

Original Article

Factors Influencing the Age of Menopause among Pakistani Women

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Abstract

Objective: The current study aimed to determine the age of natural menopause among Pakistani women and the factors affecting it.

Methodology: This prospective study was conducted in the department of obstetrics and gynecology of Ziauddin University from January 2020 to June 2020. Women aged 35–65 years, who either have gone through menopause, surgically or naturally, were included in the study. The occurrence of menopause (natural or surgical) was also noted. The last period date of perimenopausal women was recorded. To calculate the body mass index (BMI), height and weight were noted. The women were also inquired about dietary and social habits such as smoking. The principal investigator (PI) collected data by interviewing women who accompanied patients in the outpatient gynaecology department. SPSS was used for data analysis. version 21 was used for data analysis.

Results: A total of 362 women experiencing menopause were interviewed. Of those, 88.46% had natural menopause, while 13.3% had surgical menopause. Significant differences were noted in ages at menopause between Natural and surgical menopause respondents. The mean age of menopause, both natural and surgical, found in our study was 44.6 (Min25, Max59). There was a positive correlation between age of natural menopause and BMI, Education status, and diet. No statistical relationship was found between smoking, abortion, and menopausal age.

Conclusion: There was a lower age of natural menopause among our women compared to other Asian population with poor socioeconomic condition and low BMI with early menopause.

Keywords: Age of menopause, Risk factors.

Cite this article as: Rana MY, Ali HS, Istiaq S, Sultana S, Hussain R. Factors Influencing the Age of Menopause among Pakistani Women. J Soc Obstet Gynaecol Pak. 2021; 11(3):214-216.

Introduction

Menopause is defined as the complete cessation of menstruation for a period of one year. The transition from perimenopause to menopause could last for many years. There is very little, if any, awareness among women for seeking help in getting through this phase of life. Because of variety of cultures and ethnic groups, the perception and thus definition of this term varies to some extent in Southeast Asian subcontinent. Thus; age of menopause ranges from 47 to 51 years, as found in different studies across the region. Because of sheer number of menopausal women in Pakistan and other south Asian countries and all over the world, the exact age of menopause whether natural or surgical has to be known. Women life expectancy in Pakistan is 67.5 years.¹ It is projected that in 2020, the life expectancy of women has increased to 72.1 years which not only enable them to outlive their male partners³ simultaneously have to live 1/3 of their whole life or half of their adult life in menopause. There is no available exact data to enumerate the menopausal population

in Pakistan. However, the frequency of postmenopausal ages 50-59 years women is thought to jump from 36 million in 2000 to 63 million in 2020. According to WHO; number of postmenopausal women (living with one of other complication like obesity and high BMI) will cross 1.2 billion by the year 2030.⁴ The figure highlights the importance of health and related matters of women during this critical phase of life. In the absence of proper disease preventive measures, this physiological phenomenon can be turned into a pathological mess up.⁵ Furthermore; knowledge and understanding of factors like age at occurrence of natural menopause, the nature, frequency and severity of symptoms is very crucial. These again are dependent and influenced by socio-cultural, psychological and environmental factors.⁶ The quality of life is severely affected by appearance of clinical features of menopause including vasomotor instability, genitourinary symptoms, osteoporosis and an increased incidence of bone fractures. Apart from these; frequency of

Authorship Contribution: ¹Substantial contributions to the conception or design of the work, acquisition, analysis, or interpretation of data for the work, ²Final approval of the version to be published. ³Drafting the work or revising it critically for important intellectual content

Funding Source: none
Conflict of Interest: none

Received: May 9, 2021
Accepted: Oct 3, 2021

thrombo-embolic, ischemic heart disease and psychological symptoms of anxiety, depression and memory loss is also on higher side.^{7, 8} There is a dire need of spreading awareness about menopause and its related problems in our populations. There is a significant disparity between the lives of women in developed and developing countries. This gap is even wider in slums and urban areas in developing countries. Through this study, the healthcare system will be sensitized to foster the comprehensive well-being of elderly Pakistani women.

Methodology

This prospective study was carried out in the department of obstetrics and gynecology of Ziauddin University from January 2020 to June 2020. Women aged 35–65 years, who have gone through menopause, either surgically or naturally, were included in the study. Data were collected by principal investigator (PI) through interviewing women which accompanied patient in the outpatient department of gynecology. We took informed written consent (both verbally and written). A questionnaire Performa in English and Urdu language was filled out by the principal investigator, which gathered information about identification of the women's age, age at menopause, education, and other socioeconomic variables. The marital status, parity, and previous abortions

Table I: Association of natural menopausal age with selected variables using multivariate linear regression

	Coefficients			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
(Constant)	40.199	3.372		11.923	.000
Age	.190	.042	.312	4.493	.000
Educational Status	.538	.198	.163	2.718	.007
Social Economic Status	-.399	.334	-.063	1.197	.232
Married life in year	-.044	.034	-.091	1.316	.189
Marital Status	.686	.343	.101	2.001	.046
Menopause Nature	-4.112	.730	-.279	5.631	.000
Body Mass Index height in cm/Weight in kgs	.155	.040	.187	3.867	.000
Waist circumference in cm	-.011	.013	-.043	-.880	.380
Food Type	-2.891	1.030	-.132	2.807	.005
Parity Status	-.119	.391	-.033	-.304	.761
No. of Children born	.305	.317	.109	.962	.337
Abortion	-.143	.279	-.024	-.513	.608
Smoking	.379	.155	.111	2.444	.015
Contraceptive	-1.335	.764	-.082	1.747	.082

a. Dependent Variable: Age of Menopause

were also asked. The occurrence of menopause (natural or surgical) was also noted. The last period date of perimenopausal women was recorded. To calculate the Body mass index (BMI), height and weight were noted. The women

were also inquired about dietary and social habits such as smoking. Data was entered on Microsoft Excel and analysed using SPSS version 20.

