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Original Research Article

Study of incidence and severity of menopausal symptoms in women of sub Himalayan region, using the Greene Climacteric Scale

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ABSTRACT

Background: Identifying and measuring menopausal symptoms using Greene Climacteric Scale and calculating the mean age at menopause to find out the frequency of the menopausal symptoms so that can be used for better perimenapausal and menopausal care to females.
Methods: A cross-sectional study was conducted in a tertiary care center in northern India. All menopausal women in gynaecology outpatient department were enrolled in study, over six months from May 2019 to October 2019. A total of 206 women fulfilled the inclusion criteria and were interviewed using the 21 points Greene Climateric Scale (GCS) Questionnaire. Analysis was done using SPSS 20 Windows software. Descriptive statistics included computation of percentages, means and standard deviations. Level of significance was set at $P \leq 0.05$.
Results: The mean age of menopause was 47.9±3.42 years. About 90.3% of the menopausal women studied belonged to the rural population. The most frequently perceived symptoms by females were muscle joint pain (100%), vaginal dryness and pruritus vulvae (84%), lower abdominal pain (79.6%), hot flushes (50.5%).The most frequently reported symptoms as per the GCS were muscle and joint pains, loss of interest in sex, headaches, feeling tired or lacking in energy, difficulty in concentrating, attacks of anxiety, difficulty in sleeping and hot flushes. The mean total score was 17.61.
Conclusions: Menopausal symptoms were common in this study group but women seeking help for the same was less. Therefore menopause clinics and care programmes need to be developed and strengthened to promote better health and higher quality of life in menopausal women.

Keywords: Climacteric, Depression, Menopause, Somatic symptoms, Vasomotor symptoms

INTRODUCTION

Menopause represents a landmark in the biological life of a woman, signifying the end of her reproductive life.[1] The menopause is that point in time when permanent cessation of menstruation occurs following the loss of ovarian activity. The years prior to the menopause that encompass the change from normal ovulatory cycles to cessation of menses are known as the perimenopausal transitional years, marked by irregularity of menstrual cycles.

With increase in life expectancy, a woman spends nearly 1/3rd of her life in this phase.[2] The age at natural menopause worldwide is 45-55 year.[3]

Two large cohorts of European women reported average ages of menopause in various countries that centered around age 51, slightly higher in Northern Europe and slightly lower in Southern Europe. India reports an average age of menopause as much as 5 years earlier.[4] Estimated mean age of menopause is 46 years in India, and is lower than that of the Caucasians.

Changes in menstrual function are not symbols of some ominous "change". There are good physiologic reasons for changing menstrual function, and understanding the physiology will do much to reinforce a healthy, normal attitude. Attitude and expectations about the menopause are very important.

In Indian scenario, women seek advice only when the symptoms are severe owing to a combination of socio-cultural behaviour, transportation difficulties and economic instability. All these results in under reporting of data. Moreover, Indian women lack awareness about menopause and its effects.[5]

METHODS

This was a cross-sectional study conducted in a tertiary care centre in the state of Himachal Pradesh in northern India. All menopausal women presenting in gynaecology outpatient department were enrolled in the study, over a period of six months from May 2019 to October 2019.

Inclusion criteria

Women with natural menopause. Women giving consent to be included in the study.

Exclusion criteria

Women with unnatural menopause such as those having surgical menopause or radiotherapy. Women who had received hormone replacement therapy (HRT). Women on antidepressant or anti-anxiety drugs within the previous 6 months.

The study was approved by Institutional Ethical Committee. A total of 206 women fulfilled the inclusion criteria and were interviewed. Women were interviewed using the 21 points GCS Questionnaire, after taking informed consent from each participant.

The women were interviewed by a gynaecologist in the hospital. The Greene climacteric scale was used, which measures a total of 21 symptoms. Each symptom is rated by the woman herself according to its severity using a 4 point rating scale from not at all (0) to extremely (3). Symptoms 1-11 address psychological symptoms divided into a measure of anxiety (a sum of symptoms 1-6) and of depression (a sum of symptoms 7-11).

Somatic aspects were addressed in symptoms 12-18 and vasomotor symptoms in symptoms 19 and 20. Symptom 21 was a probe for sexual dysfunction. The total Greene climacteric score was the sum of all 21 score.[6,7].

The questionnaire included demographic data (age, duration of menopause, parity, marital status, educational level, smoking, alcohol and employment status), as well as awareness about Pap smear and menopausal symptoms and self-reported menopausal symptoms.

The data was coded and entered into Microsoft Excel spreadsheet. Analysis was done using SPSS version 20 (IBM SPSS Statistics Inc., Chicago, Illinois, USA) Windows software program.

Descriptive statistics included computation of percentages, means and standard deviations. Chi-square test and fisher exact test were used for qualitative data whenever two or more than two groups were used to compare. Level of significance was set at P≤0.05.

RESULTS

A total of 206 menopausal women participated and completed the questionnaire. Table 1 shows the demographic profile of the study population.

Table 1: Demographic profile of menopausal women.

