

KNOWLEDGE ATTITUDE AND PRACTICE IN MIDDLE AGE WOMEN REGARDING MENOPAUSAL SYMPTOMS AND HORMONE REPLACEMENT THERAPY: A SURVEY

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ABSTRACT

Objectives: Menopause is the permanent cessation of menstruation due to loss of ovarian follicle and hormones responsible for it. The study aim was to assess knowledge, attitude and practice towards menopause and Hormone Replacement Therapy (HRT), severity of menopausal symptoms and to analyse the different attitudes between peri and postmenopausal women.

Methods: An online-based questionnaire survey was conducted for 6 months including 501 middle-aged women above 35 years of age. The data was analysed in MS-Excel and SPSS version 20 using Menopausal Rating Scale (MRS) and statistical tests like Analysis of variance (ANOVA) and chi-square test.

Results: In this study, mean age of women was 50.4 years. The severe menopausal symptoms experienced by women were hot flushes (34.1%), muscle or joint problems (27.5%) and sleep problems (10.6%). The mean total MRS score was 13.717 ± 10.26 . 77.4 % of participants had knowledge about menopause and HRT. Women in this survey had positive attitude towards menopause (67.26%) and negative attitude towards the use of HRT (64.67%). Only 5 out of 501 were using HRT.

Conclusions: These results show that women have more knowledge about the menopausal symptoms and hormone replacement therapy. But the use of hormone therapy is limited considering its risk over benefits. Statistically difference exists in the attitude between peri

and post-menopausal women. Majority of women had healthy sanitary practices in their menopausal period.

Keywords: Estrogen, Hormone Replacement Therapy, Menopause, Progesterone.

INTRODUCTION:

Menopause is defined as the permanent termination of menstruation that is periodic cycle of menses, owing to loss of ovarian follicle and the hormones responsible for it [1]. Menopause is derived from Greek word in which 'menos' means month and 'pausos' means ending [2]. It is detected retrospectively with 12 consecutive months of amenorrhea which marks the end of women's carrying capacity [1,3]. The average age at which women observe menopause falls under range of 42 to 51 years globally with mean age of 46.7 years, but changes from country to country [4]. In India, average age of menopause is 46.2 years [5]. Globally, it is estimated that women will now spend one-third of their life span in post-menopausal stage and number of post-menopausal women will reach 1.1 billion by 2025 [6,7]. Therefore, menopause is currently an alarming subject to sustain and enrich women's health [8].

Menopausal period is divided into three phases like pre-menopause, peri-menopause and post-menopause [9]. Menopause is caused by the aging of ovaries which leads to decline in the production of ovarian gonadotropins like estrogen and progesterone, it is also known as natural menopause and occurs between the ages of 45 and 55 [10,11]. For some women, it is not gradual but sudden as a result of surgery and chemotherapy [4,11,12]. Ovarian ablation of ovary function can be due to hormone therapy, surgery, or radio therapy, pelvic radiation, and pelvic injuries [13].

According to MRS, the eleven menopausal symptoms are divided into 3 domains; one is Vasomotor Symptoms (VMS) consisting of Hot Flushes (HFs), heart discomfort, sleep problems and muscle and joint problems. Second is psychological symptoms consisting of depression, irritability, anxiety and physical and mental exhaustion. Third is urogenital symptom consisting of sexual problems, bladder problems and dryness of vagina [10,14]. The most experienced symptom is hot flushes and the reason for this is decrease in estrogen level. Low level of o\estrogen can increase the risk of osteoporosis, osteoarthritis, anxiety, depressed mood, urinary retention and insomnia [3,13,15,16].

HRT is the standard treatment to relieve symptoms of menopause and it replaces hormone levels which goes depleting near or after menopause [17]. HRT with estrogen and estrogen plus progesterone is considered as gold standard treatment for vasomotor symptoms and chronic disease [18]. The HRT was believed to be long-term protection against joint inflammation and cardiovascular and neurological deterioration [19]. Estrogen only HRT increases the risk of developing endometrial cancer because of this majority of women chooses combination of hormones estrogen and progesterone. The two main hormones used in HRT are Estrogen (estradiol, estrone and estriol and progestogen (dydrogesterone, medroxyprogesterone, norethisterone and levonorgestrel) [17].

