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TO STUDY ASSOCIATION OF POST-MENOPAUSAL SYMPTOMS AND CLINICO-DEMOGRAPHIC PROFILE: A DESCRIPTIVE STUDY

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ABSTRACT

Age at menopause influences the severity of post-menopausal symptoms to determine the symptoms and clinicodemographic links in post menopauseal women in a representative population from eastern Uttar Pradesh. All postmenopausal women presenting with symptoms in the Gynaecological Emergency Department for a period of one year were enrolled. Age and clinicodemographic details, symptoms severity, and reasons for delay in seeking treatment were noted. The data was analysed using Chi-square test. Overall 990/17,927 (5.52%) women visiting the gynaecological OPD presented with post-menopausal complaints. Among menopausal women, the mean age ranged from 40 to 60 years old with a mean age of 46.6012.48 years. Majority were para 3-4 (52.5%), age at menarche were >13 years (58.3%), uneducated (58.8 %) , lower/upper lower SES (57.5%), married (77.3%) and had BMI<18.5kg/m2 (62.1%). Tobacco/smoking addiction was reported in 55 (5.6%) women. A total of 145 (14.6%) were working women. Severity of symptoms was mild, moderate and severe in 57.2%, 28.3% and 14.5% cases. Majority had onset of symptoms for 4-5 years (56.4%) after menopause. Joint pains and Backache/body ache were the most common presenting complaints (81.8%). A significant association of age at presentation was seen with parity, age at menarche, BMI category and occupational status. Severity of symptoms showed a significant association with age at presentation, parity, age at menarche, BMI category, occupational status and tobacco/smoking use. Most common reasons for delayed treatment were financial problems (22.2%), family problems (18.2%) and commonness of problem (12.6%). Only 2.1% women were aware about HRT. Among the relatively less informed members of our study population, low socioeconomic status, underweight, and menopause age were all influenced by clinicodemographic factors.

KEYWORDS: Post-menopausal complaints, Symptom severity, Age at menopause, Reasons for delayed treatment.

INTRODUCTION

Menopause is an important milestone in the reproductive life of every women that might disrupt the wellbeing during this transition period. Menopause is an emergent issue in Indian women due to increase in urbanization over the years, changing lifestyle and life expectancy. However, most remains unaware about middle and geriatric age issues due to lack of awareness, social barriers and unavailability or the increase in cost of health care.

Menopause is physiological and permanent cessation of menses. The diagnosis of menopause can only be made when an individual has had 12 months of amenorrhea. Menopause also leads to decrease in ovarian follicles leading to decrease in ovarian hormones. Thus, it is characterized by menstrual changes that reflect oocyte depletion and subsequent reduction in ovarian hormone production such as estrogen levels and changes in the levels of the other hormones like testosterone. Hence, the symptoms during menopause arise due to hormonal changes rather than cessation of menstruation itself. Natural menopause occurs at or after age of 40 and has no underlying pathology.

During the transition to menopause, women can complaints of symptoms such as hot flashes, night sweats, menstrual cycle changes, loss of libido and mood changes whereas delayed symptoms include atrophic changes, psychosomatic effects, osteoporotic complications, cardiovascular diseases and cognitive decline (Alzheimer's disease).

In India, age of menopause seems to be less than that of western world. This means that the fertility potential of Indian women starts compromising early, so we need

to start with the preventive measures much early. 46.2 % is average age of menopause in Indian women compared to average age of 51 years in western world.**1**

MATERIALS AND METHODS

STUDY SETTING

This study is an observational cross- sectional study conducted in the department of Obstetrics & Gynecology, BRD Medical College Gorakhpur, over a period of one year. This tertiary care centre caters to 15 surrounding districts in a 300 km^2 region around Gorakhpur.

STUDY PARTICIPANTS AND SAMPLE SIZE

All postmenopausal patients visiting OPD over a period of 1 year, who attained their menopause naturally and reported with any postmenopausal complaints / symptoms were asked to participate in this study. 990 women visited Gynaecology OPD for postmenopausal complaints and were enrolled for the study after taking written and informed consent to participate in the study.

