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Impact of menopause on quality of life: A cross sectional study in menopausal females'

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Abstract

Objective: Menopause can severely effects the somatic, urogenital and psychological aspects of life, our aim is to find out the Health Related Quality of Life in female patients with menopause in a tertiary care hospital.

Methods: A cross-sectional, observational study was conducted in the Gynecology out-patient department. All female patients with menopause attending the Gynecology OPD of tertiary care hospital for various complaints were included in the study. After obtaining written informed consent, demographics, relevant medical and surgical history was noted and they were then administered validated questionnaire 'Health related Quality of Life Questionnaire: Menopause Rating Scale' (HRQoL).

Results: The overall population sample size was 409. The mean age of menopause was 48.91± 4.76 years. Hot flushes and sweating (somatic symptom) were the commonest symptom (86.31%), followed by anxiety (psychological symptom) in 76.53%. Maximum score was attributed to psychological symptoms, while urogenital domain had the minimum score. The association between the duration of menopause (early versus late post-menopause) and severity of symptom complex was found to be significant in psychological symptoms only. Frequency of psychological symptoms decreased as the duration since onset of menopause increased. Occurrence of somatic and urogenital symptoms is not significantly associated with duration of menopause.

Conclusion: Menopausal symptoms commonly affect a large number of early and late post-menopausal women and adversely affect health related quality of life. Menopausal symptoms are common in postmenopausal women and except psychological symptoms there is minimal difference in the frequency and severity of other symptoms with duration.

Keywords: Menopause, Quality of life questionnaire, Menopause Rating Scale, Quality of life

Introduction

Menopause is a universal phenomenon for women. It is a biologic process, characterized by fall in estradiol and progesterone levels, increases in follicle stimulating hormone, as well as a life stage, characterized by changing roles such as the end of childbearing potential and children leaving home. While the biologic impact of menopause is well characterized, the impacts of menopause on a woman's function and well-being, or quality of life, are less clear. The interest of clinical research in aging women increased in recent years and thereby the interest to measure health-related quality of life (HRQoL) and symptoms (1).

These hallmark symptoms of menopause are caused in part by changes in reproductive hormone levels. Early in the menopause, most women experience hot flashes, which can persist for more than 5 years.

Symptoms experienced with the menopausal transition and early postmenopause are varied and span both physical and psychological domains. Anovulatory cycles and ovarian failure may be accompanied by a multiplicity of physical symptoms. Vasomotor symptoms, including hot flashes and night sweats, sleep disturbances, vaginal dryness, urinary incontinence, and weight gain, are common physical conditions experienced by women in the transition through menopause and during menopause.

Psychological symptoms frequently associated with menopause include fatigue, irritability, and anxiety. Not all women who experience hot flashes, however, report them as bothersome. In the later stages of menopause and persisting until death, women can experience vaginal dryness; bother associated with vaginal dryness has not been well studied (2)

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Some studies have shown that the early menopause and late menopause negatively impacts HRQoL, while others have found no impact of menopausal status alone, but rather an impact of menopausal symptoms on HRQoL. Few empirical studies, however, have examined the interrelated nature of symptoms associated with the menopausal transition and early post-menopause and the effects of those symptom groups on quality of life. In some chronic diseases, symptoms may have greater impact when they co-occur in distinct clusters; this impact is referred to as 'symptom experience'. It is important to understand symptom experience during the transition through menopause and early post-menopause because of the large number of symptoms that may co-occur (3)

Studies find that most women experience at least one or more of these symptoms as they transition through the postmenopausal stage of life. Recently, the Study of Women's Health Across the Nation (SWAN), a community-based sample of women across the menopausal transition, found a negative impact of menopausal symptoms on HRQoL and much less of an impact of menopausal status (4). Overall, studies that draw from populations of women seeking care for menopausal symptoms have shown a negative impact of later menopausal stage on HRQoL, while general population studies have either reported a negative impact only of menopausal symptoms, but not status, on HRQoL or failed to find any impact of menopause at all (5)

