ethical standards

Conflict of interest The authors report no conflict of interest.

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