Women with premature ovarian failure, surgical menopause, any known chronic illness hampering the quality of life or psychiatric illness were excluded from the study.

STUDY PROCEDURE AND STUDY TOOL

A pretested structured questionnaire was made and it was used to gather the sociodemographic, obstetric and clinical details of the participants such as age, socioeconomic status, height, weight, occupation, education, religion, marital status, average household income, history of addiction, menstrual history, brief obstetric history and Postmenopausal symptoms/complaints. The questionnaire was pretested on 25 women to check for it validity. The questionnaire was in English as well as in Hindi language. Women were interviewed face to face in her understandable language.

Patients were given the questionnaire and inquired about the symptoms they experienced during menopause. The interview was taken by trained health professional and every symptom was explained to the patients so as to make sure that they understand the symptoms and give accurate responses. Women who experienced menopausal symptoms were asked to participate in the study. An informed written consent was taken from all the women who participated.

Severity of symptoms was predefined as:

Mild: no limitation to daily activities.

Moderate: slight limitation to daily activities.

Severe: severe limitation to daily activities.

STATISTICAL ANALYSIS

The statistical analysis was done using the Chi square test. P value < 0.05 was taken to be statistically significant.

RESULTS

During the study period spanned over one year, a total of 17,927 women visited the gynaecological OPD, out of which a total of 990 visited for postmenopausal complaints. Age of women ranged from 40 to 60 years with a mean age of 46.60±2.48 years. Majority of the women were in age group 45-50 years (76.1%). Parity wise, majority (52.5%) were para 3-4, followed by para >4 (42.4%) women. Only 50 (5.1%) were para 1-2. There were no nullipara women in this study. Majority of patients had menarche at age ≥13 years (58.3%). The study sample was dominated by uneducated women (58.8%) and only 28 (2.8%) women were educated high school or above. Lower and Upper lower together comprised the most common socioeconomic group (57.5%) while only 75 (7.6%) women were from upper socioeconomic class. A total of 765 (77.3%) women were married followed by widowed (20.2%) and separated (2.5%) women. The nutritional status (BMI) of women was underweight in majority (62.1%) followed by normal weight (36.4%) and overweight (1.5%) women. There were no obese women. A total of 145 (14.6%) women were working women. Severity of symptoms was rated as mild, moderate and severe in 566 (57.2%), 280 (28.3%) and 144 (14.5%) cases respectively. The duration since menopause to onset of symptoms was reported to be <4 years in 186 (18.6%), 4-5 years in 560 (56.4%) and ≥5 years in 245 (25.0%) cases respectively (Table 1).

Joint pains and backache/body ache were the most common presenting complaints (81.8% each) followed by headache (72.02%), loss of libido (55.5%), insomnia (48.4%), vaginal dryness (30.3%), hot flushes (30%), urinary symptoms (24.2%), GI problems (15.1%), irritability/anxiety and sweating (11% each) and tiredness, depression, loneliness (5.05%) respectively. There was no patient presenting with post-menopausal hirsutism (0%) in our study (Fig.1).

On evaluating the association of age at presentation with different patient characteristics like parity, age at menarche, BMI category, occupation and tobacco/smoking addiction, except for tobacco/smoking habit all the other characteristics were found to have a significant association. Lower parity, age at menarche ≥13 years, overweight status

and non-working (homemaking) status were significantly associated with older age at presentation ($p<0.05$). Among tobacco users/smokers, though proportion of those presenting at <45 years was higher (23.6%) as compared to that in non-tobacco users/non-smokers (17.6%) yet this association was not significant statistically ($p=0.105$) (Table 2).

On evaluating the association of symptom severity with different patient characteristics like age at presentation, parity, age at menarche, BMI category, occupational status and tobacco/smoking use, all these variables emerged to have a statistically significant association. It was seen that with increasing age, parity, age at menarche, underweight or overweight BMI status, working status, and tobacco/smoking use, the proportion of women with moderate and severe symptoms increased significantly ($p<0.05$) (Table 3).