Quality of life is a broad, multidimensional concept that lacks a precise definition in the medical literature. The World Health Organization has defined quality of life as 'Individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. Quality of life tends to decline in older women, and there is a need to determine what role, if any, symptoms commonly associated with early and post-menopause play in this phenomenon. Quality of life is an important outcome measure of health care, and understanding the impact of menopause on quality of life is a critically important part of the care of symptomatic postmenopausal women (6)

Symptom experience includes perception of, evaluation of, and response to a symptom. Symptom evaluation occurs when individuals make a judgment about the severity, cause, treatability, and effects of a particular symptom on their life. Understanding symptom experience is important in the evaluation and mitigation of negative effects on health and quality of life. Symptom experience may be influenced by the fact that women often report experiencing multiple symptoms associated with menopause (7)

The Menopause Rating Scale (MRS) is a health-related quality of life scale (HRQoL) and was developed in response to the lack of standardized scales to measure the severity of aging-symptoms and their impact on the HRQoL (8)

Understanding the impact of menopause on HRQoL is important as our population ages. Despite a majority of women experiencing multiple symptoms, the literature still presents a gap on whether clusters of symptoms consistently occur and what effect symptom clusters have on quality of life. In this study of menopausal patients in a tertiary care setting, we examine overall frequency of symptoms and the impact of menopausal status alone, or in the context of menopausal symptoms, on HRQoL.

Materials and methods

Study design: This was a cross-sectional, observational study conducted in the Gynecology out-patient department (OPD) of tertiary care hospital, from ___September 2013 to sept 2014.

Ethics: Ethics Committee permission was obtained prior to commencement of the study. Written informed consent was obtained from all the women prior to their inclusion in the study.

Study population: All clinically diagnosed menopausal women, attending the Gynecology OPD of –Jordan University of science and technology teaching hospital for various complaints were included in the study. After obtaining written informed consent, demographics, relevant medical and surgical history was noted. They were then administered a validated questionnaire 'The Menopause Rating Scale' which is a Health Related Quality of Life Questionnaire' (HRQoL) by the same medical person.

HRQoL Questionnaire: 'The Menopause Rating Scale' (MRS) is a patient reported HRQoL questionnaire (9). It was divided into 3 subscales with a total of 21 items pertaining to the symptoms of urinary incontinence:

1) Psychological symptoms: 0 to 16 scoring points (4 symptoms: depressed, irritable, anxious, exhausted)

2) Somato-vegetative symptoms: 0 to 16 points (4 symptoms: sweating/flush, cardiac complaints, sleeping disorders, joint & muscle complaints)

3) Urogenital symptoms: 0 to 12 points (3 symptoms: sexual problems, urinary complaints, vaginal dryness).

Scoring by HRQoL: Each item was to be scored on a 5-point Likert scale of 0 (not at all) to 4 (very severe). A median score for each subscale is calculated (averaging the scores as well as a total score for all 11 items (sum of all subscale scores). The score increases point by point with increasing severity of subjectively perceived complaints in each of the 11 items. The total score of the MRS ranges between 0 (asymptomatic) and 44 (highest degree of complaints).

Interpretation of HRQoL: For all items, higher scores indicated higher impact of menopausal symptoms on quality of life.

Statistical analysis: Categorical variables were described using frequencies and percentages; continuous variables were described using mean and standard deviation (SD) if normal, and range and median if non-normal. Comparison of groups and categorical variables (cross-tabulation) was conducted using chi square if the variable was binomial. An

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α of 0.05 was considered statistically significant. All statistical analysis was conducted using IBM SPSS Statistics 19.0 (IBM, Chicago, IL) using 2-tailed tests.

