



Clinical Research

An assessment of *Manasika Bhavas* in menopausal syndrome and its management

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Abstract

The present clinical trial was conducted to evaluate the efficacy of *Shirodhara* and *Saraswatarishta* as compared to hormone replacement therapy (HRT) in the management of menopausal syndrome, along with the assessment of *Manasika Bhavas*. The subjects were randomly divided into three groups. A total 48 patients were selected for the study, out of which 43 patients completed the study. Specialized Ayurvedic rating scales like *Manasa Pariksha Bhavas* as well as the Hamilton Anxiety Rating Scale, Hamilton Depression Rating scale, and Menopause Rating Scale were adopted to assess the effect of therapy. The effects were examined on the chief complaints as well as the associated complaints. Patients undergoing *Shirodhara* had better relief of the disturbances of *Manasa Bhavas* and psychic symptoms of menopause as compared to the other two groups. *Saraswatarishta* also showed encouraging results in managing the associated somatic symptoms and the psychic symptoms. Hence, we conclude that it can be used as an alternative therapy to HRT.

Key words: Menopausal syndrome, *Manasika Bhavas*, *Shirodhara*, *Saraswatarishta*.

Introduction

From the very beginning of existence of life in the universe man has striven to live a physically and mentally healthy and comfortable life. According to Ayurveda health is a combination of a healthy body and mind, the *Atma*, and the *Indriyas*.^[1] In Ayurveda, various psychological conditions like greed, grief, fear, anger, envy, excessive attachment, etc., have been considered to play a role in the precipitation of diseases. It is advised that one must control these emotions (*Manas Bhavas*) or else it may lead to various *Manasika Rogas*. Many such *Manas Bhavas* affect the menopausal woman due to various reasons and lead ultimately to various somatic and psychological disturbances.

The propagation of the species is a basic aim of nature. In the multiplication of the human race 'woman has a pivotal role to play.' In the fashioning of a woman's bodily structure nature has proved its great capacity and efficiency in a very astonishing manner.

The phase of 'menarche' and 'menopause' have important influences on the physical, psychological, social, and emotional

aspects of a woman. The menopause is a natural phenomenon and one of the life's important milestones. As both menarche and menopause are related to post-birth changes, both should be tackled with the same caution and care; however, sometimes increasing age and diminishing qualities from life make the menopausal condition more difficult to handle in the lack of proper understanding, sound medical advice, and good social support. Not every woman passes through a torrid time during this phase but every female surely knows about the negative changes associated with the onset of the menopause. Hot flushes, lack of energy, vaginal dryness, irregular periods, backache, depression, etc., are some of the symptoms which may accompany this stage due to the changes in hormonal activity. The period of menopause is a time of tremendous changes in lifestyle. These changes may cause loss of equilibrium and discipline in her day-to-day life.

There has been extensive research on menopause in the West, but in India only a few research institutes have recognized the potential of research on this subject. Being a common and distressing problem, it needs effective and safe treatment. In modern medicine, the management of menopausal syndrome is through hormone replacement therapy (HRT). Often there is spectacular relief from the symptoms of the disease but there is an associated risk of serious side effects such as increased probability of developing breast cancer, uterine cancer, venous thromboembolism, stroke, etc. HRT, however, is not very effective in managing the psychological symptoms associated with menopause. An effort to manage this with

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long-term use of sedatives, hypnotics, and anxiolytic drugs leads to side effects like drowsiness, impaired motor function, loss of memory, antisocial behavior, allergic reactions, etc. Thus modern science mainly concentrates on tackling the physical problems of menopause, but the psychological aspect is often neglected. Therefore, here we have made an attempt to focus on the other side of the coin, i.e., the psychological aspects of menopause. There is a great scope for research in Ayurveda to find a cure for the management of menopause.

Aims and Objectives

1. To study the psychological manifestations in menopausal women and their management
2. To assess the efficacy of a *Rasayana* preparation and *Shirodhara* in the management of menopausal syndrome as compared to that of HRT.

Material and methods

Distribution of patients

Forty-eight patients were randomly selected from among the outpatients and inpatients of *Panchakarma* & *Manasa Roga* Department, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat. They were divided into three groups as shown in the Table.

Group	Completed treatment	Discontinued treatment	Total
Group A	10	00	10
Group B	15	03	18
Group C	19	02	20
Total	43	05	48

Inclusion criteria

1. Age between 40–55 years
2. Women not having menses since at least 6 months
3. Patients having psychological manifestations during menopause

Exclusion criteria

1. Patients with surgical menopause
2. Patients suffering from any major illnesses, e.g., tuberculosis, cancer, diabetes mellitus, etc.