Only 135 (13.6%) women were found to have previous knowledge of menopausal symptoms. Changes in dietary habit and worsening of familial relationships were reported by 55.5% and 26.6% of women respectively. Among reasons for delayed treatment seeking, financial problems (22.2%), family problems (18.2%) and commonness of problem (12.6%) were the most common ones while shyness (8.6%), medication inhibition (5.5%) and self-medication (3%) were the least common reasons. Only 20 (2.1%) women had awareness regarding hormone-replacement therapy (HRT) in our study (Table 4).

SN	Characteristic	Statistic
1.	Age of post-menopausal women	(n=990)
	<45 Years	178 (18.0%)
	45-50 Years	753 (76.1%)
	>50 Years	59 (6.0%)
	Mean age±SD (Range) in years	46.60±2.48 (39-56)
2.	Parity	
	1-2	50 (5.1%)
	3-4	520 (52.5%)
	>4	420 (42.4%)
3.	Age at menarche	
	<13 Years	413 (41.7%)
	≥13 Years	577 (58.3%)
4.	Educational status	
	Uneducated	582 (58.8%)
	Primary	231 (23.3%)
	Junior	143 (14.4%)
	High School or above	28 (2.8%)
5.	Socioeconomic Status	
	Lower	335 (33.8%)
	Upper lower	235 (23.7%)
	Lower middle	205 (20.7%)
	Upper middle	140 (14.1%)
	Upper	75 (7.6%)
6.	Marital Status	
	Married	765 (77.3%)
	Widowed	200 (20.2%)
	Separated	25 (2.5%)
7.	BMI Category	
	Underweight (<18.5 kg/m^2)	615 (62.1%)
	Normal weight (18.5-24.9 kg/m^2)	360 (36.4%)
	Overweight (25.0-29.9 kg/m^2)	15 (1.5%)
8.	Tobacco/Smoking addiction	55 (5.6%)
9.	Working women	145 (14.6%)
10.	Severity of symptoms	
	Mild	566 (57.2%)
	Moderate	280 (28.3%)
	Severe	144 (14.5%)
11.	Duration since onset of symptoms	
	<4 Years	185 (18.6%)
	4-5 Years	560 (56.4%)
	≥5 Years	245 (25.0%)

Table 1: General Profile and Characteristics of the Women Enrolled in the study (n=990)

SN	Characteristic	<45 Yrs (n=178)	45-50 Yrs (n=753)	>50 Yrs (n=59)	Statistical significance ('p' value)
1.	Parity				
	1-2 (n=50)	0	0	50 (100%)	<0.001
	3-4 (n=520)	0	511 (98.3 %)	9 (1.7%)	
	>4 (n=420)	178 (42.4 %)	242 (57.4%)	0	
2.	Age at menarche				
	<13 Yrs (n=413)	88 (21.3 %)	310 (75.1 %)	15 (3.6%)	0.002
	=13 Yrs (n=577)	90 (15.3 %)	443 (76.8 %)	47 (8.1 %)	
3.	BMI Category				
	Underweight (n=615)	27 (4.4 %)	578 (94.0 %)	10 (1.6 %)	<0.001
	Normal weight (n=360)	3 (0.8 %)	352 (97.8 %)	6 (1.7 %)	
	Overweight (n=15)	7 (46.7 %)	3 (20.0 %)	5 (33.3%)	
4.	Occupational status				
	Homemakers (n=845)	143 (16.9 %)	655 (77.5 %)	47 (5.6 %)	0.035
	Working women (n=145)	35 (24.1 %)	98 (67.6 %)	12 (8.3 %)	
5.	Tobacco/Smoking				
	Yes (n=55)	13 (23.6 %)	42 (76.4%)	0	0.105
	No (n=935)	165 (17.6 %)	711 (76.0 %)	59 (6.3 %)	

**Percentages have been Calculated for Row-Total*

Table 2: Association of Different Clinic-Demographic Characteristics with age at Presentation