Results

Total of 362 menopausal women interviewed, the occurrence of natural menopause was among 88.46% of the women, while other 13.0% had history of having a surgical menopause. The mean age of menopause was 44.6 years (Min25, Max59). There was a significant difference in age of menopause between natural and surgical menopause respondents. There were significant differences ($t(54.219) = 5.085$ $p = .001$) in the scores, with the mean score for natural menopause ($M = 45.31$, $SD = 4.406$) being higher than surgical menopause [$M = 40.10$, $SD = 6.950$]. The magnitude of the differences in the means (mean differences = 5.206, 95% CL: 3.153 to 7.258) was significant. On comparing the age of menopause with different determinants, it was found that there were no significant differences between the groups of smoking and non-smoking respondents ($p > .05$). Similarly, there were no significant differences between the groups with a history of abortion and no Abortion ($p > .05$). There was significant difference between the vegetarian=45.76, $SD=5.476$ and non-vegetarian. There was a positive correlation of high BMI ($r=.108$, $p<0.05$), and delayed age of menopause ($r=.349$, $p<0.01$) while no relation exists with married life ($r=.103$, $p=0.05$) and age of menopause. The value of the table I show that Age of menopause is positively correlated with Educational Status ($p<0.05$) and socioeconomic status.

Discussion

The mean age at natural menopause is approximately 51 years however; varies in different populations.¹⁰ The age to achieve the menopause by a woman a highly significant health related event for her. It is directly linked and affected by the subsequent morbidity and mortality to be faced by her in this phase of life. Earlier menopause saves women from breast cancer conversely makes them prone to a higher risk of cardiovascular disease and osteoporosis.^{11,12} With every one more year to achieve the menopause, the women are at 5% exaggerated risk of uterine and ovarian cancer while 2% reduction in age-adjusted mortality.¹³

The current study identified 45.31 years as age of natural menopause. This result is different from a recent study done in Islamabad where the author found 47.96 ± 4.15 years as age of natural menopause.¹⁴ A study from India¹⁵ involving a large number of women identifies 46.2 ± 4.9 as the mean age of menopause. A very latest study from Iran on the age of menopause found 47.9 ± 4.7 as mean age of natural menopause.¹⁶ While a Chinese study

- 30.5% variation age of Menopause is explained by model.
- Highlight value shows that relation exists with Age of Menopause.

quoted 48.94 year as age of natural menopause which is slightly higher than our study.¹⁷ The menopause is attained at an earlier age in the Asian countries as compared to the

developed countries. However, an Iranian study rejects this difference by commenting the gap in menopause age at menopause (of developed and developing countries) a mere underestimation among developing countries and not an actual difference. Study found 51.2 years as age of menopause in Iranian women¹⁸ same age has been described in American population.¹⁹ Of the factors influencing the age of menopause we found that MI, socioeconomic and educational status and diet has a positive correlation age while smoking, abortion, and marital status has negative correlation with age of menopause. A study done on Indian women in 2016¹⁵ showed that marital status and marriage duration has a strong positive correlation in contrast we found no significant relationship with age of menopause and marital status. Consistent with many studies.^{15, 17, 19, 20} our findings showed that low socioeconomic status is associated low educational level and high socioeconomic status is associated with higher education and a later age of natural menopause. Higher BMI was associated with higher estradiol and estrone levels and late onset of menopause. As like others^{15, 16, 17, 21, 22} we found lower BMI associated with early menopause while Gold et al²⁰ in their study on American population found that BMI and physical activity were not related to age at natural menopause. We found no significant association of smoking with early menopause as reported by many authors.^{20, 23, 24, 25}

Probably in our setup women usually not smoke due to cultural and religious reasons and also women shyness and social stigma in admitting that they smoke. The study conducted on Chinese women¹⁷ found positive association of meat consumption with late menopause, similarly we found that women who consumed non-vegetarian diet has late menopause compared with women who consumed vegetarian diet. Nagel G²⁶ found an inverse relationship between high carbohydrate consumption/ high vegetable/ fiber and cereal intake with the age at natural menopause. Sapre S et al²³ identified most of the factors of low socioeconomic status such as father occupation of laborer, family size > 10 and less meat intake and rural residence significantly associated with early menopause. Parity is also thought to be a reason for propelling the age of menopause farther than the mean age.^{15, 16, 27} In our study we did not found significant correlation with parity, miscarriages and age at menopause. Small sample size is one of the limitations; also, no documented evidence of age or women date of birth, Age of menopause was just determined by remembrance, which can create a recall bias self-reported and misclassification. Secondly, the participants are from a single hospital-based setting so it cannot represent the whole country.

Conclusion

The median age of menopause in our study was found to be lower than other studies from Pakistan, India and other Asian countries such as Iran and China. As with most of the studies done in this region, we found significant association of age of menopause and BMI, Educational status, and diet.

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