

ORIGINAL ARTICLE

A CLINICO-EPIDEMIOLOGICAL STUDY ON HEALTH PROBLEMS OF POST-MENOPAUSAL WOMEN IN RURAL AREA OF VADODARA DISTRICT, GUJARAT

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ABSTRACT

Background: Health issues of postmenopausal women pose a significant challenge to public health, considering the facts like; there hasn't been a specific health program for such women in the country and the rising geriatric population.

Objectives: To find out the health problems among rural post-menopausal women and to compare the results with few of the studies in the past with different settings.

Methods: Design: Cross-sectional study, Participants: 147 post-menopausal women residing in Piparia village of Vadodara district were involved in the study, based on sample size calculation and necessary assumptions. Information was filled up in a pre-tested questionnaire.

Results: Most of them suffered from physical symptoms of tiredness (88.4%) and headache (74.8%). This was followed by vasomotor symptoms like hot flushes (40.1%), night sweats (40.8%) and palpitations (37.4%) as well as psychological symptoms like insomnia (57.1%), anxiety (38.1%) and lack of concentration in the work (33.3%).

Conclusion: The rural post-menopausal women suffer from variety of health problems and it has also some relevance to the settings they come from.

Keywords: Post-menopausal women, Health problem, Rural, Clinico-epidemiological study

INTRODUCTION

In India, post-menopausal women ageing 45 years and above are yet to be covered in any specific health program, in contrast to their younger counterparts (RCH, ICDS etc). The provision of geriatric health care is largely based on the general health problems of the elderly and not directed specifically to the post-menopausal health problems. There is also issue related to generating valid data of rural people in India, as most of the country resides in such areas only.¹ This holds true because the social and demographic profiles of such women are bound to be different and those have got a significant impact on the perception of the menopausal symptoms.² Though there are few studies in India, local context need to be studied well in every part of the country.³ A clinical-epidemiological study was considered relevant for such context considering two important objectives : 1. To find out the health problems among rural post-menopausal women. 2. To compare the results with few of the studies in the past with different settings.

MATERIAL & METHODS

A cross sectional study was conducted during 2010 in rural area (Village Piparia) of Vadodara district of Gujarat state. Sample size calculation was done using average prevalence of some of the major postmenopausal symptoms affecting Indian women found from various studies. The formula⁴ applied was $n = z^2_{1-\alpha/2} p / (1-p) / d^2$, where n: sample size, $z = z$ score of distribution curve, which comes at 2 if $\alpha = 0.05$ (error), $p =$ prevalence in percentages, $d =$ maximum allowable error = taken as 20% of p . Taking $z = 2$, $p = 40\% = 0.4$ (from taking averages of prevalence of major menopausal symptoms from previous studies^{1-3 & 5-7} and $d = 0.08$ (i.e. 20% of p), the desired sample size comes out to be 150. As a particular rural area was surveyed exclusively taking all the eligible women of the village, sample size of 147 was considered valid. Institutional ethical committee approved the project and informed written consent was taken from the participant during the conduct of the study.

The inclusion criteria were any woman, aged 45 and above and who reported to have experienced

menopause in recent or remote past and who gave informed consent to participate in the study. Seriously ill women were excluded. The study was carried out in the village by searching in all the four corners of the village conducting house to house survey, using a pre-designed questionnaire. The information was collected by considering a particular symptom if it was present for at least 5 days at the time of interview and which was apparently not due to some pre-identified cause other than related to menopause. The data was collected by the intern doctors posted in the department and verified randomly by the author. The data were analyzed using Microsoft Excel for finding out relevant statistics (Mean, Standard Deviation, Proportions).

RESULTS

Among a total of 147 respondents, the mean age of the study subjects was 58.32 (48-68) years. Importantly, the mean age of menopause worked out to be 47.74 (44.84-50.64) years. The results of the study shows that among a total of 147 women, the majority of the women were housewives (n=108, 73.5%), while most of the others were laborer (n=37, 25.2%). Most (98.5%) of the women belonged to either class IV or class V (Lower SE class). The education wise most of them (n=110, 74.8%) were not literate.