SN	Characteristic	Mild (n=566)	Moderate (n=280)	Severe (n=144)	Statistical significance ('p' value)
1.	Age at presentation				
	<45 Years (n=178)	92 (62.9 %)	46 (25.8 %)	40 (22.5 %)	<0.001
	45-50 Years (n=753)	458 (60.8 %)	205 (27.2 %)	90(12.0 %)	
	>50 Years (n=59)	16 (27.1 %)	29 (49.2 %)	14 (23.7 %)	
2.	Parity				
	1-2 (n=50)	32 (64%)	16 (32%)	4 (8%)	<0.001
	3-4 (n=520)	338 (65.0 %)	111 (21.3 %)	71 (13.7 %)	
	>4 (n=420)	196 (46.7 %)	153 (36.4 %)	69 (16.4 %)	
3.	Age at menarche				
	<13 Yrs (n=413)	216 (52.3 %)	120 (29.1 %)	77 (18.6 %)	0.004
	=13 Yrs (n=577)	350 (60.7 %)	160 (27.7 %)	67 (11.6 %)	

Table 3: Association of different Clinic-Demograpiccharacteristics with symptom severity

4.	BMI Category				
	Underweight (n=615)	264 (26.7%)	233 (37.9%)	118(19.2%)	<0.001
	Normal weight (n=360)	302 (83.9%)	43 (11.9%)	15 (4.2%)	
	Overweight (n=15)	0	4 (26.7%)	11(73.3%)	
5.	Occupational status				
	Homemakers (n=845)	534 (63.2%)	228 (27.0%)	83 (9.8%)	<0.001
	Working women (n=145)	32 (22.1%)	52 (35.9%)	61 (42.1%)	
6.	Tobacco/Smoking				
	Yes (n=55)	22 (40.0%)	25 (45.5%)	3 (4.5%)	0.001
	No (n=935)	544 (58.2%)	255 (27.3%)	141(15.1%)	

Cont. Table 3: Association of different Clinic-Demograpiccharacteristics with symptom severity

SN	Characteristic	No. (%)
1.	Previous knowledge of menopausal symptoms	135 (13.6%)
2.	Changes in dietary habits as a result of change in appe tite/indigestion and other GIT issues	540 (55.5%)
3.	Worsening of relationship with other family members	283 (26.6%)
4.	Reasons for seeking delayed treatment	
	Commonness of the problem	125 (12.6%)
	Not taking it seriously	95 (9.6%)
	Considering it self-resolving	90 (9.1%)
	Self-medication	30 (3.0%)
	Family problems	180 (18.2%)
	Financial problems	220 (22.2%)
	Hospital fear	115 (11.6%)
	Shyness	85 (8.6%)
	Medication inhibition	50 (5.5%)
5.	Awareness regarding HRT	20 (2.1%)

Table 4: Knowledge, Attitude and Practices related with menopausal symptoms and their treatment (n=990)

DISCUSSION

Total patients in outpatient department were 17,927 over one-year period out of which 990 (5.52 %) came with postmenopausal symptoms. Low incidence of post-menopausal women coming for checkup indicates low awareness about health problems, high rate of illiteracy and poverty. They only come when they have problems like post-menopausal bleeding, vaginal discharge, severe body ache or severe somatic symptoms and which affected their quality of life.

The mean age of menopause in our study was found to be 46.60±2.48 which is lesser when compared to western countries. The median age at menopause among white women from developed countries ranges between 49 and 52 years and at onset of the perimenopause is 47.5 years. (2,6) Maninder Ahuja et al 7 did their study across 21 cities in India and reported that the mean menopausal age of women in India was 45.59 ± 5.59 years.

