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Age of Menopause and Menopausal Symptoms Among Malaysian Women Who Referred to Health Clinic in Malaysia.

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Abstract:

Menopause is the permanent cessation of menstruation due to loss of ovarian follicular function. Due to increased life span among Malaysians, women will have to spend 1/3 of their life during menopause. Early and late complications of menopause calls for specific attention to this large group of women who need constant care. This cross sectional study aims at obtaining the age at menopause in women attending Greentown clinic in Ipoh. The incidence of early menopausal symptoms and correlation between socio-demographic characteristics of these women and severity of menopausal symptoms were also sought. Result suggested that age at menopause was 47.96 years of age. No significant correlation was found between demographic data and severity of menopausal symptoms. High incidence of the menopausal symptoms found in this study group is the evidence of strong need for the establishment of a menopausal clinic to deal with particular problem arising in this age group.

Key Words: Education, Hypertension, medication compliance, Shiraz.

Introduction:

Menopause, a natural step in aging process, represents the end of menstruation after the last menstrual periods in the previous 12 months. It occurs gradually in women and indicates the transition from the reproductive to the post productive era of a woman's life [1]. It is a condition that every woman faces in later life and can have many associated effects, which might disrupt the quality of life. Although the time spent in menopause (now up to one third of life cycles) has increased with phenomenon of increasing longevity, the actual age of menopause approximately 50-51 has not changed for centuries. Aristotle (3rd century B.C), Paulus Aeginata (7th century AD) and Gilberts Anglicus (13th century AD) all quote an age of 50 for the menopause [2]. In the western world, the average age of menopause is 50.4 [3]. This implies that the age at menopause differs in different descendants. It is generally accepted that average age at menopause is about 51 years in industrialized countries[2]. In a recent study in the state of Seremban, in Malaysia, the age of menopause among teachers were found to be 50.7 years [4]. However, the mean age of menopause among women referring to clinics has not been studies in Malaysia. Menopause is a biological phenomenon, which receives less attention in scientific studies. However, due to increase in life expectancies of Malaysian women from 68 years in 1985 to 74 years in 1993, the recent information is essential for a better approach to increase women's status of health.

A research from the first phase of the Study of Women's Health Across the Nation (SWAN) in Boston, United States suggested that common symptoms of menopause also differ by ethnicity [5]. There are differences in the severity of common symptoms experienced by different nations. This factor can also be studied in a Malaysian concept as it is a multiracial society where 45% of the populations are Malays, 41% are Chinese and 14% are Indians [6].

The severity of the menopausal symptoms is determined from the symptoms experienced including hot flashes, night sweat, vaginal bleeding, mood swings, vaginal dryness, insomnia, headache and fatigue [7]. Among all of these symptoms, hot flushes (56%) and generalized tiredness (49%) are the most common according to a study in an urban population in Malaysia [8].

The severity of symptoms varies in different societies. Anthropological and cross-cultural studies have challenged the concept of the menopause as a universal phenomenon, with wide variations in the symptom perception and reporting in women from different ethnic origins living in different countries. Cultural explanations of these differences need to include lifestyle (diet, exercise, social factors) as well as reproductive patterns which can affect biological processes, population differences in biology, as well as beliefs and attitudes to the menopause and the social status of mid-aged and older women. In other words, severity of menopausal symptoms reported depends upon a biological, social, cultural and psychological process which may vary within and between cultures and change over time [9]. Apparently, smoking habits [10] and the use of HRT and OCP [11] also play an important role in determining the severity and age of being menopause. Unraveling these complex influences is a challenge to researchers.

This study was aimed at looking into the mean age of menopause and severity of the symptoms reported among patients referring to Greentown clinic, Ipoh, Perak, one of the states in Malaysia.

Materials and Methods:

This was a cross sectional study. Subjects were recruited from Greentown clinic in Ipoh city in the state of Perak in Malaysia. Simple random sampling method applied to recruit 70 subjects needed for the study. The sample size was obtained using the Epi-Info software and on the basis of medical help-seeking for menopausal symptoms taken from the number of patients visiting the Greentown Clinic per year with absolute precision (d) of 20%, an expected proportion in the population (p) of 20%. Estimated error of 10% was considered for incorrect data entry or missing data. Confidence level of 95% was chosen.