Investigations

All selected patients were subjected to routine investigations, which included the following:

- Blood: Hb, TC, DC, ESR, PCV, etc.
- Urine: Routine and microscopic examination
- Biochemical examination: Fasting blood glucose, total serum proteins, lipid profile, alkaline phosphatase

Grouping/dose/duration of treatment

The selected patients were randomly separated into three groups as follows:

Group A was treated with conjugated estrogens 0.625 mg once daily for 45 days

Group B was treated with *Saraswatarishta* 20 ml mixed with water and taken before meals twice a day for a duration of 45 days

Group C was treated with *Shirodhara* with *Bala Taila*, 30 min per sitting for 45 days (After 7 days of continuous *Shirodhara*, a gap of 3 days in between before the next 7 days sitting with 3-3 days gap after every 7 days)

Follow-up study

All patients were followed up for 1 month.

Method of assessment

- Detailed history was taken and a thorough physical and mental examination was done, with the data being recorded in a special proforma that was specifically designed for this study
- Relief in the subjective signs and symptoms of menopause was assessed
- Gradation of *Manasa Pariksha Bhavas* as per Charaka Vimanasthana,^[2] Hamilton's Anxiety Rating Scale,^[3] Depression Rating Scale,^[4] Menopause Rating Scale^[5]

Overall effect of therapy: Overall effect of the therapy was graded as complete remission, marked improvement, moderate improvement, improvement, and unchanged; the following criteria were used for grading:

1. Complete remission: 100% relief in *Manasa Bhavas* and clinical features
2. Marked improvement: More than 75% reduction in the score of *Manasa Bhavas* and clinical features
3. Moderate improvement: 50%–75% improvement in the score of *Manasa Bhavas* and clinical features
4. Improvement: 25%–50% improvement in the score of *Manasa Bhavas* and clinical features
5. Unchanged: Less than 25% reduction in the score of *Manasa Bhavas* and clinical features

Observations and Results

In this series of 48 patients with menopausal syndrome, 68.75% of the subjects were from the age-group of 40–45 years and 31.25% patients were in the age-group of 46–50 years. Hindus comprised 89.58% of the patients, and 10.41% patients were Muslims. Seventy-five percent of the patients were housewives, 12.5% were laborers, and 12.5% were engaged with government service. With regard to educational status, 39.6% were graduates and 25% had studied up to secondary school. Socioeconomically, 58.4% patients were from middle class and 25% patients were from lower class.

We assessed the dietary habits and found that 39.58% patients complained of having poor appetite and 31.25% patients had moderate appetite. Vegetarians constituted 60.42% of the subjects, whereas 39.58% were nonvegetarians. *Vishama Agni* was found in 39.58% patients and *Manda agni* was found in 33.34% patients. The 58.34% patients were doing *Vishamashana* and 20.84% patients followed *Samashana* and *Adhyashana* dietary habits. Among the patients, 81.25% were taking a *Lavana Rasa* dominant diet and 64.58% patients were taking *Katu Rasa* dominant diet. Irregular bowel habits were present in 79.17% patients and 66.67% complained of habitual constipation. The 52.08% patients were having *Madhyama Koshta*, while 66.67%

patients were suffering from *Muhurmuhur Mutra Pravritti*, 45.84% had *Sadaha Mutra Pravritti*, and 43.75% had *Krichchra Mutra Pravritti*.

The majority of the patients (91.67%) complained of disturbed sleep. A large proportion (79.17%) said that were doing little *Vyayama*. Of the subjects, 64.58% were from *Sadharana Desha* and 35.42% were from *Jangala Desha*.

Fifty percent of the patients had attained menarche at the age of 11–13 years. At the time of the study, 60.42% patients were in the climacteric stage, whereas 39.58% had established menopause. Among the patients, 70.83% said they had painless menstrual bleeding, 66.66% had delayed menses, and 50% had heavy bleeding during menstruation.

The majority (81.25%) of the women were married, with 60.42% saying they had some problems with the partner (sexual/ psychosexual). Oral contraceptive pills were used by 16.67% of patients, while 39.58% patients were using intrauterine contraceptive devices, and 39.58% had undergone tubectomy. The majority (68.75%) had full-term normal deliveries (FTND), while 22.92% gave history of caesarian section.