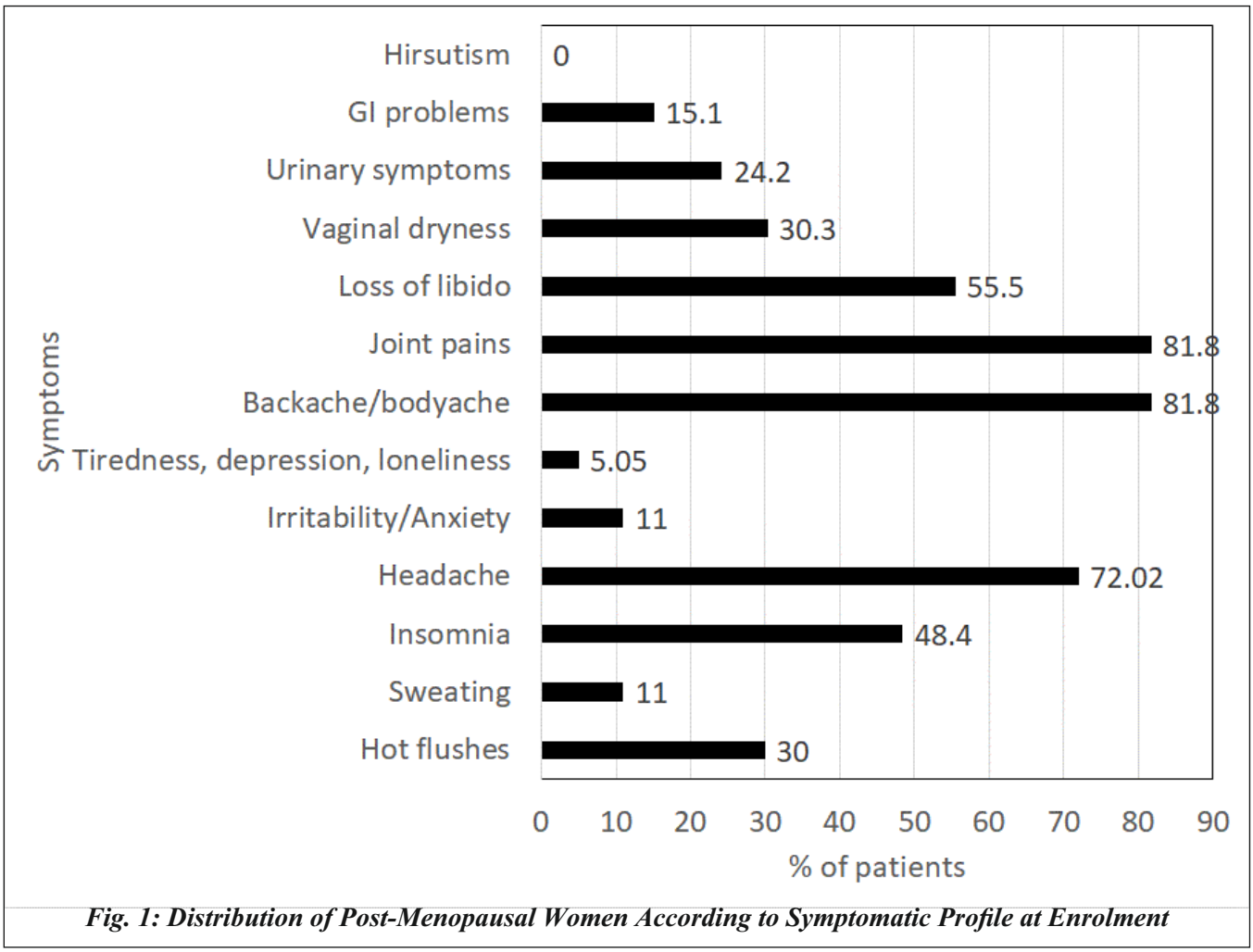

Fig. 1: Distribution of Post-Menopausal Women According to Symptomatic Profile at Enrolment

Avin Alva BR et al[8] did their study among rural women in Mangalore and concluded that mean age at menopause is 45.32 with SD of +/-2.79.

Women in India will live approximately 25 years or a quarter of her life beyond menopause. Therefore, it is important to ensure these years are as healthy and productive as possible.

In our study, vasomotor symptoms such as hot Flushes was experienced by 30 % of the women, 11 % experienced sweating and 48.4 % women experienced sleeping problems which is significantly less as identified by Patrizia Monteleone et[9] al, in their study found that approximately 75% of women experience vasomotor symptoms during menopause and 40-60 percent had sleeping difficulties.This can be because very less women come with these symptoms to seek medical help unless it starts hampering their routine life. The less incidence of these symptoms in our study can also be due to recall bias and ignorance of the symptoms in the low socioeconomic status and uneducated women. Hairi HA [10] in their study explained phytoestrogens causes a low prevalence of Hot flushes. Phytoestrogens are in high quantity in Asian diet[11] which might explain low prevalence of hot flushes in Asian women.