The target group was the females aged 45-55 years, who were in menopausal state namely absence of menstrual cycle for 12 months. Each individual who was registered with the health clinic and was eligible for the study was recruited. Postmenopausal women, those who had hysterectomy, those who underwent radiotherapy or chemotherapy prior to menopausal age, and finally women with premature menopause were excluded from the study.

A standard questionnaire was used for a face to face interview with each subject to obtain the data. The questionnaire was a modification of a universally used questionnaire named Green questionnaire [12]. Permission to use the questionnaire was granted by the author orally in a congress in Kuala Lumpur. A modification was found to be necessary to adopt the questionnaire to Malaysian concept. For this study, we translated the questionnaire using forward and backward translation methods. There were three researchers fluent in three languages namely Tamil, Chinese and Malay. Interview was done by the native speaker of the language as the need aroused. The difficult or ambiguous words were identified and changed during the pilot study and meeting between the researchers and the author. The questionnaire included 2 parts: The first part collecting socio-demographic data such as level of education, occupation, income, marital status, etc. (14 questions) and the second part were asking about sign and symptoms of menopause (11 questions). Following items were asked: Hot flushes, sweating (episodes of sweating); heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness; sleep problems (difficulty in falling asleep, difficulty in sleeping through, walking up early); Depressive mood (feeling down, sad, on the verge of tears, lack of drive, mood swings); irritability (feeling nervous, inner tension, feeling aggressive; Anxiety (inner restlessness, feeling panicky; physical and mental exhaustion (general decrease in performance, impaired memory, decrease in concentration, forgetfulness); sexual problem (change in sexual desire, in sexual activity and satisfaction); bladder problems (difficulty in urinating, increase need to urinate, bladder incontinence), dryness of vagina (sensation of dryness or burning in the vagina, difficulty with sexual intercourse); joint and muscular discomfort (pain in the joints, rheumatoid complaints).

Severity of menopausal symptoms was measured and categorized as follows: Score below 11 was considered mild, 12 to 22 moderate, 23 to 33 severe and 34-44 very severe. The classification was done after taking the average of the severity of the symptoms ± one and two standard deviation into consideration.

Study was done as a part of elective program for medical students. Approval was given by the Royal College of Medicine, Perak Ethical Committee and Greentown Clinic. Face to face interview was conducted. Each interview took about 10 minutes and consent was taken orally. Each subject received a pamphlet explaining about the study and was then asked to take part in the study. Interview was done in a private setting so that the confidentiality of the study was ensured.

SPSS software was used for statistical analysis. P values less then 0.05 was considered significant. Quantitative data was assessed by chi square test and student T-Test was used to compare qualitative data. Pearson test was used to find correlations between bi-variates. Anova test was used to compare means of a quantitative variable between different levels of a qualitative variable.

Results:

The average level of age was 51.2 (± 2.6 SD) with the range of 46 to 55; median of 51 and mode of 50. Age of menarche was 13.27 (± 1.35 SD) with the range of 10-17, (median = 13, mode =12). The average age of menopause was 47.96 (± 2.46 SD) (range: 44 to 54; median 48, mode=50). The mean value of age of menopause did not show any significant difference between different race although Chinese women tent to have a higher age of menopause (48.13 ± 1.36) as opposed to Malay (47.98 ± 2.63) and Indian (47.79 ± 2.49) (p=0.949). There was no correlation between the age of menarche and age of menopause (p= 0.098).

Sixty nine percent of the subjects were Malay, 20% Indian and 11% Chinese. Majority of subjects

were married (83%), 71% were single and only 10% were widowed or separated. Most of subjects were housewives (63%) and the rest were working, 30% worked as full-timers and 7% as part timers. Fifty six percent of the subjects had secondary education, 32.9% had primary education, 3% were illiterate, 5.7% had diploma and another 3% were degree holders. Forty seven percent of women did not have any income. The average income of the remaining subjects was 804. 36 RM per month ± 1399.6 SD. Each US dolor is equal to 3.8 Malaysian Ringgit.

