

AN OPEN CLINICAL STUDY TO EVALUATE THE EFFECT OF MEDHYA RASAYANA IN MANASIKA BHAVA OF RAJONIVRUTTI W.S.R TO MENOPAUSAL SYNDROME

Dr. Jiji Varghese¹, Dr. Vijayendra G Bhat², Dr. Aniruddha³

1.Final year PG scholar, Dept.of Mano vijnana evum Manasaroga, SDM College of Ayurveda, Udupi.

2.Associate Professor, Dept.of Mano vijnana evum Manasaroga, SDM College of Ayurveda, Udupi.

3.Assistant Professor, Dept.of Mano vijnana evum Manasaroga, SDM College of Ayurveda, Udupi.

ABSTRACT: Back ground: Rajo nivrutti or menopause is a physiological event in the women with 50 and above of age. Due to hormonal variation women gets psychological, somatic and urogenital symptoms, it is termed as Menopausal syndrome in the contemporary science. Only 50.9 % of women undergo hormonal therapy, rest of the women will be with family and social relation and emotionally hampered in day today activities. In this context an attempt is made out to evaluate the efficacy of Medhyarasayana in the Manasika bhava of menopause.

Objectives: To evaluate the efficacy of medhyarasayana in the Manasika bhava or psychological symptoms of menopause and to assess the quality of life of the patients.

Study design: Study type – Interventional, Interventional model – Single group, Allocation – Non-randomized, End point classification – Efficacy study, Primary purpose - Treatment, Masking – Open label, Statistical analysis- Wilcoxon sign rank test.

Source of data: 20 patients fulfilling Diagnostic Criteria of Menopausal syndrome, selected from OPD/IPD of S D M Hospital of Ayurveda, Udupi.

Intervention: Medhya rasayana 2 tabs of 500mg TID. Duration- 90 days , Anupana- milk.

Follow up: Once in 15 Days during the treatment for the period of 90 days.

Assessment criteria: Irritability, Anxious, Exhausted, Depression, Sleeplessness, Lack of concentration, Flushing, Mood swings

Diagnostic criteria: Diagnostic criteria for Natural Menopausal syndrome mentioned in ICD-10(code N95.1)

Secondary assessment criteria: Manasika bhava assessment scale, Menopausal rating scale developed by Berlin Center for Epidemiology and Health research, WHO Quality of life Questionnaire

Result: Medhya rasyayana provides a statistically high significant p value ($p < 0.001$),

There was remarkable result in improving psychological symptoms of women included in the study. The overall improvement in Manasa bhava assessment scale, in negative emotions 73% , positive emotions enhanced by 56.9%. Psychological aspect of MRS scale and WHO QOL assessment improved by 70.5% and 67.6% respectively.

Interpretation and Conclusion: The overall inference is that therapeutic action of Medhyavati have effective role in improving psychological symptoms present in the rajonivrutti

Key Word: Rajo nivrutti, Manasikabhava, Menopausal syndrome, Medhyarayana.

I.INTRODUCTION

“Women are a valuable part of the society, and they play vital role in the human progress.” Ayurveda classics, has given valuable importance for the women’s health. From the formation of fetus, gradual development of the child¹, secondary sexual characters, the specific factors which are the characteristic features² of the women etc. were elaborately mentioned in the Ayurvedic Classical literatures. Starting from

Menstrual cycle³ detailed description of reproductive life and different types of diseases, which are distressing the women in the reproductive age and its treatments, are highlighted.

Around the age of 50 years, the menstruation ceases and the woman enters into the menopausal state. Every woman faces menopause and many dread its approach to the physical changes as well as psychological fluctuations. Women lose their youth by the cessation of menses and they spend one third of their life in the menopausal age⁴.

Menopause is defined as the permanent cessation of menstruation. It's not just cessation of menses; it is depletion of ovarian follicles leading to decrease in ovarian hormones⁵. Natural menopause occurs at or after 40 years of age and has no underlying pathological causes. Even though this is a natural phenomenon, due to fluctuation of hormones Psychological, somatic and urogenital symptoms are produced in this stage.

