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Prevalence and Characterization of Menopausal Symptoms in Climacteric Women of the Coffee Region, Colombia, 2018-2020

Prevalencia y caracterización de los síntomas de la menopausia en mujeres climatéricas del Eje Cafetero (Colombia), 2018-2020

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RESUMEN

Objetivo: Determinar la prevalencia y caracterizar los síntomas de la menopausia en mujeres climatéricas del Eje Cafetero (Colombia). **Materiales y métodos**: Estudio de corte transversal, entre 2018 y 2020, en tres clínicas privadas, de alta complejidad, en las ciudades de Manizales, Pereira y Armenia, que incluyó a mujeres mayores de 45 years, residentes en el Eje Cafetero, en etapa de climaterio, sexualmente activas y no usuarias de terapia hormonal de la menopausia. Se aplicaron como instrumentos el Índice de Kupperman y el Menopause-Specific Quality of Life questionnaire (MENQOL). Se realizó un muestreo no probabilístico por conveniencia. **Resultados**: Participaron 594 mujeres, con edades promedio de 49,28 ± 6,17 años (edad media de la menopausia: 48,71 ± 4,93 años). La prevalencia de los síntomas de la menopausia fue del 71,88%. La mayoría de las mujeres presentaron sofocos, seguidos de irritabilidad e insomnio. La puntuación del Índice de Kupperman en la población total fue 18,58 ± 7,61 puntos. Según el MENQOL, los mayores promedios pertenecen a las dimensiones vasomotoras (7,13 ± 2,54) y psicosocial (6,48 ± 2,17), con afectación de la calidad de vida del 68,85%. **Conclusiones**: Las mujeres climatéricas del Eje Cafetero presentaron una prevalencia de síntomas de la menopausia próxima a las tres cuartas partes de las participantes, caracterizados principalmente por sofocos e irritabilidad. La mala calidad de vida se atribuye a los síntomas vasomotores. Se hace necesario explorar el impacto del síndrome climatérico durante la atención médica, a fin de ofrecer oportunas soluciones.

Palabras clave

prevalencia; signos y síntomas; menopausia; encuestas y cuestionarios; calidad de vida.

ABSTRACT

Objective: To determine the prevalence and characterize the symptoms of menopause in climacteric women of the Coffee Region. **Materials and methods**: Cross-sectional study. It included women over 45 years of

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age, residents of the Coffee Region (Colombia), in the climacteric stage, sexually active and not users of menopausal hormone therapy; between 2018 and 2020. It was carried out in three highly complex private clinics in the cities of Manizales, Pereira and Armenia. The Kupperman index and the Menopause-Specific Quality of Life questionnaire (MENQOL) were applied as instruments. A non-probabilistic convenience sampling was carried out. **Results**: 594 women participated, with an average age of 49.28 ± 6.17 years. Mean age of menopause 48.71 ± 4.93 years. The prevalence of menopausal symptoms was 71.88%. Most of the women had hot flushes (71.88%), followed by irritability (63.13%) and insomnia (54.88%). The Kupperman index score in the total population was 18.58 ± 7.61 points. According to the MENQOL, the highest averages belong to the vasomotor dimensions (7.13 ± 2.54) and psychosocial (6.48 ± 2.17), affecting the quality of life of 68.85%. **Conclusions**: the climacteric women of the Coffee Region had a prevalence of menopausal symptoms close to three-quarters of the participants, characterized mainly by hot flushes and irritability. The poor quality of life is attributed to vasomotor symptoms. It is necessary to explore the impact of climacteric syndrome during medical care in order to offer timely solutions.

Keywords
prevalence; signs and symptoms; menopause; surveys and questionnaires; quality of life.

Introduction

The climacteric stage characterizes the transitional stage in which a woman passes from the reproductive to the non-reproductive period, before and after the last menstruation. It usually ranges from 40 to 65 years of age (1).

The climacteric period includes the premenopause (reproductive period until the last menstrual period); the transition to menopause or perimenopause, which is characterized by irregular menstrual cycles and amenorrhea spells ≥60 days, associated with variable concentrations of follicle-stimulating hormone, without an increase in luteinizing hormone, and ends with the deprivation of menstruation after 12 months. Its duration is variable, although the appearance of vasomotor symptoms is frequent (2).

Menopause is expressed when the interruption of menstruation is determined for a period longer than twelve months as a result of the decrease in ovarian function (spontaneous or artificial) (3). Postmenopause is the stage after the last menstruation, which corresponds to menopause, until the end of life (early: five years after menopause) (4).

Worldwide, the age of menopause ranges between 45 and 55 years (5). In Latin America, it occurs between 43.8 and 53 years old (6), ages that are consistent with Colombian women (1,7,8). On the other hand, it is estimated that by the year 2030, approximately 1.2 billion women will be in transition to menopause (5).