About 56% of subjects had 5 or more pregnancies while the number of deliveries (5 or more) was 41.4%. Thirty four percent experienced one or more abortions. Forty percent had 5 or more children, 11.4% had no children and the maximum number of living children was 12. There was no correlation between the age of menopause and number of pregnancies (p=0.732); number of deliveries (p= 0.031); or number of abortion (p=0.044). However, there was a significant correlation between the age of menopause and the number of living children (p=0.002). Table 1 summarizes obstetric history of the subjects.

Table1: Central description means, median, mode and SD for obstetric variables in subjects referring to Greentown clinic, Ipoh (n=70), SD= Standard Deviation.

Variables	Mean	Median	Mode	SD
Gravida	4.79	5.00	5	2.879
Para	4.29	4.00	4	2.594
Abortion	0.50	2.00	0	0.864
Live Children	4.23	4.00	4	2.589
Boys	2.29	2.00	2	1.669
Girls	1.94	2.00	2	1.483

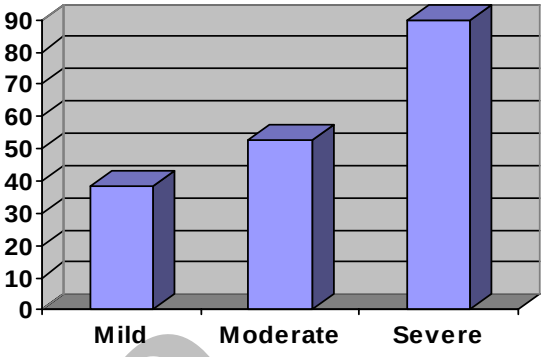
None of the subjects were on hormone replacement therapy (HRT) at the time of interview but 11.4% (mean duration of HRT use was 0.36 months ± 1.42 SD) reported history of using HRT. Moreover, history of oral contraceptive (OCP) use was reported among 17.1% of subjects (mean duration of OCP use was 0.53 month ± 1.55 SD). Only one subject was smoking.

Table 2 shows various menopausal symptoms reported by the subjects. Only 2 subjects (2.9%) reported no menopausal symptoms. The most common symptom was found to be joint and muscle discomfort with the prevalence of 84.3% followed by anxiety (71.4%), physical and mental discomfort (67.2%), hot flashes and sweating (67.1%), irritability (65.7%), sleep problem (64.35), mood problem (62.8%). Heart problem (49.7%), dried vagina 942.85), bladder problem (41.5%) and sexual problem (21.4%) were found to have a prevalence rate of less than 50%. The mean value of total score of menopausal symptoms was 12.53 ± 7.36 SD.

Table 2. Total and classified (mild, moderate, severe and very severe) frequency of menopausal symptoms reported by the subjects refereed to Greentown clinic, Ipoh (n=70).

Symptom	Number	Percentage
Hot flash	47	67.1
Mild	8	11.4
Moderate	30	42.9
Severe	5	7.1
Very severe	4	5.7
Heart problem	35	49.7
Mild	15	21.4
Moderate	20	28.6
Severe	0	0
Very severe	0	0
Sleep problem	45	64.3
Mild	6	8.6
Moderate	27	38.6
Severe	11	15.7
Very severe	1	1.4
Mood	44	62.8
Mild	7	10
Moderate	24	34.3
Severe	12	17.1
Very severe	1	1.4
Irritability	46	65.7
Mild	10	14.3
Moderate	26	37.1
Severe	8	11.4
Very severe	2	2.9
Anxiety	50	71.4
Mild	19	27.1
Moderate	21	30
Severe	8	11.4
Very severe	2	2.9
Physical and	47	67.2
mental	10	14.3
exhaustion	28	40
Mild	7	10
Moderate	2	2.9
Severe		
Very severe		
Sexual problems	15	21.4
Mild	12	17.1
Moderate	2	2.9
Severe	1	1.4
Very severe	0	0
Bladder problem	29	41.5
Mild	12	17.1
Moderate	13	18.6
Severe	3	4.3
Very severe	1	1.4
Dried vagina	30	42.8
Mild	11	15.7
Moderate	15	21.4
Severe	3	4.3
Very severe	1	1.4
Joint and muscle	59	84.3
discomfort	11	15.7
Mild	32	45.7
Moderate	14	20
Severe	2	2.9
Very severe		

Figure 1. Frequency of severity of menopausal symptoms amongst women attended in Greentown clinic, Ipoh (n=70).