Every year World Menopausal Day is celebrated on 18th October, for the purpose of raising awareness on the menopause and to support the improvement of health and wellbeing of the women⁶. By 2020, approximately, 43 million women will be aged 45 to 65 years (U.S Census Bureau, 2014)⁷. Importantly Climacteric phase and life after menopause bring with them issues related to both quality of life and disease prevention and management. Awareness in clinicians and menopausal women is the need of the hour. Preventive aspects and lifestyle managements are to be started early in life. It is not only quantity of life but quality of life of the menopausal women which also merits. Psychological, Social and Psychosomatic changes happen during this biological changing phase of women. In spite of modernized civilization and medicinal field solace in this regard is still a mirage.

Estrogen hormone therapy is the only one treatment currently accepted by the U.S Food and Drug Administration (FDA) ⁸. It should be used at the lowest effective dose for the shortest amount of time that meets the treatment goal. Even though estrogen therapy reduces the symptoms of menopause, the long term usage leads to different complications like endometrial cancer, breast cancer, hypertension, hyperlipidemia, gallbladder disease and hepatic diseases⁹.

In Sushruta Samhita it is narrated that the arthava nivrutti is attained at around 50years of age, which is considered to be beginning of the Jaravastha. When the person gets Jara, there will be the depletion of body constituents, sense organs, strength, enthusiasm, and power. Also individual get decline in, dhraranashakti, smaranashakthi, and vachana vijnana shakthi¹⁰.

This study emphasize to treat the Manasika bhava of Rajonivrutti ie. Psychological symptoms of menopausal syndrome. Moha, Krodha, Shoka, Bhaya like Bhavas disturbs the mental faculty. Strikarabhava dushti and ojokshaya lakshanas are comparatively related to the menopausal syndrome.

In Ayurveda, Rasayana therapy is intended to enhance the quality of life by subdue the aging process and all its co-morbidities. It improves recalling capacity, intelligence, health, luster, prolongs the youthfulness and provide longevity of life. Medhya Rasayana(Medhya vati), a special formulation described in the rasayana prakarana of Abhinava navajeevanam text used in the management of Menopausal syndrome with a view to tackle the disturbed Manasika Bhavas.

Objectives of the study: To evaluate the efficacy of Medhyarasayana in Psychological symptoms of Menopause. And to assess the quality of life in Patients.

II.MATERIALS AND METHODS

Source of data: A minimum 20 patients fulfilling Diagnostic Criteria of Menopausal syndrome were selected irrespective of caste and creed from OPD/IPD of S D M Hospital of Ayurveda, Udupi.

Medicine Source: S D M Ayurveda Hospital Pharmacy, Kuthpady, Udupi.

Method of collection of data: A special Performa was prepared with all points of history taking and physical as well as psychological signs and symptoms of Rajonivrutti w.s.r menopausal syndrome as mentioned in classics and allied science.

Study design: It is open label clinical study with pre and posttest design. The parameter of symptoms and signs were recorded before and after and analyzed as per Manasika bhava assessment scale¹¹, MRS (Menopausal Rating Scale)¹², WHO QOL Questionnaire¹³ and statistically analyzed by using Wilcoxon sign rank test.

Patients were administered with 2 Medhyarasayana¹⁴ tablets of 500mg thrice in a day for 90 days. Along with sufficient quantity of milk.

Follow up: Once in 15 Days during the treatment for period of 3 months.

Diagnostic Criteria: Diagnostic criteria for Natural Menopausal syndrome mentioned in ICD-10(code N95.1)

Inclusion criteria:

1. Patient fulfilling diagnostic criteria.
2. Woman age group of 45-55 years
3. Patients willing to sign the consent form of this study.