A little over half of the patients (54.17%) were of *Vata-Pitta Prakriti* and 22.92% were of *Vata-Kapha* and *Kapha-Pitta Prakriti*; 66.67% were of *Rajasika-Tamasika Prakriti*, 29.17% were of *Satwika-Rajasika Prakriti*, and 4.17% were of *Satwika-Tamasika Prakriti*.

56.25% patients were of *Madhyam Satwa* and 43.75% were of *Avara Satwa*. 72.92% patients were of *Madhyama Sara*. 81.25% patients had *Madhyama Samhanan*. 75% patients were of *Madhyama Pramana*. 72.92% patients were having *SarvaRasa Satmya*. 72.92% patients were having *Madhyama Abhyavara Shakti*. 56.25% patients were having *Avara Jarana Shakti*. 52.08% patients were having *Avara Vyayama Shakti*.

All patients, i.e., 100%, had *Vata Dosha Dushti*; 85.41% had

Pitta Dosha Dushti and 31.25% showed *Kapha Dosha Dushti*.

All of the patients were having *Manovaha*, *Udakvaha*, *Rasavaha*, and *Artavavaha srotodushti*; 90% patients were having *Purishavaha Srotodushti*; 85.40% patients were having *Swedavaha Srotodushti*, and 83.34% were having *Raktavaha Srotodushti*.

Krodha was seen in 85.42% of patients, *Shoka* in 80%, *Moha* in 75%, *Bhaya* in 66.67%, *Smriti Bhransha* in 62.50%, and 58.34% patients had disturbances related to *Medha*.

All patients complained of anxiety, disturbed sleep, and fatigue; 85.2% complained of irritability; 79.17% complained of depression, and 62.5% complained of vertigo.

Headaches were complained of by 97.91% patients, 93.75% had joint pains and backache, 89.58% had constipation, 83.34% had dyspepsia, 81.25% had palpitations, 79.17% had decreased libido, 75% had muscular aches, 70.83% had tingling sensations in different body parts, 68.75% suffered from hot flushes and frequent urination, and 60.41% suffered from flatulence.

Effect of therapy

As shown in Table 1, group A showed highly significant result ($<.001$) in *Moha*, *Shoka*, *Bhaya*, *Medha*, and *Smriti*, whereas there was insignificant result in *Krodha* ($>.01$). Group B and group C showed highly significant improvement ($P\leq.001$) in all the *Manas Bhavas*

Thus, group A showed highly significant ($P\leq.001$) relief in the psychic symptoms of menopause, except in the case of irritability, where the change was statistically nonsignificant ($P\leq.10$). Group B and group C showed highly significant result ($P\leq.001$) in all the psychic symptoms of menopause [Table 2].

As the Table 3 shows, in group A there was highly significant relief ($P\leq.001$) of all the somatic symptoms, except constipation, flatulence, backache, joint pain, and tingling sensation. Group B showed highly significant results ($P\leq.001$) in the somatic symptoms of menopause. Group C shows highly

Table 1: Effect on Manas Bhavas

Manasa Bhavas	Group A			Group B			Group C		
	(%) Relief	±SD	P value	(%) Relief	±SD	P value	(%) Relief	±SD	P value
Moha	32	0.42	<.001	39.02	0.25	<.001	48.93	0.46	<.001
Krodha	34.48	0	<.1	51.51	0.35	<.001	73.46	0.48	<.001
Shoka	29.03	0.31	<.001	45.94	0.35	<.001	62	0.57	<.001
Bhaya	30.76	0.42	<.001	48.38	0.37	<.001	59.45	0.42	<.001
Medha	31.57	0.51	<.001	46.66	0.25	<.001	60	0.48	<.001
Smriti	38.88	0.48	<.001	46.66	0.25	<.001	46.15	0.48	<.001

Table 2: Effect on psychic symptoms of menopausal syndrome

Psychic symptoms	Group A			Group B			Group C		
	(%) Relief	±SD	P value	(%) Relief	±SD	P value	(%) Relief	±SD	P value
Anxiety	41.93	0.48	<.001	50.94	0.41	<.001	70.90	0.51	<.001
Irritability	40.90	0	≥.10	53.19	0.48	<.001	67.92	0.76	<.001
Vertigo	66.66	0.42	<.001	80	0.63	<.001	71.87	0.66	<.001
Depression	40.74	0.56	<.001	70.27	0.59	<.001	72.50	0.60	<.001
Sleep disturbance	31.25	0.47	<.001	57.14	0.50	<.001	82.35	0.68	<.001
Fatigue	40	0.51	<.001	67.27	0.63	<.001	55.17	0.42	<.001