Sample size: No formal sample size was calculated for this study. All menopausal women visiting the Gynecology OPD were sequentially enrolled in the study with no previous medical or surgical illnesses causing such complaints

Results

Total number of women studied was 409. The age-wise distribution of post-menopausal women is outlined in Table1. The mean age at which menopause was attained was 48.91 years, with an SD of 4.76 years.

Table 1: Age-wise distribution of the post-menopausal women

Age (years)	No. of women
40 and below	4
41-60	269
61-80	134
81 and above	2
Total	**409**

Women were classified as per the time since menopause, as early postmenopausal (if their last menstrual period [LMP] was between 12 months and 5 years ago) and late post-menopausal (if their LMP was 5 or more years ago.

The number of women having early menopause were 124 whereas 285 women had late post-menopause.

Symptoms of menopause were experienced by women. The frequency of these symptoms is shown in Table 2. Hot flushes and sweating (somatic symptom) were the commonest symptom (86.31%), followed by anxiety (psychological symptom) in 76.53%.

The median grade of each of the symptoms and the sum-score of the domain is also shown in Table 2. Maximum score was attributed to psychological symptoms, while urogenital domain had the minimum score.

It was analyzed whether the presence or absence of symptoms from various domains was associated with the duration of menopause.

The association between duration of menopause and somatic symptoms is shown in Table 3. The p-value obtained was 0.0806, indicating that occurrence of somatic symptoms is not significantly associated with duration of menopause.

The association between duration of menopause and psychological symptoms is shown in Table 4. The p-value obtained was 0.04, indicating that there is significant association between occurrence of psychological symptoms and duration of menopause.

As per Table 4, we found that the frequency of psychological symptoms decreased as the duration since onset of menopause increased

Table 2: Frequency and scores of menopausal symptoms

Domain	Menopausal symptoms	No. of women	Percentage	Median score (Range)	Sum-score
Somatic	Hot flushes, sweating	353	86.31	4 (0-4)	8
	Heart discomfort	193	47.19	0 (0-4)	
	Sleep problems	251	61.37	2 (0-4)	
	Joint and muscular discomfort	249	60.88	2 (0-4)	
Psychological	Depressive mood	258	63.08	2 (0-4)	10
	Irritability	290	70.90	2 (0-4)	
	Anxiety	313	76.53	3 (0-4)	
	Physical and mental exhaustion	288	70.42	3 (0-4)	
Urogenital	Sexual problem	92	22.49	0 (0-4)	4
	Bladder problem	206	50.37	1 (0-4)	
	Dryness of vagina	261	63.81	3 (0-4)	

Table 3: Association between duration of menopause and somatic symptoms

	At least one somatic symptom present	Somatic symptoms absent	Total
Early post-menopausal	22	102	124
Late post-menopausal	75	210	285
Total	97	312	409
p=0.0806, using chi-square test. There is no significant association between duration of menopause and the number of postmenopausal women who experience at least one somatic symptom			

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Table 4: Association between duration of menopause and psychological symptoms

	At least one psychologic symptoms present	Psychologic symptoms absent	Total
Early post-menopausal	63	61	124
Late post-menopausal	112	173	285
Total	175	234	409
p=0.04, using chi-square test. There is significant association between the duration of menopause and number of women experiencing psychological symptoms			

Table 5: Association between duration of menopause and urogenital symptoms

	At least one urogenital symptom present	Urogenital symptoms absent	Total
Early post-menopausal	19	105	124
Late post-menopausal	37	248	285
Total	56	353	409
p=0.6339, using chi-square test. There is no significant association between duration of menopause and the number of postmenopausal women who experience at least one urogenital symptom			

The association between duration of menopause and urogenital symptoms is shown in Table 5. The p-value obtained was 0.6339, indicating that occurrence of urogenital symptoms is not significantly associated with duration of menopause.

Discussion

Menopause which is defined as complete cessation of menstruation for twelve months or more is a normal physiological change experienced by middle age women. Some of menopausal symptoms experienced by these women can be severe enough to affect their normal daily activities. Unfortunately majority of these women are not aware of the changes brought about by menopause (10).

