Postmenopausal symptoms among Egyptian geripausal women

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الأعراض التالية لإياس الشيخوخة لدى المصريات

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الخلاصة: إن زيادة متوسطة مأمول الحياة يعني أن النساء سيقضين فترة أطول من حياتهن في حالة من نقص الإستروجين. وقد صمم الباحثون دراسة مستعرضة لتقييم معدل انتشار الأعراض التالية للإياس بين المصريات الـمُسِنَّات في المرحلة التالية لإياس الشيخوخة. وقد شملت الدراسة عينة من 400 سيدة مُسِنَّة، يُقِمْنَ في المجتمع وتزيد أعمارهن على خمسة وستين عاماً وينتمين إلى ستة من نوادي المسنين في مدينة القاهرة. وقد أخذ الباحثون من المشاركات في الدراسة السوابقَ الشخصية والطبية الكاملة، وطبقوا سُلَّمَ قياس لمراتب الإياس على جميع المشاركات في الدراسة بعد ترجمتها، والتأكُّد من صَوابيَّتها باللغة العربية. واتّضح أن أكثر الأعراض التالية للإياس شيوعاً هي آلام المفاصل (90.3٪)، تتلوها مشكلات في النوم (84.0٪) ثم الإنهاك البدني والنفسي (80.0٪). ووجد الباحثون ترابطاً إيجابياً يُعتد به إحصائياً بين أحْراز سلَّم قياس مراتب سن الإياس وبين كلٍّ من العمر، ومدة الإياس، وعدد الأمراض المزمنة، في حين لم يشاهد أيُّ ترابط مع العمر الذي بدأ فيه الإياس.

ABSTRACT Increases in life expectancies mean that women are spending longer periods of their life in a hypo-oestrogenic state. A cross-sectional study was designed to assess the prevalence of postmenopausal symptoms among elderly Egyptian women in the geripausal phase. A sample of 400 community-dwelling elderly women aged > 65 years were recruited from 6 geriatric social clubs in Cairo. A full personal and medical history was taken from all participants. The menopause rating scale was applied to all participants after translation and linguistic validation in the Arabic language. The most prevalent postmenopausal symptoms were joint pain (90.3%), followed by sleep problems (84.0%) and physical and mental exhaustion (80.0%). A statistically significant positive correlation was found between total menopause rating scale score and age, duration of menopause and number of chronic diseases but not with age of menopause.

Symptômes ménopausiques chez des femmes égyptiennes du troisième et quatrième âge

RÉSUMÉ L'augmentation de la durée de vie signifie que les femmes passent une proportion plus importante de leur vie dans un état hypo-oestrogénique. Une étude transversale a été élaborée pour évaluer la prévalence des symptômes ménopausiques chez des femmes égyptiennes du troisième et quatrième âge. Un échantillon de 400 femmes âgées de plus de 65 ans et vivant dans la communauté a été recruté dans six clubs pour personnes âgées au Caire. Les données personnelles et les antécédents médicaux complets de toutes les participantes ont été notés. L'échelle *Menopause Rating Scale - MRS* [échelle d'évaluation de la ménopause] a été utilisée pour toutes les participantes après sa traduction et sa validation en langue arabe. Les symptômes ménopausiques les plus fréquents étaient les douleurs articulaires (90,3 %), suivis par les troubles du sommeil (84,0 %) et l'épuisement physique et mental (80,0 %). Une corrélation positive statistiquement significative a été retrouvée entre le score total à l'échelle MRS et l'âge, la durée de la ménopause et le nombre de pathologies chroniques. En revanche, aucune corrélation n'a été observée avec l'âge de survenue de la ménopause.

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Introduction

The increasing proportion of the population who are not only elderly but the "oldest old" is a concern for policy-makers, especially concerning the health of women, who account for approximately 60% of all those age 65+ years and 67% of those ages 85+ years [1,2]. Despite increasing life expectancies there has been no concomitant change in the average age of menopause (approximately 50–51 years) which means that women are spending longer periods of their life (now up to one-third of the life cycle) in a hypo-oestrogenic state.