The climacteric syndrome represents the constellation of symptoms and signs that become present in perimenopause and postmenopause, and incorporates vasomotor symptoms, psychological alterations, sleep disturbances and genital atrophy (9).

The impact of climacteric symptoms can be assessed with different scales, such as the Blatt-Kupperman Index (10), the Menopause-Specific Quality of Life Questionnaire (MENQOL) (11), the Menopause Rating Scale (12), the Cervantes Scale (13), the Utian Quality of Life Score (14), the Greene Climacteric Scale (15), the MENCAV questionnaire (16), among others.

A rational approach to the climacteric syndrome per se requires a well-founded knowledge of the specific physiological and pathophysiological changes that affect women in this period of their lives (1). Multiple therapeutics are available, such as menopausal hormone therapy (17), as well as alternative non-hormonal treatments (18).

In Colombia, several authors have been interested in researching the impact of climacteric syndrome in our women (7,8,19,20); however, there is a lack of studies on the prevalence of symptoms and their impact on quality of life in climacteric women in the Coffee Region (Colombia). Thus, it was considered important to evaluate the effect of climacteric menopause on women in the three departments that make up the Coffee Region. Therefore, the objective of the research was to determine the prevalence and characterize the symptoms of menopause in climacteric women of the Coffee Region.

Materials and methods

Design and population

This was a cross-sectional study that included women over 45 years of age residing in the Coffee Region (Colombia), in the climacteric stage, sexually active and not users of menopausal hormone therapy in the last six months, who signed informed consent to take part in the research. Women with a history of hysterectomy or salpingectomy, psychiatric illness or neurological deficit, low educational level, history of cancer, incomplete data (greater than 10%), and those who did not choose to participate were excluded.

The study was conducted in the gynecology outpatient clinic of three private, high-complexity clinics in the cities of Manizales, Pereira, and Armenia, between April 1, 2018, and March 31, 2020. The three institutions serve the population belonging to the contributory and subsidized regimes of the Colombian Social Security System. Non-probabilistic convenience sampling was carried out, trying to include the largest sample of women among to whom the instruments were filled out. Descriptive statistics were used.

Method

In all three clinics, women attending the gynecology outpatient clinic were seen and evaluated by a family physician to decide whether they met the eligibility criteria. If they met the criteria, the same physician informed them of the objectives of the study as well as the purpose of the results. The confidentiality of the information was guaranteed, and they were asked to sign the informed consent form. After signing the consent form, a professional nurse was in charge of the delivery and collection of the standardized instruments (the Kupperman Index and the MENQOL), which are available (freely accessible) and widely used in the population, despite not having been officially validated in the country.

The Kupperman Index assesses the severity of menopausal and climacteric symptoms. It is widely used internationally, thanks to its well-established role in clinical practice. It consists of 11 items and uses a scale ranging from 0 to 3 points to describe the severity of each item, where 0 indicates the absence of the symptom and 3, the supreme intensity of the symptom. The total score ranges from 0 to 48, calculated as the arithmetic sum of all the items, after multiplying them by a weighting factor. The following scores were used: 0 (no symptoms), 1 to 14 (minimal symptoms), 15 to 20 (mild symptoms), 21 to 35 (moderate symptoms), and above 35 (severe symptoms) (10).

The MENQOL assesses quality of life, specifically in menopause, through vasomotor, psychosocial, physical, and sexual symptoms. It was introduced in 1996 as a tool to assess health-related quality of life in the immediate postmenopausal stage. The MENQOL is a self-administered questionnaire and is composed of 29 items in Likert scale configuration. Each item assesses the impact of one of the four domains of menopausal symptoms experienced during the last month: vasomotor (items 1 to 3), psychosocial (items 4 to 10), physical (items 11 to 26), and sexual (items 27 to 29). Items related to a specific symptom are classified as present or not present, and if present, how bothersome they are on a scale from 0 (not bothersome) to 6 (extremely or very bothersome). Means are calculated for each subscale by dividing the sum of the items in the domain by the number of items within that domain. Failure to approve an item is scored as a 1, and approving is scored as a 2, plus the number of the particular grade so that the possible score on any item ranges from 1 to 8 (11).

Measured variables

Sociodemographic variables were measured (age, race, marital status, schooling, occupation, socioeconomic stratum, area of residence, affiliation to the General Social Security Health System, spiritual or religious condition, weight,

height, and body mass index); sexual and reproductive health variables (age at menopause, time of menopause, parity); habits (alcohol intake, smoking, sedentary lifestyle, consumption of psychoactive substances); sexual behavior variables (age at first sexual intercourse, sexual orientation, frequency of monthly sexual relations, sexual abuse by the partner and time of cohabitation as a couple) and comorbidities. The Kupperman Index and MENQOL instruments were also evaluated.