Table 3: Effect on somatic symptoms of menopausal syndrome

Somatic symptoms	Group A			Group B			Group C		
	(%) Relief	±SD	P value	(%) Relief	±SD	P value	(%) Relief	±SD	P value
Palpitation	55	0.31	<.001	62.16	0.63	<.001	54.28	0.41	<.001
Tingling	45.45	0	>.10	64.86	0.63	<.001	37.50	0.70	<.001
Decreased libido	50	0.42	<.001	51.42	0.67	<.001	38.46	0.51	<.001
Joint pain	19.04	0.51	<.05	68.29	0.63	<.001	22.22	0.61	<.01
Backache	38.88	0.48	<.01	52.63	0.72	<.001	10.34	0.38	<.05
Dyspepsia	50	0.56	<.001	72.97	0.67	<.001	44.44	0.75	<.001
Flatulence	30.43	0.48	<.01	79.54	0.81	<.001	27.02	0.61	<.01
Constipation	21.73	0.52	<.02	83.33	0.65	<.001	30.76	0.59	<.001
Hot flushes	46.87	0.52	<.001	62.22	0.35	<.001	68.51	0.63	<.001
Headache	41.93	0.48	<.001	54.76	0.51	<.001	84.12	0.23	<.001
Muscular ache	40	0.42	<.001	71.79	0.51	<.001	27.5	0.50	<.001
Night sweats	65.21	0.52	<.001	60.46	0.45	<.001	68.88	0.66	<.001
Micturition	50	0.47	<.001	68.57	0.50	<.001	30.30	0.51	<.001

significant result ($P \leq .001$) in all the somatic symptoms except flatulence, backache, and joint pain.

According to Hamilton's Anxiety Rating Scale, group A showed highly significant ($P \leq .001$) results in all symptoms, except in tension, which showed insignificant improvement. Groups B and C showed highly significant results ($P \leq .001$) in all the symptoms [Table 4].

Thus, group A showed highly significant results ($P \leq .001$) in all the symptoms assessed by Hamilton's Depression Rating Scale, except in guilt (<.1). Group B showed highly significant results ($P \leq .001$) in all symptoms, except in the case of except in the case of suicidal tendencies ($P < 0.02$) and weight loss ($P < 0.1$). Group C showed highly significant result ($P \leq .001$) in all symptoms, except in the case of psychomotor retardation ($P < 0.01$) [Table 5].

The Table 6 shows the effects as assessed by the Menopause Rating Scale. Group C showed the greater relief than the other two groups in hot flushes (66.66%), sleep problems (80.39%), in depressive mood (72.5%), in irritability (69.81%), and in anxiety (70.90%). The overall effect of the therapy is shown in Table 7.

Effect on hematological / biochemical values

None of the three groups showed any significant change in the hematological and biochemical values after treatment.

Discussion

The slogan 'Healthy Women, Healthy World' embodies the fact that as custodians of family health, women play a critical role in maintaining the health and well-being of their communities. Although anatomically there is no difference in the structure of the brain between males and females, the emotional makeup of a female is different; certain *Manobhavas* are peculiarly more common in females, e.g., *Sukumarta*, *Lajja*, *Ekanistha*, *Bhavukta*, *Vishvasniyata*, *Sahansheelta*, *Udarata*, *Tyaga*, *Ardrachitta*, *Bhakti*, *Dhairya*, *Moha*, etc.^[6] Due to this and other factors, females are likely to be affected to a greater extent by any change occurring in their physical or psychological milieu. Hence, she is to be handled with great care and should

be helped to sail through any emotional turmoil. During the perimenopause and menopause, emotions can bubble to the surface in a way similar to that seen in the premenstrual syndrome or during the postpartum period. Hence it is very important for a physician to appreciate the psychological state of the female before undertaking the task of managing her menopausal condition.