It is now clear that the term "postmenopausal" is insufficient to describe the years after menopause [3]. The term "geripause" has been suggested to describe consistent changes in the body due to both oestrogen loss and the impact of ageing and to provide a focus for the management of late menopause [4]. It has been used to characterize a phase of reproductive ageing that begins postmenopause, presenting a new set of endocrinological, metabolic and physiological manifestations with an increase in age-related changes. It has been divided into 2 phases: early geripause (65–85 years age) and late geripause (above 85 years).

The menopause rating scale (MRS) is a well accepted instrument for measuring the severity of menopausal symptoms. It was developed in response to the lack of standardized scales to measure the severity of ageing symptoms and their impact on health-related quality of life. The ease of completion and high repeatability of the test results emphasize its practical applicability [5]. The MRS is recommended for use in clinical practice as being a reliable scale for the measurement and long-term surveillance of menopausal complaint dynamics [5]. This study aimed to develop an Arabic version of the MRS questionnaire and use it to assess postmenopausal symptoms among Egyptian women in the early geripausal phase.

Methods

Study setting and sample

A cross-sectional study was conducted in Cairo, Egypt over the period August 2008 to January 2009. The study was carried out in 6 social clubs for elderly people which were randomly selected from a list of geriatric clubs in the city that is reviewed and updated by the Ministry of Social Affairs. The list was provided by the social worker of the Department of Geriatrics and Gerontology of Ain Shams University hospital. The study was reviewed and approved by the research review board of the Department of Geriatrics and Gerontology, Faculty of Medicine, Ain Shams University.

Elderly females dwelling in the community who attended these clubs were approached. Women were excluded if they were taking, or had ever taken, hormone replacement therapy before or after menopause or if they were taking anxiolytics or antidepressants. Explanation of the study aims and procedures was given to all subjects and informed consent for participation was taken from each woman. Those who refused to participate were excluded from the study. A total of 457 elderly females met the study criteria; 30 refused to participate while 27 did not complete the questionnaire. Therefore 400 elderly females aged 65+ years completed the study.

Data collection

All participants were interviewed face-to-face by trained health personnel to obtain their demographic details, age of menopause, any history of chronic diseases (self-reported), surgery or medication use and to complete the MRS.

The scale consists of 11 symptoms in 3 domains: somato-vegetative domain (hot flushes, heart discomfort, sleep problems, joint and muscular discomfort); psychological domain (depressed mood, irritability, anxiety, physical and mental exhaustion); urogenital domain (sexual problems, bladder problems and vaginal dryness). Each symptom is scored from none (0) to very severe (4), giving a score range from 0–44 [6]. Summation scores for severity were classified as: none/little = 0–4, mild = 5–8, moderate = 9–16, severe/very severe = 17+ [6].

A chronic physical illness summary score [7] was calculated. This score was the sum of 10 common chronic physical conditions: coronary heart disease, hypertension, diabetes, stroke, arthritis, asthma, osteoporosis, thyroid disease, Parkinson disease and cancer. Diagnosis depended on previous physician diagnosis, or available medical records. The scale score range was 0–10.

Linguistic validation of the Arabic MRS

The MRS scale was originally developed in German language and then translated into a number of other languages [8]. Translation to Arabic and confirmation of the linguistic validity and reliability of the Arabic version was made for the current study. The translation of the MRS was done according to international methodological recommendations for the linguistic and cultural adaptation of questionnaires [9] using the English version as the source. Six steps of the translation process were followed: forward translation by 2 translators, meeting with the coordinator of the translation, a check by a bilingual expert to evaluate the scientific correctness of the wording, a backwards translation, meeting among the translators with the coordinator, and finally a pretest with a chosen sample. The translated questionnaire was tested on 80 volunteers who were allowed to comment on their understanding on each question. A few statements were changed in the Arabic translation to reflect the same correct meaning in the English version. The stability of the Arabic MRS questionnaire was examined by the test–retest

method and the Pearson correlation coefficient between the 2 measures, done on the same group of 60 participants 1 week apart, revealed 90% test–retest agreement.

Statistical methods

The collected data were coded, tabulated, and statistically analysed using *SPSS* programme, version 17. Qualitative data was presented in form of frequency tables (number and percentage). Quantitative data was presented in form of mean, standard deviation (SD) and range. Pearson correlation coefficient was performed to test correlation between 2 quantitative variables, while one-way analysis of variance (ANOVA) was used to test for comparison between multiple groups with quantitative continuous variables. Independent sample *t*-test was also used to compare 2 groups with quantitative continuous variables.

