Evaluation of the efficacy and safety of Menosan in Post-menopausal symptoms: A short-term pilot study

Singh, S.K., Reader and Head, Department of Endocrinology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India and Kala Suhas Kulkarni*, Medical Advisor, R&D Center, The Himalaya Drug Company, Bangalore, India.

[*Corresponding author]

ABSTRACT
Menopause is a physiological transition in women, which occurs when a woman’s menstrual period ceases around the age of 45 years. It is the result of a gradual and natural transition in a woman’s body that usually begins years before the final menstrual period ceases and produces a variety of symptoms called menopausal syndrome. The present study was conducted and designed to assess the efficacy of a polyherbal formulation, Menosan. Twenty-seven women in the age group of 35 to 56 years with symptoms of menopause participated in the trial. An informed consent was obtained from all the 27 women after explaining the nature and safety aspects of the herbal treatment. Twenty-seven women presented with hot flashes, 22 with irritability, 11 with depression, 5 with bone and joint pains, 9 with sweating and 6 with insomia. Symptoms were graded on a scale from 0 to 4, with 0: asymptomatic, 1: mild symptoms, 2: moderate symptoms, 3: severe symptoms and 4: very severe symptoms. Routine hematological and biochemical investigations were done along with Serum Follicle Stimulating Hormone (S. FSH) and Serum Luteinizing Hormone (S. LH) estimation. All the 27 women were administered Menosan at a dose of 1 tablet twice daily and reviewed monthly for 3 months and at the end of 6 months to determine the effect of the drug and also the side effects, if any. At the end of the treatment, all the investigations were repeated. It was found that the mean S. FSH and S. LH did not show significant change. Depression was relieved in 90%, insomnia in 83.33%, irritability in 50%, weight gain in 50%, bone and joint pains in 40%, sweating in 37.88% and hot flashes in 37.03% of the women. Thus, it was concluded from the clinical trial that Menosan is significantly effective in treating post-menopausal syndrome.

INTRODUCTION
Menopause is an important transition in a woman's life. The absence of a relevant staging system for female reproductive aging and the confusing current nomenclature for the years before reaching final menstruation called for the development of a new staging system for menopause. Consensus was reached for a 7-stage model at the recently concluded 10th World Congress on Menopause earlier this year1. This model consists of early, peak, and late reproductive phases; early and late menopausal transition phases; and early and late postmenopause phases. Features of early menopausal transition are the onset of variable cycle length, with increasing follicle-stimulating hormone (FSH), whereas late menopausal transition is characterized by at least 2 skipped menstruations, with elevated FSH and increased likelihood of vasomotor symptoms. The early postmenopausal phase comprises the first 5 years after the final menstrual period (FMP). Women
continue to be at risk for vasomotor symptoms. FSH continues to be elevated through this phase and the subsequent late phase of postmenopause. The predominant view of menopause is that of an estrogen-deficient state that heralds the onset of aging and illness with many negative connotations. Although hormone replacement therapy (HRT) is widely recommended for use by postmenopausal women, concerns about safety and effectiveness are causing alarm from the blanket use of HRT. Recent studies have shown that the risks of HRT far outweigh its benefits and hence alternative approaches are now viewed as safer. There is substantial interest in natural alternatives to hormone replacement therapy especially phytoestrogens, which are perceived as potential sources of exogenous estrogens for alleviation of menopausal symptoms.

Numerous studies with phytoestrogens have shown that they provide effective and safe mitigation of the tumultuous and distressing endocrine events associated with perimenopausal transition. This clinical trial was conducted to determine the efficacy of Menosan, a polyherbal formulation enriched with phytoestrogens in women with post-menopausal symptoms. Earlier studies with Menosan have shown that it offers a safe and viable option that substantially increases the likelihood of successful treatment and promotes enhanced satisfaction and well being for menopausal women. The important constituents of Menosan are Centella asiatica, Terminalia chebula, Glycyrrhiza glabra, Sida cordifolia, Zaharmohara bhasma and Kukkutandatvak bhasma along with the extracts of Asparagus racemosus and Saraca indica.

MATERIAL AND METHODS
Twenty-nine women presenting with symptoms related to menopausal syndrome were included in the study. Among the 29 women, 27 presented with hot flashes, 22 with irritability, 11 with depression, 5 with bone and joint pains, 9 with night sweats and 6 with insomnia. Two women were not included in the study as they had complaints of diarrhea and abdominal pain.

An informed consent was obtained from all of them after explaining the nature and safety aspect of the trial drug. Symptom score was recorded on the preset proforma on the scale of 0 to 4. 0: asymptomatic, 1: mild symptoms, 2: moderate symptoms, 3: severe symptoms and 4: very severe symptoms.

Complete hematological and biochemical investigations were performed before starting the treatment. Serum LH and serum FSH were performed using Radio-immunoassay (RIA). Women were administered Menosan tablets at a dose of 1 tablet, twice daily for 3 months. All the women were followed up every month for the first 3 months, and at the end of 6 months. The investigations were repeated after completion of 3 months of treatment.