Rajonivritti is a consequence of *Jaraawastha*, and *Vata* is the dominant *Dosha* during this stage; it is therefore very important to understand the interrelationship between *Vata* and *Manas*. It can be clearly seen that all the disturbances during *Rajonivritti* are directly proportional to the vitiation of *Vata* during this phase. The Table below clarifies this interrelationship:

Disturbance in given physiology of Vata	Disturbances observed in Rajonivritti phase
<i>Niyanta Praneta Cha Manas Sarvendriyarthanam Abhivodhac Sarvendriyanam Udhoyjaka Harsha Utsaha Yoni Sameerane Agni</i>	Psychological disturbances like anxiety, irritability, depression, mood swings, etc.
<i>Sarvasharira Dhatu Vyuhkar</i>	Digestive troubles like <i>Aruchi</i> , <i>Hrillasa</i> , <i>Ajeerna</i> , etc.
<i>Sandhankar Sharirasya Kshepta Bahirmalanam</i>	Circulatory disturbances resulting in cardiovascular problems like palpitations, and vasomotor complaints like hot flushes
<i>Prakriti Shabda Sparshayoh Pravartak Cheshtanam Uchhaavachanam Pravartako Vacha</i>	Menopausal arthropathies Disturbances related to waste products like stool, urine, sweat, menses, etc. For example, constipation, dysuria, excessive sweating, etc.
	Sensory motor problems Difficulty in initiating activities, fatigue, weakness, etc.
	<i>Swarabhanga</i>

Table 4: Effect as assessed by Hamilton's anxiety rating scale

Symptoms	Group A			Group B			Group C		
	(%) Relief	±SD	P value	(%) Relief	±SD	P value	(%) Relief	±SD	P value
Anxious mood	35.48	0.31	<.001	53.06	0.45	<.001	54.28	0.41	<.001
Tension	30.30	0	<.10	44.18	0.45	<.001	37.50	0.70	<.001
Fear	34.61	0.56	<.001	54.83	0.35	<.001	38.46	0.51	<.001
Insomnia	35.48	0.56	<.001	61.90	0.59	<.001	22.22	0.61	<.01
Cognitive disturbances	42.85	0.42	<.001	48.38	0.53	<.001	10.34	0.38	<.05
Depressed mood	33.33	0.31	<.001	60	0.50	<.001	44.44	0.75	<.001
Muscular complains	40.90	0.31	<.001	79.41	0.41	<.001	27.02	0.61	<.001
Sensory complains	54.54	0.42	<.001	64.28	0.56	<.001	30.76	0.59	<.001
CVS	61.90	0.48	<.001	74.07	0.48	<.001	68.51	0.63	<.001
GUS	66.67	0.51	<.001	81.81	0.41	<.001	84.12	0.23	<.001
RS	66.66	0.42	<.001	93.75	0.37	<.001	27.5	0.50	<.001
Autonomic complaints	38.46	0.47	<.001	57.69	0.37	<.001	68.88	0.66	<.001
Behavioral changes	33.33	0.31	<.001	52.17	0.50	<.001	30.30	0.51	<.001

Table 5: Effect as assessed by Hamilton's depression rating scale

Symptoms	Group A			Group B			Group C		
	(%) Relief	±SD	P value	(%) Relief	±SD	P value	(%) Relief	±SD	P value
Depressed mood	33.33	0.31	<.001	60	0.50	<.001	71.79	0.61	<.001
Guilt	29.03	0.31	<.10	46.87	0.53	<.001	56.41	0.64	<.001
Suicidal tendency	63.15	0.63	<.001	88.88	0.74	<.02	81.25	0.75	<.001
Insomnia initial	35.36	0.54	<.001	61.20	0.56	<.001	76.60	0.76	<.001
Insomnia middle	35.44	0.54	<.001	62.90	0.62	<.001	76.10	0.77	<.001
Insomnia delayed	35.66	0.60	<.001	61.62	0.59	<.001	75.32	0.74	<.001
Work interest	43.24	0.51	<.001	78.26	0.77	<.001	67.74	0.70	<.001
Retardation	42.30	0.31	<.001	70	0.70	<.001	50	0.76	<.01
Agitation	57.14	0.42	<.001	54.90	0.51	<.001	58.92	0.51	<.001
Anxiety (psyche)	35.48	0.32	<.001	60	0.53	<.001	59.37	0.80	<.001
Anxiety (somatic)	43.33	0.48	<.001	70.58	0.73	<.001	91.89	0.47	<.001
GIT complaints	30.43	0.48	<.001	48.97	0.50	<.001	70.90	0.62	<.001
Genital complaints	68.42	0.48	<.001	70	0.50	<.001	61.70	0.60	<.001
Hypochondriasis	46.15	0.42	<.001	58.82	0.48	<.001	45.94	0.63	<.001
Insight	58.82	0.47	<.001	64	0.70	<.001	34.31	0.57	<.001
Weight loss	0	0.47	<.001	0	0.73	<.10	66.67	0.62	<.001