Results

Background characteristics

Table 1 shows the background characteristics of the women. The study sample included 400 postmenopausal women with a mean age of 68.7 (SD 4.6) years (range 65–86 years), mean recalled age of menopause 49.2 (SD 1.6) years (range 41–56 years) and menopause duration of 19.5 (SD 4.5) years (range 11–36 years). The distribution by age group was as follows: 349 (87.3%) 65–75 years, 43 (10.8%) 75–85 years and 8 (2.0%) > 85 years. All of them had been through natural menopause and 3.8% (n = 15) had had a hysterectomy. Marital status was as follows: 34.5% married, 64.5% widowed and 1.0% divorced. The clinical history showed that 70.3% were hypertensive, 45.3% were diabetic, 31.8% had coronary heart disease, 5.0% were asthmatic, 6.8% had osteoporosis, 0.8% had previous stroke, 1.0% were previously diagnosed with cancer and 1.0% had thyroid disease. Presence of diseases was determined according to previous diagnosis by a physician and medication use.

Postmenopausal symptoms

The most prevalent of the postmenopausal symptoms assessed were joint pain (90.3%), followed by sleep problems (83.3%), physical and mental exhaustion (80.0%), hot flushes (76.8%), depressive mood (74.5%), heart discomfort (72.8%), bladder problems (69.3%), irritability (66.0%), anxiety (58.0%), vaginal dryness (21.3%) and sexual problems (4.0%) (Table 2).

Only 11 women (2.8%) did not complain of any of these symptoms. Table 3 shows the distribution of the symptoms by degree of severity. All of the symptoms were present mainly to a mild or moderate degree rather than a severe or very severe degree, except for joint pain, which more women suffered to a severe/very severe degree than mild degree, and for bladder problems, which more women suffered to a severe degree than a mild degree.

The prevalence of symptoms was also assessed according to age group (Table 2). The oldest age group (> 85 years) had the highest prevalence of all symptoms except for heart discomfort, irritability, vaginal dryness and sexual problems. Using ANOVA, a statistically significant association was found between age and each of the following MRS symptoms: heart discomfort (F = 1.623, P = 0.05), anxiety (F = 2.184, P = 0.003), bladder problems (F = 1.777, P = 0.02), and vaginal dryness (F = 2.068, P = 0.006), but not with the other symptoms (Table 2).

On correlating the mean age and the score of each symptom (degree of severity), significant positive correlations were found between age and sleep problems, physical and mental exhaustion, bladder problems, depressed mood and anxiety, i.e. as age increase the severity of each of these symptoms increased (Table 4)

MRS scores

The total MRS score was 13.7 (SD 6.0) (range 0–31). Mean scores on the subscales were: 6.8 (SD 2.7) (range 0–15) for the somato-vegetative domain, 5.1 (SD 3.2) (range 0–16) for the psychological domain and 1.9 (SD 1.6) (range 0–8) for the urogenital domain. According to the degree of severity of the total MRS score, 50.3% of the assessed women had a moderate degree, 31.3% severe/very severe degree, whereas 11.5% a mild degree (Figure 1).

The mean total MRS score was higher among diabetics [14.4 (SD 5.6)] than non-diabetics [13.2 (SD 6.3)] (t = 2.09, P = 0.037) and higher among hypertensives [14.6 (SD 6.0)] than non-hypertensives [11.7 (SD 5.6)] (t = 4.61, P < 0.001). The mean illness summary score of the study group of women was 1.6 (SD 1.1), range 0–6.

The total MRS score increased with increasing age. This correlation was statistically significant (r = 0.153, P = 0.002) and was independent using linear regression (t = 3.417, P = 0.001). Significant positive correlations were also found with menopause duration (r = 0.166, P = 0.001) and the chronic illness summary score (r = 0.357, P < 0.001), but not with menopause age, i.e. the MRS score increased with the increasing menopause duration and increasing number of chronic diseases suffered (Table 5).