RESULTS
Twenty-seven women completed the treatment. Out of 27 women who complained of hot flashes, 1 had mild (score 1), 6 women had moderate (score 2), 9 women had severe (score 3) symptoms and in 11 women the hot flashes was very severe (score 4). After treatment with Menosan, 10 women were rendered asymptomatic (score 0), in 8 women, mild (score 1), in another 8 moderate (score 2), and in 1 women the symptoms persisted as severe (score 3). None of the women had very severe (score 4) degree of symptoms. Thus, 37% women were symptom free (Figure).
Of the twenty-seven women, 9 women had sweating. 5 women had mild (score 1), 1 women had moderate (score 2), and 3 women had severe (score 3) degree of sweating. After treatment with Menosan, 3 women became asymptomatic (score 0), 5 women had mild (score 1) and 1 women had moderate (score 2) sweating. Thus, 33% women were free from night sweats (Figure).

Twenty-two women presented with irritability and fatigue. Of these, 9 women had mild (score 1), 10 women had moderate (score 2), 2 women had severe (score 3) and 1 women presented with very severe (score 4) degree of irritability and fatigue. Eleven women became asymptomatic (score 0), after 3 months treatment with Menosan. In 4 women, the symptoms were reduced to mild (score 1). In 7 women, the symptoms continued to be of moderate (score 2) degree. 50 % of women were free from irritability and fatigue (Figure).

In 11 women who presented with depression, 9 had mild (score 1), 2 women had moderate (score 2) degree of depression and 10 women were rendered asymptomatic (score 0) at 3 months and in only 1 women a mild (score 1) degree of depression persisted. It was interesting to note that 90.09% women were relieved of symptoms (i.e. score 0) of depression (Figure).

Bone and joint pains were present in 5 women, 2 had mild (score 1) and 3 had moderate (score 2) symptoms. Two women were asymptomatic (score 0) and 3 had mild (score 1) with 3 months of treatment with Menosan. 40% of women with bone and joint pain became asymptomatic (score 0) (Figure).

Two women who had moderate (score 2) and 4 women who had mild (score 1) degrees of insomnia were reduced to asymptomatic (score 0) (Figure).

The mean FSH of initial, first follow-up and second follow-up was 59.45 ± 6.67, 47.79 ± 6.48 and 47.58 ± 6.28 mIU/ml respectively.
DISCUSSION

The study revealed that Menosan effectively results in amelioration of symptoms related to menopause as early as 4 weeks. A significant percentage of women were found to be free from symptoms at 3 months. In those whom the symptoms seemed to persist, a relatively longer duration of treatment with Menosan may be required to relieve the symptoms effectively.

Although, serum FSH and LH levels showed marginal change with treatment, this may be confirmed in a larger population study.

There were no adverse effects reported during the trial period indicating that Menosan is safe for long-term management of menopausal symptoms.

Menosan contains *Asparagus racemosus*, a natural source of phytoestrogens, which also possesses antibacterial activity. The phytoestrogens present may be responsible for the early relief of symptoms like hot flashes and night sweats.

*Withania somnifera* works through macrophage chemotaxis and *Asparagus racemosus* induced excess production of TNF-α. This indicates the stimulation of the immune response.

*Terminalia chebula* contains natural vitamin C and has antioxidant properties. It also has antimicrobial activity, largely active against *Salmonella, Staphylococcus aureus* and *Klebsiella*. This property is beneficial in prevention of vaginal infections. It reduces cholesterolemia and helps prevent the progress of atherosclerosis and checking the development of ischemic heart disease (IHD) and stroke. *Terminalia chebula* is also known to inhibit malignant cells including the breast cancer cell line. *Glycyrrhiza glabra* supports the genitourinary tract, decreasing the development of urinary tract infections, which are associated with dryness of the vagina. *Centella asiatica* is useful in diabetic microangiopathy. It improves microcirculation and decreases capillary permeability thereby decreasing any complications in diabetic women, which is common in the elderly. It has cognitive enhancing effect and has an antioxidant mechanism. It has antithrombin effect and prevents the chances of developing clots, which may later lead to embolism, thereby preventing IHD and strokes. *Glycyrrhiza glabra* also has its effect on blood pressure regulating hormones by directly acting on the mineralocorticoid receptors.

The estrogenic activities of *Saraca* extracts are used for the potential treatment of menopausal symptoms and hence help in alleviation of symptoms resulting from estrogen deficiency. Kukkutandatvak bhasma is a rich source of minerals like calcium, phosphorous and helps prevent symptoms of bone and joint pain related to osteoporosis, which have a positive effect on the bone mineral density in post-menopausal women.

CONCLUSION

From the above findings, it can be concluded that Menosan is effective in treating symptoms of menopausal symptoms. Menosan contains phytoestrogens, which act through estrogen-receptor dependent mechanisms. Phyrosetrogens present in Menosan bind to estrogen receptors and produce estrogenic effects. Thus, Menosan helps in alleviating vasomotor and other symptoms of menopause.
The inhibitory effect of Menosan on endometrial and breast cancers may be studied in larger population with long-term treatment follow-up.

ACKNOWLEDGEMENT
We sincerely thank Dr. Rangesh Paramesh, M.D (Ay) for his kind help to conduct the study, and The Himalaya Drug Company for providing drug samples.

REFERENCES