According to the research, benefits of HRT include decreased chances of hip fracture by 30% and spine fracture by 50%. It also prevents several cardiovascular diseases and Alzheimer's disease by enhancing cognitive function [11]. The risk includes higher prevalence of breast cancer with the use of HRT according to the Million Women's Study (MWS), a large observational study conducted in UK [20]. It is also associated with the increased risk of endometrial cancer and venous thromboembolism [21]. The WHI study was conducted to assess benefits and risk towards menopausal HRT for chronic disease prevention in healthy postmenopausal women [22]. The study was double-blinded, placebo-

controlled, randomized clinical trial conducted in USA among women aged from 50 to 79 years old. The regimen included conjugated equine estrogen (CEE) plus medroxy progesterone acetate (MPA) for women with intact uterus and CEE alone for women without uterus. It was revealed in the study that increased risk of breast cancer is seen in women taking combination hormonal therapy; hence the study was stopped after 5.6 years of follow up [22]. According to the study done Byrne et al, it was found that there are mammographic density changes after exposed to estrogen plus progesterone therapy [23].

A KAP survey usually is conducted to collect information on the knowledge (i.e., what is known), attitudes (i.e., what is thought), and practices (i.e., what is done) about general or specific topics of a particular population. Menopause knowledge includes degree of transition women experience from reproductive stage to non-reproductive stage. In this section knowledge also implies information known about menopausal symptoms, menopausal age, estrogen levels according to survey conducted by Polit and LaRacco [24]. Menopause attitude include evaluative opinions, emotional changes regarding menopause and how it impacts on women life whether in a positive or negative manner [24]. The menopause practice evaluates the practices like healthy sanitary practices incorporated in the post-menopausal period. Also any other diet used to relieve the symptoms and consultation with health-care professionals [8]. In this paper there were total 25 KAP questions and were assessed for the knowledge, attitude and practice of middle age women towards menopausal symptoms, and HRT.

MATERIALS AND METHODS

Design and study participants

This prospective observational study was conducted from January 2021 to July 2021 by distributing online questionnaires to the women of southern India through social media.

Institutional Ethical Committee (IEC) clearance was obtained from Ethical Committee for human subject's research on January 30, 2021. Electronic consent was obtained from the participants. Participants were selected for the study based on inclusion criteria, such as females above 35 years and females who experience menopausal symptoms with or without hysterectomy. Females below 35 years, women who were not willing to give consent, females who do not have access to Google forms were excluded from the study.

Data Collection

Data collection was done using a Google form questionnaire. The questionnaire had four sections: The first section was about socio-demographic details, the second section was about gynecological history, the third section was about menopausal symptoms and hormone replacement therapy and the fourth section was about knowledge attitude and practice (KAP) questions. The severity of menopausal symptoms was assessed using a validated Menopause Rating Scale (MRS).

Data Analysis

The collected data was entered in MS Excel 2016 and analyzed using SPSS version 20. The results were displayed in tables and figures. Symptoms are assessed using Menopausal Rating Scale, which is based on likert scale system. The scale contains none, mild, moderate, severe and extremely severe which is scored zero, one, two, three and four respectively. Analysis of Variance (ANOVA) and chi-square test were used to find out the correlation. Chi-square test was used to correlate whether the attitude differed among the peri and post-menopausal stage.

RESULTS

Demographic data

A total of 501 women age above 35 years participated in the survey. Demographic details are shown in Table 1 in which age group, marital status, employment status, medical history, sexual activity, menopausal stages, cause of menopause and intact uterus are discussed. The demographics details of the study participants were taken from Menopause Health Questionnaire of The North American Menopause Society.

Table 1: Demographic data of study participants

| | No of participants (%) n=501 |
|-----------------------|---------------------------------|
| Age | |
| 35-45 | 171(34.13) |
| 45-55 | 181(36.13) |
| 55-65 | 112(22.36) |
| 65-75 | 22(4.39) |
| 75-85 | 15(2.99) |
| Marital status | |
| Single | 13(2.59) |
| Married | 426(85.03) |
| Divorced | 11(2.20) |
| Widow | 51(10.18) |
| Employment status | |
| Unemployed | 160(31.94) |
| Employed | 263(52.50) |
| Retired | 73(14.57) |
| Disable | 4(0.80) |
| Others | 1(0.20) |
| Medical history | |
| Hypertension | 276(55) |
| Diabetes | 213(42.50) |
| Bone health issues | 68(13.50) |
| Cardiovascular events | 67(13.30) |
| Accidents, if any | 19(3.70) |
| None | 151(30.10) |
| Others | 45(8.90) |
| Sexually active | |
| Yes | 227(45.31) |
| No | 274(54.69) |
| Menopausal stage | |
| Pre-menopause | 94(18.76) |
| Peri-menopause | 126(25.15) |
| Post-menopause | 281(56.09) |
| Cause of menopause | |
| Natural | 244(48.7) |