Discussion

The menopause is receiving increasing attention in research studies due to the increasing life expectancy of women and the concomitant increase in postmenopausal life span. The mean age of menopause in the current study was 49.2 years, resembling many other previous studies, for example 50 years in the United States [10], 49.0 years in Singapore [11] and 48.6 years in Australia [12]. Postmenopausal symptoms have been shown to lead to social

Table 1 Demographic characteristics of the sample of women by menopause rating scale (MRS) score

Variable	No.	%	MRS score Mean (SD)	Significance	
Age (years)					
65–75	349	87.2	13.4 (5.9)		
75–85	43	10.8	16.3 (6.4)	$F = 5.473$	$P = 0.005$
> 85	8	2	16.5 (4.1)		
Marital status					
Married	138	34.5	13.7 (5.7)		
Widowed	258	64.5	13.7 (6.2)	$F = 1.270$	$P = 0.282$
Divorced	4	1	18.5 (7.2)		
Age at menopause (years)					
< 50	198	49.5	13.9 (5.9)	$t = 0.465$	$P = 0.642$
≥ 50	202	50.5	13.6 (6.1)		
Menopause duration (years)					
<18	166	41.5	13.2 (5.5)	$t = 1.645$	$P = 0.101$
≥ 18	234	58.5	14.2 (6.4)		
Hysterectomy					
Yes	15	3.8	13.0 (3.5)	$t = 0.487$	$P = 0.626$
No	385	96.2	13.8 (6.1)		
Hypertension					
Yes	281	70.2	14.6 (6.0)	$t = 4.614$	$P = 0.000$
No	119	29.8	11.7 (5.6)		
Diabetes					
Yes	181	45.2	14.4 (5.6)	$t = 2.091$	$P = 0.037$
No	219	54.8	13.2 (6.3)		
Coronary heart disease					
Yes	127	31.8	16.6 (6.1)	$t = 6.865$	$P = 0.000$
No	273	68.2	12.4 (5.5)		
Asthma					
Yes	20	5	18.9 (6.6)	$t = 3.970$	$P = 0.000$
No	380	95	13.5 (5.9)		
Osteoporosis					
Yes	27	6.8	14.5 (5.1)	$t = 0.661$	$P = 0.509$
No	373	93.2	13.7 (6.1)		
Stroke					
Yes	3	0.8	23.3 (4.5	$t = 2.798$	$P = 0.005$
No	397	99.2	13.7 (6.0)		
Cancer					
Yes	4	1	17.8 (6.7)	$t = 1.342$	$P = 0.181$
No	396	99	13.7 (6.0)		
Thyroid disease					
Yes	3	0.8	16.3 (13.7)	$t = 0.749$	$P = 0.454$
No	397	99.2	13.7 (6.0)		

impairment and work-related difficulties that significantly decrease women's overall quality of life [13]. Older women are also more vulnerable to social, economic and health disadvantages than older men [14].

The assessment tool used in the study—the MRS scale—has been widely used for investigating menopausal symptoms in many epidemiological and clinical researches [8]. The questionnaire was translated into Arabic

Table 2 Prevalence of postmenopausal symptoms by age group of women

Symptoms	Age group (years)						Total (*n* = 400)		Significance of correlation between age groups	
	65–75 (*n* = 349)		75–85 (*n* = 43)		> 85 (*n* = 8)					
	No.	%	No.	%	No.	%	No.	%	*F*-value	*P*-value
Joint pain	312	89.4	41	95.3	8	100.0	361	90.3	1.534	0.07
Sleep problems	291	83.4	35	81.4	7	87.5	333	83.3	1.589	0.06
Physical and mental exhaustion	277	79.4	36	83.7	7	87.5	320	80.0	1.266	0.20
Hot flushes	270	77.4	30	69.8	7	87.5	307	76.8	0.758	0.76
Depressed mood	257	73.6	34	79.1	7	87.5	298	74.5	1.494	0.08
Heart discomfort	253	72.5	33	76.7	5	62.5	291	72.8	1.623	0.05
Bladder problems	234	67.0	36	83.7	7	87.5	277	69.3	1.777	0.02
Irritability	232	66.5	28	65.1	4	50.0	264	66.0	0.903	0.58
Anxiety	195	55.9	30	69.8	7	87.5	232	58.0	2.184	0.003
Vaginal dryness	66	18.9	18	41.9	1	12.5	85	21.3	2.068	0.006
Sexual problems	15	4.3	1	2.3	–	–	16	4.0	0.375	0.99

language and subjected to a linguistic validation for this study. The final Arabic version showed a good test–retest agreement (90%). Although it is a self-administrated questionnaire, face-to-face interviews were used in this study instead of self-completion by the respondents to minimize reporting errors due by the fact that a considerable number of the respondents had a limited level of education.