The table 1 shows the distribution of symptoms/signs among the respondents. It shows that the women experienced all the three types of menopausal health problems –Vasomotor, Psychiatric and Somatic. The study showed that somatic symptoms like tiredness and headache was experienced by majority of the respondents (88.4% and 74.8%). Among the psychiatric problems, depressive episodes were experienced by 13.6% (n=20) of the subjects. On the other hand, the percentages of subjects who experienced symptoms of anxiety irritability and insomnia were 38.1% (n=56), 21.1% (n=31) and 57.1% (n=84), respectively.

On examination it was found that mean weight of all the participants was 52.32 (42.47-62.17) kilograms. While joint pain and/or joint stiffness were experienced by about a quarter (25.9%, n=38) of the participants. Only few (n=31, 21.08%) of the subjects

had some chronic illness before the inception of menopause. This included mainly Hypertension (n=9), Diabetes Mellitus (n=5) and Jaundice (n=3).

In general examination, the mean systolic Blood Pressure was found to be 129.67 (118.97-140.37) mmHg. The mean diastolic blood pressure was found to be 81.07 (69.37-92.77) mmHg. It was found that more than half (57.1%, n=84) of them had sign of pallor of varied severity. Dental caries was found in more than a quarter (28.6%, n=42) of the subjects. Any lump or abscess in the breast was found in only 2.7% (n=4) of the subjects. Regarding awareness for the common symptoms of menopause, the study showed that most of the respondents (n=127, 86.4%) were not aware about those symptoms. The same way, almost all of the respondents (n=144, 98%) were not aware about the Hormonal Replacement Therapy (HRT) and its implications in menopause.

Table 1: Prevalence (in percentages) of various symptoms/signs, among the post-menopausal respondents (N=147)

| Symptoms/Signs | Frequency (%) |
|------------------------|---------------|
| Tiredness/Easy Fatigue | 130 (88.4) |
| Headache | 110 (74.8) |
| Insomnia | 84 (57.1) |
| Pallor | 84 (57.1) |
| Night sweats | 60 (40.8) |
| Hot Flushes | 59 (40.1) |
| Anxiety | 56 (38.1) |
| Palpitation | 55 (37.4) |
| Lack of concentration | 49 (33.3) |
| Dental caries | 42 (28.6) |
| Joint pain /Stiffness | 38 (25.9) |
| Irritability | 31 (21.1) |
| Depressive episodes | 20 (13.6) |
| Urinary incontinence | 4 (2.7) |
| Parasthesia | 4 (2.7) |

DISCUSSION

The mean age of the study was 58 (48-68) years, which is higher than the studies conducted by Kapur et al (45.02 years) Kakkara et al (48.0 years) and Bairy et al (48.70 years) which probably explains that chances of getting premenopausal women were very less. ^{3, 9, 13}

Table 2: Prevalence of common post-menopausal symptoms (in percentages) from various studies in India with various settings

| Study/Authors | Year, Area of study (R/U) | Headache (%) | Hot Flushes (%) | Tiredness/Easy Fatigue (%) | Depressive symptoms (%) | Joint pain /Stiffness (%) |
|---------------------------------|---------------------------|--------------|-----------------|----------------------------|-------------------------|---------------------------|
| Present study | 2010, Rural | 74.80 | 40.10 | 88.40 | 13.60 | 25.90 |
| Nisar N. et al ⁸ | 2010, Rural | NA | 70.20 | 83.30 | 77.40 | 83.30 |
| Kapur P. et al ⁹ | 2009, Mixed | 43.41 | NA | 51.19 | 36.43 | 55.81 |
| Sharma S. et al ¹⁰ | 2007, Urban | 55.90 | 53.86 | 72.93 | 29.80 | 48.13 |
| Dasgupta D. et al ¹¹ | 2007, Rural | 66.30 | 78.20 | 89.10 | 87.30 | 74.60 |
| Dasgupta D. et al ¹¹ | 2007, Urban | 44.30 | 57.10 | 74.30 | 60.00 | 85.70 |
| Sidhu S. et al ¹² | 2005, Mixed | 38.28 | 55.80 | 42.18 | 8.20 | NA |

NA= Not Available, R= Rural area, U=Urban area.