When the total score was classified, 37.1% of subjects were suffering from mild symptoms, 51.4% moderate and 8.6% severe symptoms. None of the subjects had the score level of 34 and more. There was a significant positive correlation between total score of menopausal symptoms and age (p= 0.019). There was a negative correlation between the values for total score and income (p=0.002), age of menarche (p=0.01), number of deliveries (p=0.01), and number of living children (p=0.006). However, there were no significant correlation between the total score of menopausal symptoms and age of menopause (p=0.06).

Using ANOVA test, the p value did not reach the level of significance when the total score of menopausal symptoms was compared within various races (p=0.06). However, the mean value of total score was higher among Chinese (14.38 ± 4.57) as compared with that of the Indians (13.29 ± 8.83) and Malays (12.00 ± 7.33).

There were no difference between total score of menopause among subjects with different marital status (p=0.934), various educational level (p= 0.696), various occupational status (p=0.707), positive or negative history of HRT use (p=0.503), and positive or negative history of OCP use (p=0.853).

Discussion:

Age of menopause:

In Malaysia, only a few studies have been done on the early complications of menopausal symptoms. A study done on 400 subjects in the state of Seremban in 1994, the mean age of menopause was 50.7 years. In this study the target group was teachers and majority were Malay (70%) [13]. A more recent study (2005) in the state of Kelantan on 326 naturally menopaused, healthy women found that the mean age at menopause was 49.4 ± 3.4 (S.D.) years while both the mode and median were 50 years [14]. The mean value for age of menopause in our study was 47.96 years among subjects who visited Greentown clinic. The difference may be due to various characteristic of the target groups. Most of the subjects who attended the clinic were Malays (69%). This is probably due to the fact that Greentown clinic provides health care services for government servants and most Malay subjects have the privilege to receive free services in this clinic. Meanwhile the number of Indians was relatively higher than Chinese. Age of menopause did not vary significantly among women with different races although Chinese reached menopause later.

Comparisons of age at menopause are made difficult by the different methodologies applied across populations. A study done in Puebla, mexico by Seivert in 2003 suggests that the differences in median ages at menopause in Puebla are solely due to methodological choices and highlight the difficulty inherent in making inferences across studies of age at menopause between biological and/or cultural groups [15]. Factors associated with age at menopause offer another avenue for comparing and understanding variation in this basic biological process. Age of menopause depends on many factors such as inheritance, smoking, number of pregnancies, use of contraceptive pills [16].

Looking at the data from other countries leads to the same conclusion as the variation is found to be extreme. Starting with the neighboring countries, a hospital-based sample of 270 women in southern Thailand reported that the average age of the postmenopausal women was 48.74 ± 3.07 years (range 40-57) [17]. This data was in concordance with previous studies in Thailand [18-20]. A multi-center study done in seven South-east Asian countries namely, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore and Taiwan reported the median age of 51.09 years for menopause [21].

Age of menopause in other Asian countries also shows various results: Pakistan (47 years) [22], United Arab Emirates (47.3 ± 3.29) [23], Lahore (49 ± 3.6) [24], Saudi Arabia (48.94± 0.290 SE) [25], Iran (49.6 ± 4.6) [26].

Some studies suggest women are getting their menopause in younger age because of many common and socially important diseases that cause early and premature menopause [27, 28]. An Australian study suggested that among 8466 subjects participating in the Australian Longitudinal Study on Women's Health, Asian-born women entered menopause earlier and passed through it more quickly. This study also suggests that there may be differences between ethnic groups that influence the timing of menopause, but the subjective experience appears similar [29]. It is also postulated that age at menopause seems to be mainly influenced by intrinsic factors such as the reproductive history of individuals [30], body mass index [31], cumulative effect of socio-economic circumstances in childhood such as childhood nutrition, cognition and emotional stress [32, 33].

Finally, these findings suggest that human patterns cannot be addressed solely by traditional, small-scale investigations on single populations. Rather, complementary research on a larger scale, may be more appropriate in defining some interesting applications to the practical problems of human ecology.

Menopause Symptoms:

Although hot flushes have been reported to be the most common symptom (57%) among Malaysian women [13, 14], our subjects were mostly disturbed by joint and muscular discomfort (84.3%), followed by anxiety (71.4%) and hot flushes (67.1%). Neslihan from Turkey also reported higher rate of complaints related to the musculoskeletal system (82.3%) as compared with hot flushes (73.9%) [17].