A search of the literature shows that other studies of menopausal symptoms have assessed women within a few years after menopause. Our aim was to assess postmenopausal symptoms in geripausal women so an older age range was selected (> 65 years) for the current study. Differences in the age range can explain the difference in symptom prevalence between our study and other studies of menopause. Differences between studies can also be attributed to differences in demographic characteristics and cultural attitudes to ageing and sexuality.

The prevalence of the classic symptom of menopause—hot flushes—was 76.8% in the current study. In another Egyptian study assessing a younger age group (women aged 50–59 years), the prevalence was 90.7% [15]. In most women, hot flushes resolve within a few years of menopause, but some women report symptoms for many years after they cease to menstruate [16]. The prevalence of hot flushes in older postmenopausal women has not yet been well documented, and it is not clear why hot flushes resolve in some women but continue for many years in others.

Several studies have been conducted to investigate postmenopausal symptoms among women in different countries and these suggest that menopausal status and symptoms vary

Table 3 Prevalence of postmenopausal symptoms in the study women (*n* = 400)

Symptom	None		Mild		Moderate		Severe		Very severe	
	No.	%	No.	%	No.	%	No.	%	No.	%
Joint pain	39	9.8	20	5.0	170	42.5	101	25.3	70	17.5
Sleep problems	67	16.8	93	23.3	167	41.8	52	13.0	21	5.3
Physical and mental exhaustion	80	20.0	81	20.3	163	40.8	61	15.3	15	3.8
Hot flushes	93	23.3	101	25.3	154	38.5	44	11.0	8	2.0
Depressed mood	102	25.5	145	36.3	111	27.8	30	7.5	12	3.0
Heart discomfort	109	27.3	107	26.8	142	35.5	31	7.8	11	2.8
Bladder problems	123	30.8	51	12.8	161	40.3	54	13.5	11	2.8
Irritability	136	34.0	130	32.5	86	21.5	36	9.0	12	3.0
Anxiety	168	42.0	93	23.3	106	26.5	25	6.3	8	2.0
Vaginal dryness	315	78.8	39	9.8	28	7.0	16	4.0	2	0.5
Sexual problems	384	96.0	6	1.5	7	1.8	1	0.3	2	0.5

Table 4 Correlation between age and menopause rating scale score in the study women (*n* = 400)

Symptom	Correlation with age	
	r	*P*-value
Joint pain	0.090	0.071
Sleep problems	0.113	0.024
Physical and mental exhaustion	0.144	0.004
Hot flushes	–0.027	0.596
Depressed mood	0.143	0.004
Heart discomfort	0.062	0.218
Bladder problems	0.141	0.005
Irritability	–0.020	0.692
Anxiety	0.145	0.004
Vaginal dryness	0.094	0.059
Sexual problems	–0.021	0.672

across racial/ethnic groups [17,18]. In Poland hot flushes were the most commonly reported symptom by 96.4% [5], whereas among Arab and Greek women living in Australia it was 63% and 43% respectively [12,19] and it was as low as 3.9% among Singaporean women [11]. In the United States, the prevalence of hot flushes was highest among African Americans (46%), followed by Hispanics (34%), whites (31%), Chinese (21%) and Japanese (18%) women [18].

In the current study joint pain, sleeping problems and physical and mental exhaustion, in the somatic and psychological subscales, were the most prevalent symptoms, at 90.3%, 83.3% and 80.0% respectively. This could be explained by the fact that most of the somatic or psychological symptoms experienced by women are not exclusively the result of changes due to menopause alone, but could also result from other physical, psychological or problems related to ageing in this group of women. These 3 symptoms were also the most prevalent in a Malaysian study, albeit with a lower rate (80.1%, 67.1%, 52.2% for joint pain, physical and sleep problems respectively) and based on a smaller age range [20]. The prevalence of joint pain increases progressively with age in women [12]. Menopausal and postmenopausal women sleep less than premenopausal women [21]. Twice as many postmenopausal women as premenopausal women report sleep disturbances [22]. Approximately 10 to 15% of these women consider themselves to have frequent significant to severe insomnia [23].