| | |
|------------------------|------------|
| Surgical | 33(6.59) |
| Due to chemotherapy | 2(0.4) |
| Not attained menopause | 222(44.31) |
| Intact Uterus | |
| Yes | 459(91.62) |
| No | 42(8.38) |

Menopause and Hormone Replacement Therapy

The view on menopause and HRT is shown in Table 2 in which view on menopause, view on use of HRT, use of HRT and use of HRT among different menopausal stages are discussed. From the data we can conclude that majority of women in study had positive view on menopause, negative view towards the use of HRT. Only 5 out of 501 participants used HRT. Among different phases, none of pre-menopausal women took HRT whereas only 1 woman from peri-menopause and 4 women from post-menopause stage took HRT for menopause.

Table 2: View on menopause and usage of HRT.

| | No of participants (%) n=501 |
|---|------------------------------|
| View on menopause | |
| Positive | 377(67.26) |
| Negative | 31(6.19) |
| Neutral | 133(26.55) |
| View on use of HRT | |
| • Positive, hormone therapy is appropriate for some women | 177(35.33) |
| • Negative, I don't support the use of hormone therapy | 324(64.67) |
| Use of HRT | |
| Yes | 5(0.99) |
| No | 496(99.01) |
| Use of HRT in different menopausal stages | |
| Pre-menopause | 0(0) |
| Peri-menopause | 1(0.19) |
| Post-menopause | 4(0.80) |

Menopausal symptoms and Menopausal Rating Scale

According to MRS system, majority of study participants complained of muscle and joint problem as shown in Table 3, whereas under extremely severe category majority of study participants experienced hot flushes (Fig. 1). MRS is a standardized tool to assess the menopausal symptoms.

Table 3: Details of the menopausal symptoms using MRS

| SYMPTOMS | NONE (%) | MILD (%) | MODERATE (%) | SEVERE (%) | EXTREMELY SEVERE (%) |
|------------------------------|------------|------------|--------------|------------|----------------------|
| Hot flushes | 117(23.4) | 50(10) | 84(16.8) | 171(34.1) | 79(15.8) |
| Heart discomfort | 229 (45.7) | 66(13.2) | 140(27.9) | 47(9.4) | 19(3.8) |
| Sleep problems | 130 (25.9) | 194 (38.7) | 111(22.2) | 53(10.6) | 13(2.6) |
| Muscle or joint problem | 112(22.4) | 84(16.8) | 132(26.3) | 38(27.5) | 35(7.0) |
| Depressed mood | 166(33.1) | 133(26.5) | 149(29.7) | 39(7.8) | 14(2.8) |
| Irritability | 171(34.1) | 179(35.7) | 94(18.8) | 48(9.6) | 9(1.8) |
| Stress | 138(27.5) | 195(38.9) | 114(22.8) | 39(7.8) | 15(3.0) |
| Anxiety or mental exhaustion | 181(36.1) | 159(31.7) | 112(22.4) | 44(8.8) | 5(1.0) |
| Sexual problems | 226(45.1) | 162(32.3) | 70(14.0) | 37(7.4) | 6(1.2) |
| Bladder problems | 199(39.7) | 172(34.3) | 83(16.6) | 45(9.0) | 2(0.4) |
| Vaginal dryness | 168 (33.5) | 194 (38.7) | 94(18.8) | 33(6.6) | 12(2.4) |