81.8% women showed symptoms due to osteopenia and muscle weakness such as backache, body ache and joint pains due to estrogen withdrawal. Anil K. Agarwal et al [12]in his study showed that the incidence of joint pain and muscular discomfort (70.6%) was most prevalent symptoms in post-Menopausal women and it is slightly lower than our study. The high prevalence of these problems in our study could be due to preexisting malnutrition and low dietary calcium supplementation and other vital nutrients deficiency with superimposed changed dietary habits after menopause as 55.55% (Table 4) of women of our study group had decreased appetite and indigestion.

Urogenital symptoms tends to occur due to atrophic changes in vaginal wall and the bladder epithelium, which makes them more prone to infection (UTI, vulvitis)[13]. The main Urogenital symptoms were loss of Libido (55.5 %),vaginal dryness / dyspareunia in 30.3% women and Urinary symptoms like frequency,

urgency, burning and urinary incontinence was seen in 24.2 % of the postmenopausal women in our study. Bahiyah Abdullah M et al found higher prevalence of vaginal dryness (40.3%) as compared to sexual problems (34.1%) whereas bladder symptoms were almost same (24.8%)[14].

The clinicodemographic correlates that were included in our study,

Parity is inversely related to age at menopause in our study (Table 2). Those women who had less children (1-2) had their menopause after 50 years, and those women who had 3 or more children had their menopause at an earlier age (<50 years). Mozumdar A et al[15] also found the similar relationship, But with increase in parity, severity of symptoms increased comparatively with women with lesser parity (Table 3).

Majority of normal (97.8%) and underweight (94%) women underwent menopause at 45-50years of age. Being overweight caused in delayed (>50years) menopause in higher percentage of women (Table 2). Also, women with higher BMI showed more moderate to severe symptoms than women with lesser BMI (Table 3). Women who have higher BMI seem to have higher levels of estradiol (E2) and esterone (E1) in their body which leads to delay in menopause[16.]

Amongst homemaker and working women most of women attained menopause in 45 – 50 years (Table 2). However, working women had more moderate to severe symptoms as compared to home maker who suffered from milder symptoms (Table 3)

No significant difference was found in tobacco/smoking user with respect to age but a statistically significant difference was found with severity of symptoms i.e. tobacco chewers/smokers had more of moderate to severe symptoms as compared to non- tobacco chewers/smokers who has mild symptoms. In India, most women abstain from the use of tobacco or alcohol consumption. There might be possibility that this information may not be correctly mentioned due to shyness or social stigma[7].

In our study group, most of the women showed mild symptoms but in patients >50 years of age, a higher percentage of women (49.2 %) showed moderate symptoms (Table 3). Most of the women (86.36%) had the same respect and relationship tuning as before menopause and their menopause did not affect their family.

The main reasons for not seeking treatment for their menopausal symptom (Table 4) were financial problems (22.22%) and family problems (18.18%). The poverty also attributes to this. 32.21 % of the patients did not take any treatment as they did not take those symptoms as a problem and 9.09 % thought that it will resolve on its own whereas a study conducted by Kausar Inayat et al in Peshawar found that 46% perimenopausal and 76% of the postmenopausal perceived menopause as a natural process and their experiences of menopause were not distressing[17]. In a study by Radha Shukla et all[18], they also found that couples accepted is as a part of life and hence does not demand much attention.

CONCLUSION

A total of 990/17,927 (5.52%) women visiting the gynaecological OPD presented with post-menopausal complaints. Age of women ranged from 40 to 60 years with a mean age of 46.60±2.48 years. Joint pains and Backache/body ache were the most common presenting complaints (81.8%) followed by headache (72.02 %) and loss of libido (55.5%). A significant association of age at presentation was seen with parity, age at menarche, BMI category and occupational status. Severity of symptoms showed a significant association with age at presentation, parity, age at menarche, BMI category, occupational status and tobacco/smoking use.