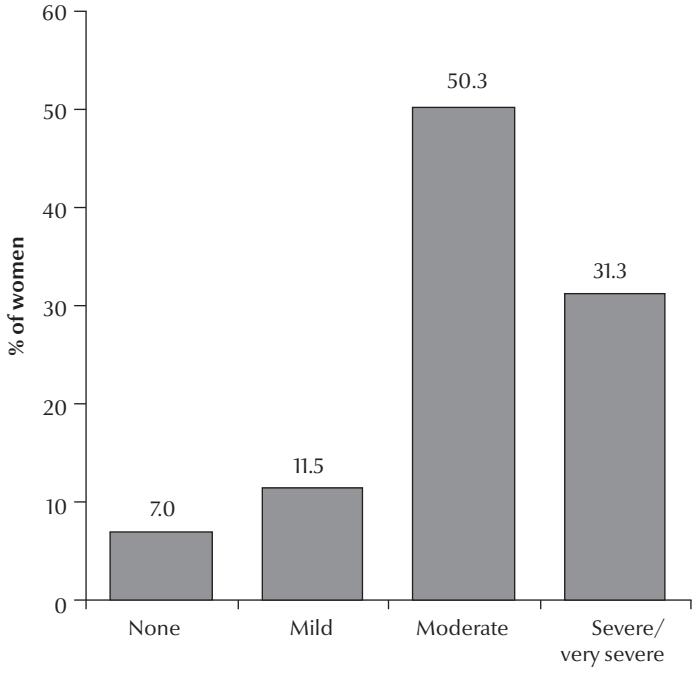

Figure 1 Distribution of women by severity of menopause rating scale (MRS) total score (none/little = 0–4, mild = 5–8, moderate = 9–16, severe = 17+ [6])

Hafiz et al. found higher scores for physical symptoms than for other symptoms among Indian women in Australia aged 45–65 years old [24]. Among Arab women living in Australia the most frequent symptom reported was found to be "feeling tired or worn out" (86%), followed by "aching in muscles and joints"(85%) [19]. The prevalence of fatigue among Greek women living in Australia was found to be 66% [12], while among Singaporean women of different racial groups the prevalence of muscle and joint aches was 52.6% [11].

The prevalence of other psychological symptoms including depressed mood, irritability and anxiety ranged from 74.5%, 66.0% to 58.0% respectively in the current study. Tangen and Mykletun reported a significantly higher score of depression and anxiety in the postmenopausal period compared with the premenopausal period in Norway [25]. The most prevalent symptoms among aged women living in homes for old people in Brazil were depression and nervousness [26]. Among Greek women living in Australia 50% complained of

Table 5 Correlation between menopause rating scale (MRS) total score and different variables

Variable	Correlation with MRS	
	r	*P*-value
Age	0.153	0.002
Menopause age	–0.023	0.652
Menopause duration	0.166	0.001
Chronic llness summary score	0.357	< 0.001

psychosocial symptoms such as feeling nervous [12].

The prevalence of bladder problems was 69.2%, but the prevalence of other symptoms in the urogenital subscale was much lower at 21.3% for vaginal dryness and only 4.0% for sexual problems. The low prevalence of sexual problems can be explained by low reporting due to reluctance to admit such problems in the conservative cultural context of Egypt or to diminished sexual desire among this age group. These rates resemble those of a study in Turkey showing prevalences of 68.8% for urinary incontinence and 23% for vaginal dryness among postmenopausal women above the age of 50 years [27].

Attempts were made to ensure that the study population was as representative as possible of the general population, yet there were some limitations to this study. This was a cross-sectional study, so it did not exclude other confounding effects that may influence experience of symptoms. In collecting data, women were asked to provide some retrospective information, hence recall bias is unavoidable. No participants of younger age were included to compare with this older age group, so further studies will be needed with a wider age range to compare age differences in symptom prevalence.

Conclusions and recommendations

An Arabic version of the MRS was prepared and subjected to linguistic validation. This tool can now be used for assessment of postmenopausal symptoms in Arabic-speaking countries. The most prevalent postmenopausal symptoms among geripausal Egyptian females were joint pain and sleep problems. Elderly females should be assessed for postmenopausal symptoms and physicians must be aware of this critical stage of life in women.

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