AGE, PATTERN AND SYMPTOMS OF MENOPAUSE AMONG RURAL WOMEN OF LAHORE

Samira Yahya, N. Rehan

Department of Obstetrics & Gynaecology, Shaikh Zayed Postgraduate Medical Institute Lahore

and PMRC Research Centre Fatima Jinnah Medical College Lahore

Background. The occurrence and timing of reproduction-related events such as menarche, first birth and menopause play major roles in a woman's life. The age at final natural menstrual period is an important risk indicator for subsequent morbidity and mortality. However, the age of natural menopause and frequency of various menopausal symptoms differ in different societies. The concept of "local biologies" has been put forward to account for such inter-societal and intra-societal differences. The present study was undertaken to explore the age at menopause and symptom complex associated with menopause. **Methods**: The data for this cross-sectional study were collected from a geographically defined rural population of 28,419 individuals living in 20 villages situated about 30 KM outside Lahore. A systematic random sample of 130 women was drawn from those 1337 women, who had reached natural menopause. In-depth interviews were conducted in local dialect. **Results**: The mean age at menopause was 49±3.6 years; the median being 50 years. The majority of women (22.3%) reached menopause at 50 years followed by 13.9%, who became menopausal at 49 years. In 66.2% cases, the onset of menopause was sudden. Among those, who had a gradual transition, the duration of climacteric ranged from 2 to 30 months. The symptoms associated with menopause were lethargy (65.4%), forgetfulness (57.7%), urinary symptoms (56.2%), agitation (50.8%), depression (38.5%), insomnia (38.5%) hot flushes (36.2%) and dysparunea (16.9%). **Conclusions**: The median age of menopause in our study is lower than that reported for Caucasian, Thai and Malaysian women; similar to figures from Africa and South America; but higher than that reported from Iran, Egypt, Turkey and UAE. The frequency of various symptoms was comparatively lower than observed among Caucasian populations. The data highlights the need for studying 'local biologies' and understanding the social and cultural basis of these differences.

Key Words: Menopause. Local biologies. Menopausal symptoms.

INTRODUCTION

The termination of reproductive period of life in a woman is marked by the cessation of the menstrual periods and is known as menopause. The transition from reproductive to non-reproductive years, known as Climacteric, is a period of declining ovarian function, which usually becomes clinically apparent over two to five years around menopause. The menopause is a biologic phenomenon unique to the human species. All other animals continue with their reproductive potential until old age.

The occurrence and timing of reproduction-related events such as menarche, first birth and menopause play major roles in a woman's life. The age at natural final menstrual period is an important risk indicator for subsequent morbidity and mortality[1] The risk of cardiovascular disease and osteoporosis tends to be higher in women with earlier menopause[2,3] On the other hand the women who experience an earlier menopause are protected against breast cancer[4] . Age at menopause has also been related to all-cause mortality. Snowdon et al[2] have shown that in a community-based cohort study, there was 95% increase in all-cause mortality associated with non-surgical menopause occurring before 40 years as compared with menopause at the age of 50 years or older. The women aged 40-49 years at menopause were also at 35% higher risk of mortality compared with women aged 50 years or older at natural menopause.

The average age at menopause 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[5]. According to Rosenwaks, age at menopause has been remarkably constant over the past 500 years at around 51.5 years. However, age per se, is not as important as the events surrounding menopause[6].

Most estimates of age at natural menopause are based on samples of Caucasian women in western societies. The studies conducted on non-Caucasian societies have reported younger age at menopause than those of Caucasian women. African, Hispanic, Chinese and Thai women have an earlier age at menopause[1, 7, 8] whereas Japanese and Malaysian women reported an age similar to women of European descent [9, 10].

Clinically menopause is important because the decline in estrogen often causes symptoms that adversely affect quality of life. Numerous physical and psychological symptoms have been attributed to the hormonal changes of menopause. The pattern and frequency of these symptoms differ in different societies.

The international data[5] show that the symptoms associated with menopause are irritability (92%), lethargy (88%), depression (78%), hot flashes and night sweats (75%), headaches (71%), forgetfulness (64%), weight gain (61%), insomnia (51%), joint and muscle pain (48%), palpitations (44%), crying spells (42%), constipation (37%), dysuria (20%), decreased libido (20%).