The assessment tool that we used in our study was based on Menopause Rating Scale (MRS) questionnaire. Although in menopausal symptoms studies few assessment tools were available, we used the Menopause Rating Scale (MRS) questionnaires, these questionnaires has been widely used in many epidemiological and clinical research when investigating the menopausal symptoms, These questionnaires has been validated and translated in many languages, although it is a self-administrated questionnaires, it's used were not only meant to assess the menopausal symptoms but also its severity, however, in our study, modification has to be done on the scaling of the original MRS because we noted that the respondents had difficulties in rating the scales, this could be explained by the fact that nearly half of the respondent studied never had formal education or only studied at primary level, and to minimize the reporting error, face to face interviewed were used instead of self administered by the respondents (11)

In this study hot flushes and sweating (somatic symptom) were the commonest symptom (86.31%).

The association between the duration of menopause and severity of symptom complex was found to be significant in psychological domain. Frequency of psychological symptoms decreased as the duration since onset of menopause increased. Occurrence of somatic and urogenital symptoms was not significantly associated with duration of menopause.

The duration, severity and impact of menopausal symptoms vary greatly from person to person and population to population. Some population-based surveys, largely conducted among Caucasian subjects, have reported a high prevalence of menopausal symptoms at between 40% and 70% (12). Conversely, studies of Asian women from differing ethnic backgrounds have reported lower symptom prevalence of between 10% and 50% (13)

Rather than imply that the physiologic changes of menopause are intrinsically causing a decrement in HRQoL, we interpret these data as evidence that other changes that may occur concurrent to menopause, beyond hot flashes and vaginal dryness, and need to be examined. In this study several potentially important variables that can change with aging were not examined such as changes in intimate relationships (e.g., changes in sexual activity due to self or partner functioning), alterations in sleep patterns, changes in caregiving responsibilities, and severity of chronic medical conditions (e.g., worsening of pulmonary disease, progression of arthritis). Nonetheless, the decrement in HRQoL associated with menopausal status in our study is similar to decrements seen with other health conditions.14 While some of the decrement is related to hot flashes, which may improve, the vaginal dryness associated with the menopausal transition does not spontaneously resolve.

Physicians and patients should be attentive to the declines in HRQoL in menopausal women, and not just expect that they will get better when hot flashes resolve. Practitioners and patients should continue to examine to other aspects of women's lives beyond menopausal symptoms that occur simultaneously and may be amenable to intervention.

These analyses have a number of limitations that deserve mention. Our study participants were enrolled from a single tertiary care practice. While tertiary care is not menopause-specific care, it may not represent the broader population including women who chose not to access private health care.

The MRS scale is a standardized HRQoL scale with good psychometric characteristics. Among women accessing tertiary care, transitioning into the menopause, regardless of the presence of its hallmark symptoms of hot flashes and vaginal dryness, is associated with a decrement in HRQoL. Clinicians and women should be aware of this impact and work to improve HRQoL, as opposed to expecting HRQoL to spontaneously improve when symptoms resolve. Researchers need to look beyond the classic menopausal symptoms to a more comprehensive biopsychosocial model in order to better understand decline in HRQoL during the menopause.

Conclusion

To conclude menopausal symptoms commonly affect a large number of early and post-menopausal women and adversely affect health related quality of life. Menopausal symptoms are common in postmenopausal women and except psychological symptoms there is minimal difference in the frequency and severity of other symptoms with duration.

Conflict of Interest: The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Author's Contributions: LA, OA: Protocol or project development, Data collection or management **LA:** Data analysis Manuscript editing or writing, Revisions. All authors approved the final version of the manuscript.

Ethical issues: All Authors declare, Originality and ethical approval of research. Responsibilities of research, responsibilities against local ethics commission are under the Authors responsibilities. The study was conducted under defined rules by the Local Ethics Commission guidelines and audits.

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