Exclusion criteria:

1. Asymptomatic menopausal state
2. Symptoms associated with artificial menopause
3. Symptoms associated with premature menopause
4. Patients with other psychiatric/psychosomatic disorders

Assessment criteria:**Primary assessment Criteria:**

Irritability
Anxious
Exhausted
Depression
Sleeplessness
Lack of concentration
Flushing
Mood swings

Secondary assessment Criteria:

1. Manasika bhava assessment scale
2. Menopausal Rating Scale developed by Berlin Centre for Epidemiology and Health Research.
3. W H O Quality of life Questionnaire

Observation: In the present study among 20 patients, 50% of patients were in age group of 45-50 years and 50% were in age group of 51-55 years. Majority of the people were belonged to Hindu religion, 100% of them married women, maximum of them belonged to middle class family, 55% of them were had upper primary education, 75% of them were home makers, for all of them onset of menopause was gradual, in 55% of them course of symptoms were progressive, most of them had mixed dietary habit and 50% of them had pittakara ahara, 75% of them had increased appetite, 60% of their bowel habit was regular, micturation was normal in 80% of them, majority of their sleep was decreased and disturbed, 70% of them attained menopause in between 46-50 years, 50% of them had Vatapitta prakruti, 55% of them had rajasika prakruti out of manasika prakruti, in the 60% of women were vitiated with vata pitta dosha, all of them vitiated with rajasika dosha in manas, 45% of them were rasasara purusha, 85% of them were having madhyama samhanana, all of them had madhyama satmya, majority of them had madhyama satva, 55% of them had madhyama aharashakti, 90% of them had madhyama vyayama shakti, all of them belonged to madhyama vaya, majority of their srotas vitiated by rasa, rakta, asthi and sukra, general examination were normal in 80% of the people, no one had early or late menopausal family history, 90% of them had normal obstretic history, 100% of them had swabhavika nidana for rajonivrutti, all of them had samanya samprapti. While observing the distribution of the symptoms, most of the patients had irritability, anxious, headache, sleeplessness, lack of concentration, flushing, and joint and muscle complains.

III.DISCUSSION

Rajonivrutti is considered to be initial phase of Jaraavastha. The term Rajonivrithi means end of Artava Pravriithi or cessation of menstruation. This can be correlated to Menopause in the Modern Physiology. It means permanent cessation of menstruation at the end of reproductive life due to loss of ovarian follicular activity. The age of menopause ranges between 45-55 years. Some of the women may be asymptomatic or some may have very minimum symptoms which go unnoticed; many may have symptomatic condition which alarms her and her family. It is physiological but has major consequences for the wellbeing and most of the women suffer from psychological symptoms like increased frequency of anxiety, headache, insomnia, irritability, mood swing, depression also suffer from lack of concentration, impaired memory, and instability of mind. Usually these suffering will not be treated in conventional medicinal system but when there are serious mental disturbances, Hormone replacement therapy is adopted, which has major adverse events.

This is the need of the hour to provide convenient and cost effective treatment for menopausal syndrome through holistic approach of Ayurveda.

Rasayana is the one which promotes memory, intellect, health, youthfulness, lustre, complexion, voice, strength of sense organs etc. In this study we use Medhya rasayana mentioned in AbhinavaNavajeevanam text, rasayanaprakarana adhyaya. Main ingredients like Guduchi, Vacha, Shankhapushpi, Sathavari and others are excellent in counteracting mood disturbance, cognitive difficulty, and have tranquilizing and antidepressant effects. Thus it will help in reducing anxiety level and curing psychological as well as cognitive disturbances. It also promotes life, maintains positive health, youthfulness, and cures physical & mental fatigue. by balancing tridosha, it prevents ageing, weakness and diseases. Thus this study is done to claim the efficacy of Medhyarasyana in Manasikabhava of Rajonivrutti w.s.r Menopausal Syndrome.