The real clinical importance of the menopause today lies in the increasing longevity of the women in 20th century. The life expectancy for both men as well as women in Pakistan is increasing, with more women living in their post-menopausal age. Though we can develop health programs for menopausal women using existing foreign data, differences in climate, culture, living conditions, level of education and health awareness, race and diet call for collecting our own data, and designing peri and post menopausal health strategies according to the identified health problems in our socio-cultural aspect.

The data on menopause in Pakistan are scarce and scanty. Except the study of Wasti et al[11] few reports that exist primarily deal with biochemical aspects[12] or hormone replacement therapy[13-14]. The present study was undertaken to explore the age at menopause and symptom complex associated with menopause.

MATERIALS AND METHODS

The data for this cross-sectional study was collected from a geographically defined rural population of 20 villages situated about 30 KM outside Lahore. The sampling frame of the entire population of 20 villages was available with the Clinic of Maternity and Child Welfare Association of Pakistan's Clinic in the study area. At the time of study, 28,419 individuals were living in these villages. From this sampling frame, 2095 women aged > 40 years were contacted to ascertain their menopausal status. Out of those 1337 women, who had reached natural menopause, a systematic random sample of 130 women was drawn.

In-depth interviews of these 130 women were conducted in local dialect of Punjabi. If the mother tongue of the interviewee was not Punjabi, interview was conducted in Urdu.

RESULTS

The socio-demographic characteristics of the study population are shown in Table-1. The age of the population ranged from 36 to 80 years. The mean age was 59.8±7.4 years. The majority of the women (53%) were aged 51–60 years. More than two third of the population (77.7%) was currently married.

Table-1: Socio-demographic characteristics of the study population

Characteristics	Number	Percentage

Age (Years)		
42–50	11	8.5
51–60	69	53.0
61–70	37	28.5
71–80	13	10.0
Marital Status		
Married	101	77.7
Divorced	2	1.5
Widowed	27	20.8
Parity		
Nulliparous	1	0.8
1–4	8	6.1
5–8	53	40.8
9–11	54	41.5
>11	14	10.8

The parity of the woman ranged from 0 to 14. The majority of the women (41.5%) had 9–11 children followed by 40.8 % women, who had 5–8 children. The median parity was 9. Only one woman was nulliparous.

The mean age of menarche was14.6±1.1 years and 46.2% women had attained menarche by the age of 14 years. The age at menopause is shown in Table-2.

Table-2: Distribution of cases according to age at menopause

Age Group (Years)	*Number*	*Percent*
< 40	*2*	*1.5*
41–45	*17*	*13.1*
46–50	*72*	*55.4*
51–55	*30*	*23.1*
>55	*9*	*6.9*

The mean age at menopause was 49±3.6 years. The majority of women (22.3%) reached menopause at 50 years followed by 13.9%, who became menopausal at 49 years. The earliest menopause was at 36 years. In 66.2% cases, the onset of menopause was sudden, while the remaining 33.8% women had a gradual transition to menopause. Among those, who had a gradual transition, the duration of climacteric ranged from 2 to 30 months.

The symptoms found to be associated with menopause are shown in Table-3. The most common symptoms were lethargy (65.4%), forgetfulness (57.7%), urinary symptoms (56.2%), agitation (50.8%), depression (38.5%),

insomnia (38.5%) hot flushes (36.2%) and dysparunea (16.9%). In 61.7% of the women, the frequency of hot flushes was ≤ 1/day, 25.53% had a frequency of 2/day while only 12.76 % had a frequency of >2/day.

Table-3: Symptoms associated with Menopause

Symptoms	Number	Percentage
Lethargy	85	65.4
Urinary Symptoms	73	56.2
Agitation	66	50.8
Depression	50	38.5
Insomnia	50	38.5
Hot flushes	47	36.2
Dysparunea	22	16.9

The most common complaint, for which the women sought treatment, was hot flushes (15.4%) followed by depression (10%), insomnia (9.2%) and urinary complaints (4.6%).

DISCUSSION

The variability in the timing of reproduction-related events exists across different geographical and cultural settings.