This can be accepted because the reported age of menopause was quite similar (47.74 years) in present study. The comparison showed above reveals that tiredness is the symptom, most commonly encountered in all of the above studies, including the present study where the prevalence was about 88.40%. [Table 2].

Only some variation in the prevalence was observed in the study done by Kapur et al and Sidhu et al, which was probably due to the fact that in both the instances the study population was rural-urban mixed.^{9, 12} the present study shows a higher proportions of headache as a symptom and a lower proportions of joint pain as a symptom than other study, which may be due to less sample size. The present study, the study by Nisar et al and the study by Dasgupta et al shows that the frequency of all the known symptoms are quite higher among rural women as compared to urban or mixed populations.^{8, 11}

CONCLUSION & RECOMMENDATIONS

The study shows that post-menopausal women in India suffer from various signs and symptoms, physical, psychiatric as well as vasomotor, related to menopausal hormonal changes with varied frequencies, depending upon their demographic, social and cultural contexts. There is a need to address the women group separately especially the disadvantaged rural subgroup, as there hasn't been a specific health program for those women yet. Preventive strategies are also need to be disseminated well in those women who are approaching their menopause, so that the frequencies and the severity of such symptoms could be minimized.

REFERENCES

1. Aaron R, Muliyl J, Abraham S, Medico-social dimensions of menopause: a cross-sectional study from rural south India, *Natl Med J India*. 2002; 15(1):14-7.
2. Liu J, Eden J., Experience and attitudes toward menopause in Chinese women living in Sydney--a cross sectional survey, *Maturitas*, 2007; 58(4):359-65.
3. Kakkara V, Kaurb D., Chopraa K., Kaura A., Kaura I., Assessment of the variation in menopausal symptoms with age, education and working/non-working status in north-Indian sub population using menopause rating scale (MRS). *Maturitus*, 2007 ;57 (3): 306-314.
4. Lwanga S K, Sample size determination in health studies- a practical manual; Geneva- World Health Organization, 1991. pp 25-26.
5. Uncu Y., Alper Z., Ozdemir H., Bilgel N. & Uncu G., The perception of menopause and hormone therapy among women in Turkey, 2007;10 (1): 63-71.
6. Simon T., Why is cardiovascular health important in menopausal women?, *Climacteric*-The journal of the International Menopause Society 2006 ;9 Suppl 1:13-18.
7. Gupta P, Sturdee DW, Hunter MS., Mid-age health in women from the Indian subcontinent (MAHWIS): general health and the experience of menopause in women. *Climacteric*, 2006; 9(1):13-22.
8. Nisar N & Sohoo N, Severity of Menopausal symptoms and the quality of life at different status of Menopause: a community based survey from rural Sindh, Pakistan, *Int J Collab Res on Internal Med & Public Health*, 2010; 2(5): 118-130.
9. Kapur P, Sinha B, Pereira BM, Measuring climacteric symptoms and age at natural menopause in an Indian population using the Greene Climacteric Scale. *Menopause*, 2009; 16(2):378-84.
10. Sharma S, Tandon V R & Mahajan A., Menopausal Symptoms in Urban Women, *J K Science*, 2007; 9(1): 13-17.
11. Dasgupta D & Ray S., Menopausal Problems Among Rural and Urban Women From Eastern India, *J Bas H Sci*, 2009: 1-24.
12. Sidhu S, Kaur a & Sidhu M, Age at Menopause in Educated Women of Amritsar (Punjab), *J. Hum Ecol*, 2005; 18 (1): 49-51.
13. Bairy L, Adiga S, Bhat P, Bhat R., Prevalence of menopausal symptoms and quality of life after menopause in women from South India, *Aust N Z J Obstet Gynaecol*, 2009; 49(1):106-110.