On objectives

Medhya means “Medhajanakam” it increases the intellectual capacity and promotes cognitive activity. Rasayana promotes ayu, bala, varna, kanthi, smriti, arogya etc. The Medhya properties of drugs are having of nootropic action in brain. Nootropic drugs help in increasing circulation to the brain, varying the concentration of the neurotransmitters activating the new brain cells and defending from free-radical damage. Hence the objective is to evaluate the efficacy of Medhya rasayana in the psychological symptoms of Menopause.

Discussion on demographic data

On Age: The age group selected in this study was 45-55 years. Out of 20 Patients 50% were belonged to 45-50 years and other half belonged to 51-55 years. Eventhough the natural Menopause occurs in the women at the age of 40's or after, the study observes majority falls under this age group only.

On Religion: 80% of the diagnosed women were Hindus and other 10% of them were Christians and 10% were belonged to Muslim community. This could be due to geographical distribution of particular community.

On Education: 55% were had upper primary education. 25% of them were having primary education. Both Higher secondary and Graduates were 10 % each. Even though the academic education does not include related knowledge regarding the health, the study observes that Graduates had little awareness about this, may be due to their social life. Less educated and nuclear family women were noticed to be unaware about physiological mental disturbance of the menopausal syndrome.

On Occupation: Maximum number of patients (75%) was involved in domestic activities, 15% of them were doing agriculture work and 10% of them were teachers. These distribution of occupation observed in this study is due to the locality here 75% of the women were only occupied with family and household works. The field work women may skip the psychological disturbances because of their nature of the job, and the teachers are seems to be little aware of the fluctuations of body and mind. Providing proper awareness, for all menopausal women about the mental disturbances with which they suffer, is the need of the hour or else, it will affect the women's mental factors and it leads to family problem also.

On Marital status: 100% of the Patients were married women. In the married life the Psychological disturbances of the menopausal woman affects her husband and children. And normally after the menopause women get reduced interest in sexual intercourse and she gets irritated soon and it leads to different marital issues in the family.

On Onset of menopause: Hundred percentage of the patients attained gradual onset of menopause. Usually in healthy women menopause occurs followed by transitional period of menopause, this period includes irregular menstruation, increased or scanty bleeding, mood swings etc. Sudden menopause occurs due to any obstetric surgery, Cancer of uterus or ovary, chemotherapy and complication of any medication. This suggests that women included in this study were healthy and attained natural menopause.

On Course of Symptoms: In the 55% of the Patients the symptoms were progressive, 45% of them had intermittent symptoms no one noticed with decreased course of symptoms. The patients reach and open up their disturbance to the physician only when it is in progressive stage or intermittently affects their daily life. Because of that patient with decreasing symptoms were not noticed in this group. Those who had severe symptoms were managed with medicine.

On Diet: Out of 20 Patients, most of them had mixed dietary habits only few were vegetarians. As per Ayurveda the doshakara aharavihara having importance in healthy as well as unhealthy persons. So this study assessed accordingly. 50% of them having practice of Pittakara diet, which includes excessive spicy, sour, hot food. And 40% of them had habit of having Vatakara ahara, which comprises of fried items, spicy, light food; Jung food etc. 10% of them had Kaphakara diet, which is predominant of Madhura, guru, cold

items etc. Observation suggests that the diet of the patient having relation with their symptoms. Most of them had vatapitta increasing diet and these will leads to aggravation of symptom.

On Appetite: Majority (75%) of the patients had increased appetite and 25% of them had moderate appetite. nobody had poor appetite. Enhanced appetite is suggestive of digestive fire is influenced with vata and pitta dosha too, in this group of patients.

On Bowel: Among twenty patients, 60% of them had regular bowel and 40% of them had irregular bowel habits. Rajopravrutti and nivrutii are related to apanavata. Apanavata vitiation leads to constipation and unsatisfied bowel habits, and irregularity in the bowel habits.