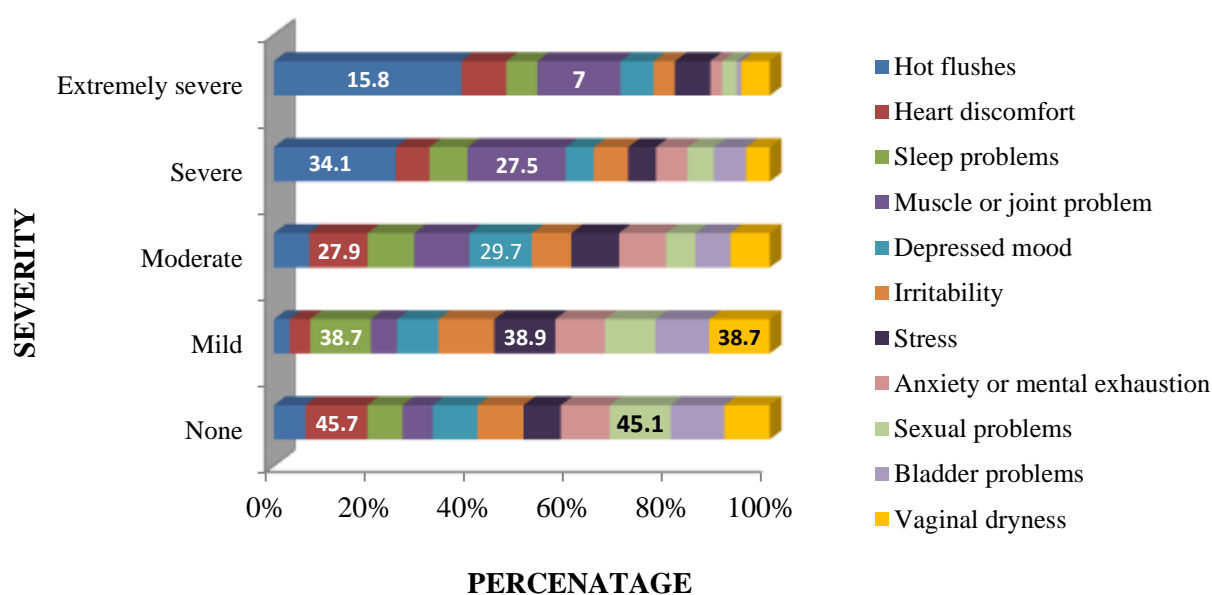


Fig. 1. Details of the menopausal symptoms using MRS.

A severe MRS Score (≥ 17) was found in 40.32% of study participants. The mean total MRS score for each menopausal stage is shown in Table 4. The analytical method used to compare menopausal stage was one way ANOVA. The p value is statistically significant which means there is a difference between each menopausal stage regarding MRS Score. It is found that most of the symptoms were experienced by post-menopausal stage women.

Table 4: Multiple group comparison of MRS scores regarding Menopausal stage.

| MENOPAUSAL STAGE | MRS SCORE | | p-value |
|------------------|-----------|---------|---------|
| | Mean | SD | |
| Pre-menopause | 2.670 | 4.9955 | 0.001* |
| Peri-menopause | 11.278 | 6.7203 | |
| Post-menopause | 18.505 | 9.6515 | |
| Total | 13.717 | 10.2676 | |

Knowledge, Attitude and Practice (KAP) response and attitude among menopausal stages

There were total 25 questions in KAP in which 10 questions belonged to knowledge domain, 9 questions from attitude domain and 6 questions from practice domain. The data from knowledge domain showed women in the study have good knowledge about menopause and HRT. From attitude domain, we found that women have positive attitude towards menopause and negative attitude towards HRT. Majority of women in the study adopted favourable sanitary practices. Details of the responses are shown in Table 5.

Table 5: KAP response among study participants

| Domain | Questions | Yes (%) | No (%) |
|-----------|--|-----------|-----------|
| Knowledge | Do you know in which age menopause occurs | 488(97.4) | 13(2.6) |
| | Do you have knowledge of menopausal symptoms | 435(86.8) | 66(13.2) |
| | Does menstruation stop suddenly at time of menopause | 138(27.5) | 363(72.5) |
| | Did you know menopause increase the risk of cardiovascular disease | 374(74.7) | 127(25.3) |