Statistical analysis

Qualitative variables were expressed as absolute and relative frequencies (proportions and percentages), and quantitative variables were expressed as measures of central tendency and dispersion (mean and standard deviation, median and ranges). The prevalence of menopausal symptoms is presented globally as follows: the number of women with menopausal symptoms/ number of women examined. Statistical calculations were performed with Statgraphics statistical software version 16.4.

Ethical aspects

The research was approved by the Scientific Ethical Committee of the corresponding Health Service in each institution. All participants provided written informed consent and were guaranteed confidentiality of the information.

Results

A total of 1085 women were invited to participate in the research. Of these, 199 (18.34%) did not accept. The remaining 886 were given the Kupperman Index and the MENQOL; however, 153 (17.26%) voluntarily withdrew because of discomfort in answering some variables regarding sexual health, leaving 733 candidates, of whom 139 (23.4%) had incomplete data in more than 10% of the histories and were therefore excluded. In the end, the analysis was conducted with a total of 594 (54.74%) participants. The mean age of the sample was 49.28 ± 6.17 years (lower 45 and upper 57 years). Of the total, 84.5% of the participating women were in the early postmenopausal stage. 92.76% professed the Catholic religion. The 77.94% belonged to the contributory Social Security Health System. The 87.37% resided in the urban area. Table 1 describes the sociodemographic characteristics.

Table 1.
Sociodemographic characteristics of climacteric women in the Coffee Region Colombia, 2018-2020

Variables	n (%)
Age (years)	49.28 ± 6.17
Partner's age (years)	53.41 ± 7.39
Weight (kg)	64.15 ± 7.28
Size (cm)	160.87 ± 9.25
Body Mass Index	24.71 ± 5.29
Ethnicity	
White	335 (56.39)
Afrodescendant	176 (29.62)
Indigenous	83 (13.97)
Socioeconomic stratum	
High	106 (17.84)
Medium	402 (67.67)
Low	86 (14.47)
Marital status	
Married	162 (27.27)
Free union	249 (41.91)
Single	61 (10.26)
Divorced	76 (12.79)
Widower	46 (7.74)
Occupation	
Housewife	285 (47.97)
Employed	214 (36.02)
Unemployed	58 (9.76)
Retired	37 (6.22)
Educational level	
Elementary	34 (5.72)
Secondary	247 (41.58)
Technical	215 (36.19)
Professional	98 (16.49)

As for major comorbidities, obesity (25.58%), dyslipidemia (32.99%), cardiovascular disease (36.02%), arterial hypertension (26.93%), osteoporosis (10.94%), diabetes (8.92%), chronic obstructive pulmonary disease (7.23%) and asthma (6.22%) were identified.

Alcohol was consumed by 77.94% of the total population. 14.98% were smokers, with a median of 7 cigarettes per day (range between 2 and >20). 42.92% were sedentary. Psychoactive substance use was reported by 5.89%.

The mean age at the last menstrual period was 48.71 ± 4.93 years, and the mean number of postmenopausal years in this population was 3.19 ± 2.48 years. The median parity reached 4 children (range between 0 and 9).

Concerning sexual behavior, 92.92% defined themselves as heterosexual. 47.97% reported more than 20 years of cohabitation. The age of first sexual intercourse reported an average of 16.94 ± 2.57 years. The median frequency of monthly sexual intercourse was 3 (range between 0 and 7). 15.31% reported sexual abuse by a partner.

The prevalence of menopausal symptoms in the study population was 71.88% (n = 427/594). The majority of women had hot flushes (71.88%), followed by irritability/nervousness (63.13%) and insomnia (54.88%) (Table 2).

Table 2.
Frequency of menopausal symptoms in climacteric women in the Coffee Region (Colombia), 2018-2020

Symptoms	n (%)
Hot flushes	427 (71.88)
Paresthesias	103 (17.34)
Insomnia	326 (54.88)
Irritability/nervousness	375 (63.13)
Melancholia	95 (15.99)
Vertigo/dizziness	57 (9.59)
Fatigue	77 (12.96)
Arthralgias and myalgias	100 (16.83)
Cephalea	74 (12.45)
Palpitations	59 (9.93)
Dysesthesias/tingling	65 (10.94)

In the total population, the Kupperman Index score was 18.58 ± 7.61 points (minimum: 8.59 and highest: 36.72). The symptom with the highest score was hot flushes, with 4.71 ± 1.46, followed by irritability/nervousness, with 4.28 ± 1.25, and insomnia, with 3.25 ± 0.89 (Table 3).

Tabla 3.
Kupperman Index score in climacteric women in the Coffee Region (Colombia), 2018-2020.