On Micturation: 80% of them had normal micturition habits and 20% of them had little reduction in the frequency and volume of the urine. This may be due to improved diet must have imbalanced the intake of water and may also due excessive sweating in the menopausal women. **On Sleep:** Out of twenty patients 60% of them had decreased sleep and 40% of them had disturbed sleep. In the menopausal women sleep disturbance is the one of the main symptom. It may due to sudden night sweats or hot flashes during night. And most of the menopausal women having anxiety and tension, these also will lead to disturbed and decreased sleep.

On Age of menopause: As the natural menopause occurs after the 40's, diagnosed patients grouped in to three categories. Study observed 70% of them attained menopause in-between 46-50 years of age group. In 50-55 years and 40-45 years age group had 15% of the woman in each group Even though textual reference says that menopause begins at 40 years of age, this observation reveals that, majority of the women attained menopause after 45 years.

DISCUSSION ON DASHAVIDA PAREEKSHA

On Shareerika prakruti: 50% of them had Vatapitta prakruti. Vata kapha and pittakapha prakruti were 25% of each. Shareerika prakruti and roopa of the diseases are interrelated. While analyzing menopausal syndrome most of the symptoms having relation with pitta and vata. Those who are of Vata and Pitta prakruti they are more vulnerable to suffer vata pitta related symptoms than kapha prakruti person.

On Manasika prakruti: Out of 20 of patients, 55% of them had Rajasika prakruti and 40% of them included under combination of rajasika thamasika prakruti, only 5% belonged to thamasika prakruti. Most of the negative and positive emotions of the menopausal syndrome are rajoguna pradhana and this study suggest that Rajasika prakruti person is more tend to get these symptoms because of their prakruti itself.

Doshavikruti: Out of 20 Patients, in 60 % of people vatapitta dosha were vitiated. 25% of them are vitiated by Vata dosha, 10% of them vitiated Pitta dosha and by Combination of vata and kapha was vitiated in 5% of persons. Assessing this dosha vitiation there is interrelation with person's doshaprakruti and symptoms related with menopause. Most of the symptoms are vata and pitta predominant. That may be the cause for the majority of patient got vata or pitta vitiation. While assessing the Manasika prakruti, rajo dosha is vitiated in hundred percentage of the patients. Rajodosha vitiated symptoms are present in patients and thamo pradhana symptoms are absent in all patients. For example anxiety, difficulty in concentration, reduced or decreased sleep etc. are the symptoms most commonly seen in this group of people with menopausal syndrome.

Sara: Majority of the patients (45%) had Rasa sara lakshanas. 35% of them were under meda sara. Rakta Sara persons were 15% and 5% of asthi sara person were noted. There was no Mamsa sara, Majjasara, Sukrasara persons in this study group. Vikruti or the vyadhi avastha is altered state of prakruti and here the dosha gets lodges in to dhatu. So dhatusarata is difficult to identify and assessment of the symptoms on the basis of dhatu sara may not holds better for understanding the situation. So if one dhatu sara lakshana is presents, those will be considered as AVARA, predominance of two to four dhatu sarata is considered to be madhyama and all seven dhatu sara purusha lakshana are found in the patient, then is said to be pravara sara.

Satmya: Literature mentions, the person with ekarasa saatmya is said to be Avara saatmya and who have habituated to two to four tastes of food are said to be Madhyama saatmya and who have habituated to intake food with all six type of taste are said to be Pravara saatmya. In this study, hundred percentages of the patients were having madhyama satmya. In the present time most of the people are fit with Madhyama satmya.

Satva: Among 20 patients, 95% of them had madhyama satva and only one patient had pravara satva. No one was with avara satva. Satva pareeksha is assessed by patient's intolerance towards diseases or co-morbidities. In this study, diagnosed women after giving awareness about the mental disturbances and psycho somatic fluctuations of the menopausal syndrome they were convinced with it and ready to take medication for better relief.

Samhanana: Among the diagnosed patients, majority (85%) of them was moderately built and 15% of them had Pravara samhanana (well built). This may be because family genetic, other way to say, Samhanana of a person is a combined contribution of pitruja beeja, matruja, kshetra as well as anapacharakruta douhruda. Hence study is not much related with samhanana of the patient.