Demographic profile		Frequency (%)
Residence	Rural	90.3
	Urban	9.7
Marital status	Married	93.2
	Widower	6.8
	Unmarried	0
Education	Illiterate	52.4
	1-5 class	18.4
	6-12 class	18.9
	Graduate	1.5
	Post graduate	8.7
Occupation	Employed	11.7
	House wife	88.3
Dietary habits	Vegetarian	90.8
	Non vegetarian	9.2
Smoking	Yes	1
	No	99
Alcohol	No	100

About 90.3% of the menopausal women studied belonged to the rural population. Majority of the population had not received formal education, were housewives, non-smokers and had vegetarian dietary habits.

Table 2: Age at menopause.

	In years	Frequency (%)
Age at menopause in years	41-45	43.7
	46-50	46.6
	51-55	9.7
Mean age of menopause	47.9 ±3.42 years	
Duration of onset of symptoms	2-5	98.1
	6-10	1.9
Pap smear awareness		14
Awareness about menopause		48.1

Table 3: Reported symptoms.

Reported symptoms	Frequency (%)
Muscle and joint pain	100
Vaginal dryness/pruritus vulvae	84
Lower abdominal pain	79.4
Hot flushes	50.5
Gastrointestinal symptoms	14.1
Stress urinary incontinence	8.3

Table 4: Descriptive statistics of greene climacteric scale questionnaires.

	Min	Max	Mean	SD
Heart beating quickly or strongly	0	0	0	0
Feeling tense or nervous	1	2	1.26	0.438
Difficulty in sleeping	1	2	1.17	0.372
Excitable	0	1	0.98	0.138
Attacks of anxiety or panic	1	2	1.76	0.43
Difficulty in concentrating	1	2	1.19	0.397
Feeling tired or lacking in energy	1	3	1.9	0.453
Loss of interest in most things	0	2	1.08	0.387
Feeling unhappy or depressed	0	2	0.95	0.511
Crying spells	0	1	0.08	0.268
Irritability	0	2	0.98	0.312
Feeling dizzy or faint	0	1	0.12	0.322
Pressure or tightness in head	0	2	0.76	0.59
Parts of body feel numb	0	1	0.02	0.138
Headaches	1	2	1.11	0.31
Muscle and joint pains	1	2	1.22	0.414
Loss of feeling in hands or feet	0	0	0	0
Breathing difficulties	0	0	0	0
Hot flushes	0	2	0.68	0.58
Sweating at night	0	1	0.38	0.487
Loss of interest in sex	1	4	1.98	0.802
Total score	13	23	17.61	2.126

The mean age of menopause was 47.9±3.42 years. The present study showed that in 98.1% females menopausal symptoms started within two to five years of menopause. (Table 2).

The most frequently perceived symptoms by females were muscle and joint pain (100%), vaginal dryness and pruritus vulvae (84%), lower abdominal pain (79.6%), hot flushes (50.5%), gastrointestinal symptoms (14.1%) and uterovaginal prolapse (4.4%). None of the females reported post-menopausal bleeding. (Table 3).

The most frequently reported symptoms as per the GCS were muscle and joint pains, loss of interest in sex, headaches, feeling tired or lacking in energy, difficulty in concentrating, attacks of anxiety , difficulty in sleeping and hot flushes. The mean total score as per Table 4 was 17.61. Residence, occupation, marital status and education were not associated with lower total GCS score (p value was not less than 0.05).

DISCUSSION

The perimenopausal period and subsequently menopause is a period characterized by progressive decline in estrogen levels, signalling the decline of a women's reproductive capacity. Mean age of menopause in the present study was 47.9±3.42 years which is similar to studies carried out by Bairy et al (48.70 years) 8 and Mundhra et al (47.2 years).[5]

Most of the females were unaware of the cervical cancer screening method Pap smear probably due to lack of awareness and lower educational status. Awareness about menopause was among half of the group.

The most frequently reported symptoms as per the GCS were muscle and joint pains, loss of interest in sex, headaches, feeling tired or lacking in energy, difficulty in concentrating, attacks of anxiety and difficulty in sleeping and hot flushes in the present study. Similarly the frequent symptoms reported in the study by Mundhra R et al were muscle and joint pain, loss of libido, insomnia, hot flushes and feeling tired.[5]

Fatigue, hot flashes, cold sweats, and backaches were most frequent symptoms in the study done by Mahajan N et al Muscle pain, hot flushes and depressive symptoms were the common symptoms.[9] A possible explanation is that these symptoms are sensitive to early decline in estrogen levels.[10,11]

The mean GCS score in the present study was 17.61 which in comparison was lower to the mean total GCS score by Haimov-Kochman R et al, -19.4 but higher than study done by Mundhra R et al, -10.9.[5,12] This could be attributed to difference in demographic profiles of subjects.

No significance was found out between higher GCS scores and any demographic profile in the present study as compared to the study by Sierra B et al, who reported that age, higher parity and lower educational level were associated to higher scorings for total and different cluster of GCS.[13]

There are some limitations to this study. The change in individual GCS scores over time was not assessed. The data collection tool was a symptom-based self-report questionnaire and it may show different results from a questionnaire based on signs. The sample size could be increased.

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