Symptoms	Mean (SD)
Hot flushes	4.71 ± 1.46
Paresthesias	1.04 ± 0.73
Insomnia	3.25 ± 0.89
Irritability/nervousness	4.28 ± 1.25
Melancholia	0.97 ± 0.62
Vertigo/dizziness	0.56 ± 0.31
Fatigue	0.79 ± 0.57
Arthralgias and myalgias	1.02 ± 0.48
Cephalea	0.75 ± 0.64
Palpitations	0.58 ± 0.39
Dysesthesias/tingling	0.63 ± 0.27
Total score	18.58 ± 7.61

Of the 427 (71.88%) women who presented menopausal symptoms, 9.13% had only one symptom, 66.27% had two, and 24.59% had three or more symptoms. A median of 2 symptoms per woman was obtained (range: 1 to 5). In terms of severity, it was found that 65.33% had mild symptoms, 26.93% had moderate symptoms, and 7.72% had severe symptoms.

As for the MENQOL, the highest averages belong to the vasomotor (7.13 ± 2.54) and psychosocial (6.48 ± 2.17) dimensions (Table 4). According to the MENQOL, in the participant population, 32.65% presented a good sexual evaluation, 30.13% had a good physical evaluation and 20.87% registered a good psychological evaluation; with a poor vasomotor evaluation, 68.85% (n = 409/594).

Tabla 4.
MENQOL score in climacteric women in the Coffee Region (Colombia), 2018-2020

Domain	Mean (SD)
Vasomotor	7.13 ± 2.54
Psychosocial	6.48 ± 2.17
Physical	4.52 ± 1.28
Sexual	3.96 ± 1.11

Discussion

In this study, the prevalence of menopausal symptoms was found to be 71.88%. Hot flushes accounted for 71.88%, followed by irritability/nervousness, with 63.13%. Mild symptoms were present in 65.33%. Quality of life impairment was detected in 68.85% of the participating population. Similarly, the manifestation of two symptoms was common in 66.27% of the population.

The results of our study report a prevalence of climacteric symptoms higher than those reported by other Colombian authors (21,22), but lower than that described in Brazil by Da Silva et al. (23), who, in a population of 1415 women aged 35 to 65 years, using the Menopause Rating Scale, reported that irritability was the most frequent symptom in 78.3% of the participants, followed by joint and muscular discomfort (74.8%) and anxiety (72.7%).

In our investigation, hot flushes were more frequent than those published by Chedraui et al. (24) who found that in Ecuador, in a study of 1154 healthy women aged 40 to 59 years, hot flushes accounted for 56%, of which 29.1% and 9.1% were classified respectively as severe and very severe, as well as more frequent compared to the 46.4% reported by Singh et al. (25) in a rural area of New Delhi, among 252 postmenopausal women.

In the present study, 68.85% of the women had poor quality of life, which is higher than the report of Krishnamoorthy et al. (26) in South India, in which they mention a prevalence of poor quality of life of 37.2%; however, it is slightly higher than the 60% documented by Larroy et al. (27) in two populations: Monterrey (Mexico) and Madrid (Spain). The difference may be explained by a different categorization of symptoms, the geographic area of study, the average age of the participants, and the use of a different study tool to assess the impact on quality of life.

In agreement with other authors, in this study, we observed that climacteric symptoms, such as hot flushes, sleep disturbances, mood disorders, as well as night sweats, and sexual dysfunction can affect the quality of life of climacteric women (28,29).

The differences in symptoms found in this research concerning other publications, as well as the different prevalences recorded, may be associated with geographic variation in the population of women, ethnic differences, women's sensitivity to hormonal changes, cultural differences, lifestyle factors, and religious beliefs.

The study has the strength of being the first in the Coffee Region to explore the constellation of symptoms of the climacteric syndrome, as well as being one of the most recent investigations of menopausal symptoms carried out in Colombia, and the fact that it was carried out in third-level institutions, which would allow extrapolating the results to the whole country. Among the limitations, we highlight the possible measurement bias when using a quality of life questionnaire, despite its universal and specific use for women in the climacteric stage, as well as the limitations inherent to cross-sectional designs and the non-probabilistic selection of the sample.

To achieve comprehensive care for women in the climacteric stage, health professionals must be constantly trained to make timely and accurate diagnoses and to offer different lines of treatment, because although menopause is a natural biological process, women are not always willing to bear the negative burden that the symptomatology represents for their quality of life, so they would be willing to receive hormone therapies if it were the case.

Conclusions

The climacteric women of the Coffee Region, who took part in this study, reported a prevalence of menopausal symptoms in almost three quarters of the population, characterized especially by hot flushes and irritability. In turn, about two-thirds of the affected women reported that their symptoms were mild. Quality of life impairment was detected in more than two-thirds of the participants, at the expense of vasomotor symptoms.

It is necessary that gynecologists, as well as other health professionals, who follow and care for women in the climacteric stage, explore the negative impact of climacteric syndrome on the quality of life of women in order to offer timely solutions.

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Conflict of interests

None reported.

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