| | | | |
|---|---|--|-----------|
| | Did you know menopause increase the risk of osteoporosis | 405(80.8) | 96(19.2) |
| | Do you think post-menopausal bleeding is abnormal | 406(81.0) | 95(19) |
| | Do you think physical exercises is a beneficial practice | 481(96.1) | 20(4.0) |
| | Are you aware about hormone therapy | 301(60.1) | 200(39.9) |
| | Do you think menopausal women should consult physician | 385 (76.8) | 116(23.2) |
| | Menopausal symptoms are preventable and curable | 465(92.8) | 36(7.2) |
| Attitude | Do you think menopause means end of sexual life | 197(39.3) | 304(60.7) |
| | Do you think menopausal symptoms affect quality of life | 401(80.0) | 100(20) |
| | Do you think absence of menstruation in post-menopause is relief | 430(85.8) | 71(14.2) |
| | Do you think physical changes of menopause are natural and acceptable | 474(94.6) | 27(5.4) |
| | Do you think menopause as loss of youth | 287(57.3) | 214(42.7) |
| | Do you think menopause is associated with maturity and experience | 323(64.5) | 178(35.5) |
| | Is hormone therapy good for age-related problems | 244(48.7) | 257(51.3) |
| | Do you think natural approaches are better than hormone therapy | 392(78.2) | 109(21.8) |
| | Do you think hormone therapy has more risk than benefits | 354(70.7) | 147(29.3) |
| | Practice | Did you discuss menopause symptoms with others | 228(45.5) |
| Did you consult a physician at the onset of menopause | | 164(32.7) | 337(67.3) |
| Have you shown response to treatment or advice | | 140(27.9) | 361(72.1) |
| Have you undergone any physical examination at the onset of menopause | | 105(21.0) | 396(79) |
| Have you adopted favourable or healthy sanitary practice | | 366(73.1) | 135(26.9) |
| Are you taking any special food to get rid from symptoms | | 166(33.1) | 335(66.9) |

Total 9 questions of attitude domain were divided into two groups with respect to yes response. It is observed that statistically significant difference exists among the attitude response of women in different menopausal stages and is shown in Table 6.

Table 6: Associations between Menopausal stages and response in Attitude domain

| | | Total "Yes" response per domain | | Total | P Value |
|-------------------|----------------|---------------------------------|-----|-------|---------|
| | | 0-4 | 5-9 | | |
| Menopausal stages | Pre-menopause | 46 | 48 | 94 | 0.001* |
| | Peri-menopause | 24 | 102 | 126 | |
| | Post-menopause | 63 | 218 | 281 | |
| Total | | 133 | 368 | 501 | |

DISCUSSION

In this study, 501 middle aged women were included for detecting KAP status related to reproductive health. In this study, 48.7% of women attained natural menopause, 44.31% of women has not attained menopause, 6.59% of women attained menopause surgically and 0.4% were due to chemotherapy. Majority of women were having uterus in this study and only few had hysterectomy. The decision to use menopausal hormone therapy in women without a uterus should involve an individualized risk or benefit analysis. After hysterectomy, for most patients, current literature results favor not including a progestogen because it has increased risk of breast cancer [25].

In this study, only 5 participants were using HRT for menopausal symptoms and 4 among them had undergone hysterectomy. According to the study conducted by Pacello et al. in Brazil showed that the prevalence of HRT use is estimated to be 5% in women aged over 40 years [26]. On assessing the symptoms during menopause, the most common symptom was muscle and joint pain (77.6%), hot flushes (76.7%) and sleep problems (74.1%). This is contrast to the study conducted by Khatoon et al. at Karachi Pakistan; the most common reported symptoms were mental and physical exhaustion (72%) and joint and muscular

discomfort (68.59%), hence we can conclude that the menopausal symptoms may vary from women to women with different ethnicity, region and culture. [14]. Out of 501 women in this study, the mean MRS total score was 13.71 ± 10.26 which is similar to study conducted by Chou et al in China, the mean MRS total score was 14.2 ± 8.80 [27].

Around 89% of the women from pre, peri and post-menopausal stages in our study had prior knowledge of menopausal symptoms which is contrast to the study conducted by Loutfy et al. in Egypt in which only 38.4% of women had previous knowledge of menopausal symptoms [28]. 97.4% of our subjects had knowledge regarding the age at which menopause occurs and 74.7% of women knew that menopause increases the risk of cardiovascular disease whereas in the study conducted by Thomas et al. only 25% of the respondents recognized cardiovascular disease as an associated risk [29]. 80.8% of our participants knew during menopause there is an increased risk of osteoporosis, which is similar to the study conducted by Juby et al. where 93.4% of women were aware about the occurrence of osteoporosis during menopause [30].