The prevalence of hot flash in our study was lower than that of the western countries. In countries such as Malaysia and Thailand hot and humid weather may mask similar symptoms associated with the climacteric. In a Thai study the most common menopausal symptoms were found to be as follows: hot flushes 36.8%, night sweats 20.8% and vaginal dryness 55.3%.

A comparative study in UK suggested that Asian women living in Delhi reported significantly fewer menopausal symptoms when compared with Caucasian women living in UK: hot flushes: 60.8% vs. 32% respectively ($p < 0.001$); night sweats: 50% vs. 24% respectively ($p = 0.002$). Same study also reports that Asian women living in Birmingham reported menopause as being similar to that of their Caucasian counterparts and both of these groups were more symptomatic than women living in Delhi. This evidence clearly shows that experience of menopause and attribution of symptoms during the menopause transition varies in women of the same ethnic origin depending on their country of residence. The effects of environmental and socio-cultural factors such as diet, exercise and other lifestyle modifications on determination of type of symptoms reported and the severity of the symptoms cannot be denied.

In our study, 42.8% (30 out of 70) of menopausal women reported dryness of vagina, (including sensation of dryness or burning in the vagina, difficulty with sexual intercourse during intercourse), but only 21.4% (15 out of 70) reported sexual problems (inclusive of change in sexual desire, in sexual activity and satisfaction). This seems best explained by the physical changes associated with reduced estrogen levels in menopause [34]. While we did not specifically ask about frequency of sexual intercourse this finding is similar to other studies. For instance, Taechakraichana [35] demonstrated that 50.7% and 39.8%, respectively, of postmenopausal women in middle and upper socioeconomic classes experienced dyspareunia and vaginal dryness. Similarly, while 87.4% of postmenopausal women in very low socioeconomic classes experienced genital symptoms, only 15.1% regarded this as problematic [36]. Sompoonporn and colleagues [37] found 85.4-88.5% of postmenopausal women reported both diminished sexual desire and activity, but 73.9% were not concerned. The prevalence of vaginal dryness in Delhi (7.3%), and other studies from the region has been reported much lower than what we have reported. [38-40]. This may be explained by positive attitudes toward sexual intercourse after menopause in women.

In our study, psychological symptoms such as anxiety (71.4%), irritability (65.7%), sleep problem (64.3%), mood swings (62.8%) was found to be common. While similar studies conducted in Thailand [41-43], Asia [44, 45] and even Western countries [46] also report psychological symptoms as being the most frequent, the specific features of these symptoms vary according to the methodology of the individual studies. It is likely that other factors are influencing the development of these psychological symptoms, such as the normal aging process, or possibly mid-life crises and many other non-menopausal factors experienced by women 45-65 years of age. Moreover, understanding and beliefs about menopause may also be due to the differences in health education between countries. Nevertheless, as cross-cultural and anthropological studies have suggested, it seems that Asian women are more likely to have a more positive view of menopause, while Western women are more concern about aging and view menopause as a problem to be controlled [47, 48]. Future qualitative studies are warranted to determine what is the true nature of psychological problems in menopausal women.

Significant correlations were found between severity of menopausal symptoms and some of the demographic data such as age, income, age of menarche and number of children. Other studies have shown that women with higher education had a lower prevalence and intensity of menopausal symptoms [49]. Another study also suggested that lower educational attainment and greater difficulty paying for basics were related to increased symptom prevalence [50]. In addition, lack of full-time employment was associated with heart pounding or racing, forgetfulness, and difficulty in sleeping.

In conclusion the mean age at menopause for women who attended Greentown Clinic was found to be 47.96 years of age. More than 97% of the

subjects suffered from at least one of the menopausal symptoms the three most common of which were joint and muscular discomfort (84.3%), anxiety (71.4%), hot flushes (67.1%). Sixty percent of our subjects had moderate to severe menopausal symptoms. This proves that menopausal symptoms are common and can not be ignored. However, many of these symptoms are either ignored or not spoken of. It is suggested that establishment of menopausal clinic within the current primary care system can centralize attention to menopausal women and their needs.

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