Table 6: Effect as assessed by the menopause rating scale

Symptoms	Percentage relief		
	Group A (%)	Group B (%)	Group C (%)
Hot flushes/sweating	46.87	62.22	66.66
Sleep problems	31.25	57.14	82.35
Depressive mood	40.74	66.66	72.5
Irritability	40	55.31	69.81
Anxiety	45.16	50.94	70.90
Heart discomfort	55	59.45	54.28
Physical/mental exhaustion	41.66	68	66.03
Sexual problems	43.47	59.25	41.17
Bladder problems	55	85.18	36.36
Vaginal dryness	47.61	60.71	37.14
Joint and muscular discomfort	31.81	75	36.84

Table 7: Overall effect of therapy

	Group A		Group B		Group C	
	Effect on <i>Manas Bhavas</i> (% patients)	Effect on chief complaints (%)	Effect on <i>Manas Bhavas</i> (%)	Effect on chief complaints (%)	Effect on <i>Manas Bhavas</i> (%)	Effect on chief complaints (%)
Marked improvement	0	0	0	6.67	11.11	0
Moderate improvement	0	20	40	93.33	77.78	94.45
Mild improvement	90	80	60	0	11.11	5.55
No improvement	10	0	0	0	0	0

Probable mode of action of *Saraswatarishta*

The drug *Saraswatarishta* has mainly *Madhura*, *Tikta*, *Katu Rasa*, *Sheeta Virya*, *Madhura Vipaka*, *Laghu Guna*, and *Tridoshashamaka* properties.^[7] The ingredients also have properties such as *Rasayana*, *Vayahsthapana*, *Balya*, *Medhya*, *Manasdosahara*, *Vedanasthapana*, etc. Thus, when *Saraswatarishta* is administered to patients through the oral route, due to its *Laghu Guna*, *Katu Rasa*, and *Ushna Virya*, it acts as *Deepana* and *Pachana* and regulates the *Agni*. On the other hand, the same drug due to its *MadhuraRasa* and *Vipaka*, *Snigdha Guna*, and *Sheeta Virya* acts as *Rasayana*, *Balya*, *Vayahsthapana*, *Medhya*, and *Vatashamaka* so that the process of formation of *Dhatu* is benefited, thereby delaying the aging process. As a result, the symptoms of *Rajonivritti* also subside.

In *Jaravastha*, as the *Vatadosha* is dominant, the majority of the symptoms occur due to *Vatavridhi*. *Saraswatarishta*, by its *Snigdha Guna*, acts against *Ruksha Guna* of *Vatadosha* and pacifies it. Thus, the majority of the symptoms of *Rajonivritti* may subside. Moreover, *Agnimandhya* is also a common manifestation of *Rajonivritti*. The drug *Saraswatarishta*, by its *Deepana-Pachana* action, acts on *Jatharagni* and effectively relieves gastrointestinal symptoms like dyspepsia, decreased appetite, flatulence, constipation etc.

Brahmi, which is a major ingredient of *Saraswatarishta*, is reported to be an effective tranquilizer; it has intellect-promoting and anxiolytic^[8] activities that are useful for managing the psychic disturbances during the menopause. The ingredients of *Saraswatarishta* also possess digestive properties (e.g., carminative, laxative, antispasmodic, etc. actions), which are attributed to the *Deepan-Pachana Karma*, and helps to control gastrointestinal complaints such as constipation, loss of appetite, etc. Drugs like *Usheera*, *Haritaki*, *Mishreya*, *Vidarikanda*, and *Brahmi* possess diuretic properties and this helps in the management of urinary tract infections during the menopause.^[9] Drugs like *Brahmi*, *Vidari*, *Haritaki*, etc. act as a cardiotonic and helps in the prevention of cardiac problems.^[10] It also has other properties (e.g., aphrodisiac, hypolipidemic, and hypotensive) that may help in relieving some other menopausal complaints.^[11] Moreover, drugs like *Vidarikanda*, *Mishreya*, and *Shatavari* are reported to have estrogenic properties.^[12]

Suvarna added in the formulation is *Medha-Buddhi-Smriti Sukhkar*, *Shoka-Bhaya-Krodha Nashanam*, *Hrid Dourbalya Haram Param*, *Vrishyam Agreyam*, etc.,^[13] which may act as a driving force by enhancing the activities of other *Rasayana* drugs in *Saraswatarishta*. Modern research shows that gold is beneficial for rejuvenating sluggish organs, especially the brain and digestive system. It has been used in cases of glandular

and nervous congestion and lack of coordination. The body's temperature-stabilizing mechanism is restored to balance with gold, particularly in cases of chills, hot flushes, and night sweats. Colloidal gold has a balancing and harmonizing effect on all levels of body, mind, and spirit. It is used to improve mental attitude and emotional states.^[14] It has been reported to increase energy, will power, mental focus, and libido. According to many studies, colloidal gold increases mental acuity and the ability to concentrate. It may help to combat feelings of depression and inferiority and to calm excitation and states of anger. It is said to alleviate stress and help stabilize emotions. It is thought to be helpful for arthritis and heart and vascular diseases. Hence, it is a very important component of this drug.