Around 81% of our subjects considered post-menopausal bleeding as abnormal. This is dissimilar to the study conducted by Pathak et al. where 16.36% of women knew that post-menopausal bleeding is abnormal [8]. 96.1% of the participants think physical exercise as beneficial practice. This is similar to the study conducted by Loutfy et al. in Egypt where 91.9% of the women were aware that exercise is a beneficial practice [28]. In our study, 60.1% of women were aware about hormone therapy which is similar to the study conducted by Hamid et al. in United Arab Emirates (UAE) where 67% of women were aware about Hormone Therapy [21]. But this is contrast to the study conducted by Jin et al. in China where only 3.5% of women were aware of HRT [11]. 76.8% of our participants thought of consulting physician at menopause which is similar to the study conducted by Osarenren N et

al. where 91% of the women thought of consulting physician at menopause [31]. Compared to other studies, our study subjects had good knowledge about menopausal symptoms and HRT is due to the reason that the study participants were literate and study was conducted on online platform in English language.

Only 39.3% of women in this study considered menopause as end of sexual life which is different to the study conducted by Beura et al. in Odisha, where 55% of the women considered menopause as an end of sexual life [9]. 80% of our participants thought menopausal symptoms affect Quality of Life (QoL) which is similar to the study conducted by Pathak et al. Bhopal Madhya Pradesh [8]. 85.8% of subjects considered absence of menstruation in post-menopause as relief which is contrast to the study conducted by Pathak et al. where 46.27% of women believe that absence of menstruation in post-menopause as relief [8]. Similar to the study conducted by Osarenren et al. 94.6% of study respondents considered menopause as natural and acceptable [31]. 57.3% of women considered menopause as loss of youth in our study which is supported by the study conducted by Pathak et al. where 64.55% of women perceived menopause as loss of youth [8]. 64.5% of subjects considered menopause is associated with maturity and experience, which is dissimilar to the study conducted by Pathak et al. where 30% of the participants considered menopause is associated with maturity and experience [8]. On considering the attitude towards use of HRT, 51.3% of participants had negative attitude towards the use of HRT which is similar to the study conducted by Hamid et al in UAE, showed 40% of the women had negative attitude towards HRT [21]. The reason for this is due to increased risk of HRT over benefits. 78.2% of women thought natural approaches are better than HRT which is different to the study conducted by Sultan et al. only 18% of women thought natural approaches are better than HRT [19]. Indian women used natural approaches in prevention and treatment of menopause related problems due to severe side effects of HRT since the supplements they used were

effective, safe and cost beneficial even with long term use. Regarding the attitude towards menopause, 67.26% of women had positive attitude towards menopause which is alike to the study conducted by Ibo et al. in Nigeria [2].

Nearly 45.5% of subjects had discussed their menopausal symptoms with others, 32.7% of our participants had consulted physician at the onset of menopause and 27.9% of women shown response to the treatment. It is parallel to the study conducted by Pathak et al. where 43.63% of women in their study had discussed menopausal symptoms with others, 29.09% of women had consulted the physician at the onset of menopause and 24.54% of women shown response to the treatment [8]. Majority of our participants that is, 73.1% have adopted favourable sanitary practices and it is contrast to the study conducted by Pathak et al. 34.54% of women have adopted favourable practices [8]. We observed that there exist a difference in the attitude between peri and post-menopausal stage. Chi-square test was used to correlate whether the attitude differed among the peri and post-menopausal stage. And it was found that there exists statistically significant difference.

CONCLUSION

The Google form questionnaire was effective to assess knowledge, attitude and practice towards menopausal symptoms and HRT in middle age women. Majority of women had natural menopause followed by surgical and due to chemotherapy. The frequent occurring symptom was found to be muscle and joint problem and the severe symptoms experienced were hot flushes, muscle or joint problem and sleep problems. Women showed positive attitude towards menopause and negative attitude towards the use of HRT due to the increased risk over benefits. Women in this survey had good knowledge regarding menopause, HRT and had healthy sanitary practices in their menopausal period. Statistically significant difference was found in the attitude between the women of peri and post-menopausal stage.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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