The main reasons for not seeking treatment for their menopausal symptom were financial problems and family problems.

LIMITATIONS

The age of menopause was determined by recall and there can be some variations on it, which attributed to the limitation of this study.

FINANCIAL SUPPORT AND SPONSORSHIP

Nil.

CONFLICTS OF INTEREST

There are no conflicts of interest.

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee

REFERENCES

1. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. Journal of mid-life health. 2016 Jul;7(3):126.
2. Appiah D, Nwabuo CC, Ebong IA, et al. Trends in Age at Natural Menopause and Reproductive Life Span Among US Women, 1959-2018. JAMA. 2021 Apr 6;325(13):1328-30.
3. Zhang L, Ruan X, Cui Y, et al. Menopausal symptoms among Chinese peri-and postmenopausal women: a large prospective

single-center cohort study. Gynecological Endocrinology. 2021 Feb 1;37(2):185-9.

4. Gottschalk MS, Eskild A, Hofvind S, et al. Temporal trends in age at menarche and age at menopause: a population study of 312 656 women in Norway. Human Reproduction. 2020 Feb 29;35(2):464-71.
5. Shen TY, Strong C, Yu T. Age at menopause and mortality in Taiwan: A cohort analysis. Maturitas. 2020 Jun 1;136:42-8.
6. InterLACE Study Team. Variations in reproductive events across life: a pooled analysis of data from 505 147 women across 10 countries. Human Reproduction. 2019 May 1;34(5):881-93.
7. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. Journal of mid-life health. 2016 Jul;7(3):126.
8. Avin Alva BR, Chethan TK. A study to assess the average age of menopause and menopause associated symptoms among rural women in Mangalore, Karnataka. National journal of community medicine. 2016 May;7(5):404-8.
9. Monteleone P, Mascagni G, Giannini A, et al. Symptoms of menopause—global prevalence, physiology and implications. Nature Reviews Endocrinology. 2018 Apr;14(4):199-215.
10. Hairi HA, Shuid AN, Ibrahim N, et al. The effects and action mechanisms of phytoestrogens on vasomotor symptoms during menopausal transition: thermoregulatory mechanism. Current drug targets. 2019 Feb 1;20(2):192-200.
11. Karahalil BE. Benefits and risks of phytoestrogens. InPhytoestrogens in functional foods 2019 Sep 17 (pp. 209-240). CRC Press.
12. Agarwal AK, Kiron N, Gupta R, et al. A study of assessment menopausal symptoms and coping strategies among middle age women of North Central India. International Journal of Community Medicine and Public Health. 2018 Oct;5(10):4470-77
13. Pal A, Hande D, Khatri S. Assessment of menopausal symptoms in perimenopause and post menopause women above 40 years in rural area Maharashtra (India). Int J Healthcare Biomed Res. 3013;1(3):166- 74.
14. Bahiyah Abdullah M, Moize B, Ismail BA, et al. Prevalence of menopausal symptoms, its effect to quality of life among Malaysian women and their treatment seeking behaviour. Med J Malaysia. 2017 Apr;72(2):95.
15. Mozumdar A, Agrawal PK. Prevalence, trends, and determinants of menopause in I ndia: NFHS 1992–93 to NFHS 2005–06. American Journal of Human Biology. 2015 May 6;27(3):421-5.
16. Zhu D, Chung HF, Pandeya N, et al. Body mass index and age at natural menopause: an international pooled analysis of 11 prospective studies. European journal of epidemiology. 2018 Aug;33(8):699-710.
17. Inayat K, Danish N, Hassan L. Symptoms of menopause in peri and postmenopausal women and their attitude towards them. J Ayub Med Coll Abbottabad. 2017 Jul 11;29(3):477-80.
18. Shukla R, Ganjiwale J, Patel R. Prevalence of postmenopausal symptoms, its effect on quality of life and coping in rural couple. Journal of mid-life health. 2018 Jan;9(1):14.

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