All the drugs in *Saraswatarishta* are different from one another, having different properties and actions, e.g., *Medhya*, *Balya*, *Dhatupushtikara* *Brimhaniya*, *Jivaniya*, *Agnivardhaka* etc. The drugs may be adaptogens; antioxidants (minimize oxidation); immunostimulants (which heighten the resistance); antistress; nootropics (which improve higher integrative brain functions like memory learning, thinking, understanding); anabolics (which promote growth); tonics (which mitigate weakness); or may have other geriatric benefits (helping to prevent the diseases of old age).

In a nutshell, *Saraswatarishta* is believed to comprise antioxidant, nootropic, adaptogenic, immunomodulatory, and intellect-promoting drugs, all of which enhance the *Rasayana* property of this drug. Hence, *Saraswatarishta* proved to be a very good formulation, with many beneficial properties.

Probable mode of action of *Shirodhara*

Shirodhara is a type of *Parisheka* among the *Murdha Taila*. It was selected in the present context to deal with the psychic problems occurring in menopause. The rationality behind using *Tarpana* or *Snehana* type of treatment in *Manas Vikaras* is that it is the preferred treatment to control *Vayu*, which plays the main role in creating pathology at the level of the psyche. Charaka has clearly mentioned that in all *Vata Vikaras*, *Snehana* should be the first line of treatment.

Mode of action of *Shirodhara*^[15] can be understood in the following ways

Drug absorption

- Topically applied drug may use either of two diffusional routes to penetrate into intact skin and the skin appendages (sweat glands and hair follicles).
- Penetration of topically applied drug into the skin follows passive diffusion. Passive diffusion takes place when a

solute's thermodynamic activity is unequal on the two sides of the membrane.

- c) The hydrated stratum corneum has an affinity for both lipophilic and hydrophilic compounds. The lipophilic compounds transfer preferentially into the lipoidal intercellular phase of the stratum corneum, while the relatively more hydrophilic compounds transfer into the intercellular domain of the stratum corneum.
- d) The effect of regional variation on skin permeability can be marked. Overall data suggest the following order of diffusion of simple molecules through the skin: plantar < palmer < arms < legs, trunk, and dorsum of hand < scrotum and post auricular < axillary < scalp (< skin permeability less than)

Physical effect

The symptoms like tension, headache, and muscular tension caused due to sustained contraction of skeletal muscles can be relieved by the physical effect of *Shirodhara*. Various muscle stress and stiffness can be relieved by *Shirodhara*. It is well recognized that for relieving this type of tension, oil is the most effective.

Effect on blood supply

Due to warm effect of the oil used for *Shirodhara* there is local vasodilatation. *Shirodhara* lasts for 45 min; the continuous flow of warm fluid on the forehead for such a long period will cause mild vasodilatation. The region where *Shirodhara* is performed overlies mainly the cortex arterial branches, venous sinuses, venous reservoir of the brain, the superior sagittal and the cavernous venous sinuses. *Shirodhara* improves the circulation in these areas and helps in regularizing the blood supply of brain.

Effect on central nervous system

The hypothalamus controls many body activities and is one of the major regulators of homeostasis. Sensory input from the external and internal environments ultimately comes to the hypothalamus via sensory pathways originating in somatic and visceral sense organs. Other important functions include: control of the autonomic nervous system, control of the pituitary gland, control of body temperature, regulation of eating and drinking, regulation of diurnal rhythms and states of consciousness, regulation of emotional and behavioral patterns (acting together with the limbic system), control of corticotrophin releasing hormone (CRH), increasing serotonin concentration in the synaptic cleft, etc. It can be postulated that *Shirodhara* has some effect on the hypothalamus, with resulting relief of most of the psychic and somatic disorders.

Effect on anxiety

It may decrease anxiety by facilitating the inhibitory presynaptic action of GABA and sedative activities in limbic system.