It is generally accepted that average age at menopause is about 51 years in industrialized countries[15,16] but the data are inconsistent for developed world. A recent study of 14,620 women from USA showed a median age at natural menopause of 51.4 years[1]. One international study of 18,997 women from 11 countries found the median age at natural menopause to be 50 years with a range of 49-52 years[17]. A few studies of non-Caucasian women, conducted primarily outside the United States have reported younger age at Menopause than those for Caucasian women. Table-4 summarizes the data from few developed and developing countries. The median age of menopause in our study i.e. 50 years is similar to that reported for women from Chile, Kenya, Philippines and Thailand[17]. The median age in our study was, however, higher than that reported from Iran[18] (47.8 years), Egypt[19] (46.7 years) and Turkey[20] (47.8 years) and UAE[21] (48 years) but lower than Malaysian women[10] (50.7 years). Within Pakistan, the findings of Wasti et al[11] and National Health Survey of Pakistan[22] (NHSP) show a slightly lower age of menopause as compared to our findings. According to Wasti et al[11], who studied 650 women from poor, middle and high social strata of Karachi, the mean age at menopause was 47 years. The data of NHSP[22] was collected through a multi-stage, stratified random sample of the whole country. According to National Health Survey of Pakistan, the mean age of menopause among 999 women was 47.76± 5.14 years. The differences may be due to regional variations or large sample size used by NHSP. On the other hand our findings corroborate with the observations of Khanum et al[23], who studied 200 women from Lahore and found the mean age of menopause to be 49 years. The subjects in their study were from urban and peri-urban areas of Lahore.

Table-4: Comparison of the age of menopause.

Country	Author	Year	**No. of women**	Age at Menopause	
				Mean	Median
USA	Gold et al[1]	2001	2001	-	51.4
Australia	Morabia et al1[7]	1998	905	-	51

Taiwan	Morabia et al1[7]	1998	816	-	49
Mexico	Morabia et al1[7]	1998	1670	-	51
Chile	Morabia et al1[7]	1998	1243	-	50
Kenya	Morabia et al1[7]	1998	757	-	50
Philippines	Morabia et al1[7]	1998	816	-	50
Thailand	Morabia et al1[7]	1998	3174	-	51
Iran	Kazerooni et al[18]	2000	9934	47.8 ±3.78	-
Egypt	Hidayat et al[19]	1999	289	46.7 ±5.44	-
Malaysia	Ismael et al[10]	1994	400	50.7	-
Turkey	Neslishan et al[20]	1998	1500	47.8 ±4.0	-
UAE	Bener et al[21]	1998	742	48.0	-
Pakistan	Wasti et al[11]	1993	650	47.0	-
Pakistan	NHSP[22]	1997	999	47.7 ±5.14	-
Pakistan	Khanum et al[23]	2001	200	49.0	-
Pakistan	Present Study	2002	130	49 ±3.64	50

The current medical view of menopause is of a pathological event with its own distinct set of symptoms and complications. Researchers have described women as facing a dramatic increase in the risk of heart disease, osteoporosis, stroke and Alzheimer's, all as a result of changing hormone levels particularly the decline in oestrogen levels. The clinical literature has interpreted these findings in term of absolute necessity of replacing these lost hormones for all women who are menopausal, regardless of any other physiological, social or cultural characteristics. The frequency of various symptoms associated with menopause differs from society to society. Recent studies[24,25] indicate the majority of the post-menopausal women don't share the medicalized view of menopause as a discrete biological entity. Researchers have, thus, suggested that it is important to think in terms of "local biologies", which reflect the different social and physical conditions of women's lives from one society to another[25].

The symptoms commonly reported by our study population in order of frequency were lethargy (65.4%), forgetfulness (57.7%), urinary symptoms (56.2%), agitation (50.8%), depression (38.5%), insomnia (38.5%) hot flushes (36.2%), dysparunea (16.9%). Majority of the women (66.2%) reported an increased libido after menopause. Only 5.4% reported a decreased libido while 22.3% did not notice any change. The corresponding figures for Caucasian populations[5] are lethargy (88%), forgetfulness (64%), irritability (92%), depression (78%), insomnia (51%), hot flashes (75%) and decreased libido (20%) showing a comparatively higher rate of complaints among Caucasian populations. Similar observations have been made for certain Asian populations. A study conducted in Thailand[26] showed a higher rate of vasomotor (72.3%) as well as psychological (93.7%) and urological symptoms (80.7%). Neslihan et al from Turkey[20] has reported that 73.9% of menopausal women suffered from hot flushes and 82.3% women complained of joint pains.

The data presented in this paper outlines the need for studying the 'local biologies' and understanding the social and cultural basis of these differences.

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Address for Correspondence and reprint requests:

Dr. N. Rehan, 32/G, Gulberg-III, Lahore, Pakistan.

Email: nrehan@yahoo.com