Effect on depression

Shirodhara may have an anti depressant effect like Mono Amine oxidase inhibitors. The enzyme MAO is present intra-cellularly in most of the tissues. Inhibition of the MAO-A decreases the deamination of Nor-Adrenaline (NA) and to a lesser extent of 5-HT which is associated with the antidepressant action. Drugs used in *Shirodhara* may inhibit the reuptake and cause a localized increase in active NA in the synaptic gap.

Effect on endocrine system

An effect of *Shirodhara* on hormone secretion has also been postulated considering the effect on the hypothalamus (as hypothalamus is the main controller of endocrine secretions, acting through the pituitary gland, i.e., the hypothalamus-pituitary axis).

Effect on autonomic nervous system

Shirodhara may also have an alpha-adrenergic blocking effect and thus block certain actions of adrenaline and noradrenaline. It may produce moderate inhibition of actions of acetylcholine and 5-hydroxytryptamine. It may have a central depressant action on the hypothalamic center controlling sympathetic activity. It may also act on the catecholamine uptake mechanism, acting as sympathomimetic amine. *Shirodhara* may also act on the adrenergic neurons, probably producing their effects by modifying the synthesis, storage, and uptake mechanisms of noradrenaline.

Effect on Marmas

Sushruta regards *Marma* as the seat for the soul, mind, *Vata*, and others (Su.Sha.6/30). Out of the 37 *Marmas* in the supraclavicular region, 23 are situated in the head. Hence, it can be believed to have effects on mainly *Sthapani*, *Utkshepa*, *Shankha*, and *Adhipati Marmas*. *Shirodhara* stimulates these *marmas* and improves their *Pranic* circulation, as the oil used for *Shirodhara* is always warm and therefore causes vasodilatation of all the channels, improving their circulation and thus improves the blood circulation of the brain. As a result there is improvement of the higher intellectual functions, which are related to the hypothalamus, frontal area, etc.

Effect on Chakras

Chakras are those regions where there is higher congregation of energy. In *Shirodhara*, *Agnya Chakra* is the one that is mainly affected.

Conclusion

This study shows that menopausal syndrome can be managed by *Rasayana* drugs like *Saraswatarishta* and procedures like *Shirodhara*. Many women experience emotional and spiritual challenges during the menopause – a female mid-life crisis – that may or may not be due to changing hormone levels, but which needs to be addressed just as urgently. This includes disturbances in *Manas Bhavas* like *Moha*, *Krodha*, *Shoka*, etc. All these patients when subjected to the *Panchakarma* procedure *Shirodhara* showed better effect in combating the disturbances of *Manas Bhavas* and the psychic symptoms of menopause. *Saraswatarishta* also showed encouraging results in the associated somatic symptoms also. Hence, it can be used as an alternative to HRT.

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हिन्दी सारांश

मीनोपौझल सिन्ड्रोम में मानसिक भावों का अध्ययन एवं चिकित्सा

ख्याती संतवानी वी.डी.शुक्ला एम.ए. संतवानी गायत्री ठाकर

मीनोपौझल सिन्ड्रोम में, होर्मोन रिप्लेसमेन्ट थेरापी की तुलना में शिरोधारा तथा सारस्वतारिष्ठ के प्रभाव आंकलन हेतु मानसिक भावों का अध्ययन करते हुए चिकित्सकीय परीक्षण किया। रोगियों को तीन समूहों में विभाजित किया गया। चिकित्सा का प्रभाव देखने हेतु विशिष्ट आयुर्वेदिक क्रमांक सारणी जैसे मानसिक परीक्षण एवं साथ ही साथ हेमिल्टन एन्जाइटी रेटिंग स्केल, हेमिल्टन डिप्रेशन रेटिंग स्केल, मीनोपौझ रेटिंग स्केल को अपनाया गया। चिकित्सा परिणाम को प्रधानवेदना के साथ सम्बद्ध वेदना पर भी देखा गया। शिरोधारा समूह के रोगियों ने अन्य दो समूहों की तुलना में विचलित भावों तथा मीनोपौझल मानसिक लक्षणों से लड़ने में बेहतर प्रदर्शन किया। सारस्वतारिष्ठ ने भी मानसिक लक्षणों के साथ-साथ सम्बद्ध शारीरिक लक्षणों के प्रबद्धन में उत्साहवर्धक परिणाम दिये। अतः एच. आर.टी.की वैकल्पिक चिकित्सा के रूप में इनका प्रयोग किया जा सकता है।