Pramana: Among the diagnosed patients majority of them had madhyama pramana and minimum of them had pravara pramana. This is because inherited; present locality and culture also plays important role in this. It is depend upon person's aharashakti, vyayama etc.also.

Aharashakti: Out of 20 Patients, 55% of them were with Madhyama Aharashakti. Pravara and Avara Ahara Shakti were 25% and 20% respectively. It is depends upon quantity of food intake and how much time taken for digestion. Majority of them had the capacity to take moderate amount of food and it digest in proper time. Minimum of them had the habit of increased amount of food intake and have good digestive capacity. And other 20% of them take small amount of food and their digestive capacity also was very less, which was prolonged. Since the medication is easily digestible and enhanced with milk as anupana there was no significant issues relating to digestion.

Discussion on Sroto pareeksha: Among 20 patients 85% of had either rasa,rakta,asthi or sukra sroto dushti lakshana and 15% of them had symptoms belongs to mamsa, meda or majja dushti. After observing this group of women majority of them had vyanga on their face it is due to raktavahasroto dushti. And this vyanga is the common symptom in the menopausal women, modern science called it as melasma. And sukravahasroto dushti is seen in women as apraharshana (loss of interest in sexual activities) and their reproductive life ends after the menopause. Asthivaha sroto dushti also seen in majority of the diagnosed patients, because the bone density reduces and osteoporosis and osteoarthritis are more in menopausal women due to hormonal changes and calcium deficiency. And manovaha sroto dushti is seen in all the women who were selected for this study.

DICUSSION ON ACTION OF THE MEDHYA RASAYANA (MEDHYAVATI)

On negative symptoms

Effect on Bhaya (Fear): Study revealed that patients treated with Medhyavati had marked reduction in Bhaya. 2.5 were the mean score before the treatment and 0.7 was the mean after treatment. Reduction in the score is indicating the improvement. 70% of improvement is found and it is statistically significant (P value <0.001). These improvement shows, patients who were had always fearful emotion or fear in non-reasonable cause changed to fearful only at reasonable cause

Effect on Krodha(Angry): Patients treated with Medhyavati had marked remission on Krodha, before the treatment mean score was 2.65 and it was reduced to 0.9. And there was 66% of improvement and found to be statistically significant (P<0.001). Patients had always angry with non-reasonable cause is reduced to only in reasonable cause or non-angry thoughts.

Effect on Shoka (Sorrow): Patients were treated with Medhyavati for 90 days, has marked improvement in Shoka. The mean score was 2.25 before the treatment was reduced to 0.6, it is indicating the improvement of 73% and it is statistically highly significant (0.001). This shows improvement from always sorrowful thoughts to feels sorrow only occasions or no feeling of sorrow.

Effect on Dvesha (Revenge): The initial mean score on Dvesha before the intervention with Medhya vati was 2.3 reduced to 0.65 after the treatment, thus recording a remission by 71% with statistically highly significant (P<0.001). Patients got reduction from always revenging thoughts to thoughts of revenge only a few events or no revenging thoughts.

Effect on Rajah (Affection): Before the treatment with Medhya vati on Rajah, the mean score was 2.5 and it is reduced to mean score 0.6 after the treatment with the improvement of 76%. And it is statistically highly significant (P<0.001). Patients from reduced affection increased to normal affection after the treatment.

Effect on Manah(Deviation from object perception) : The mean score of the Manah before the intervention with Medhya vati was 2.5 and it is reduced to 0.6. Thus recording the remission by 73% and it was statistically highly significant (P<0.001). Improvement from often deviated knowledge perception to very rare deviation or no deviation.

Effect on Cinta (worry) Treatment with Medhya vati on Cinta, meanscore was 2.65 before the treatment and it is reduced to 0.55 and it is indicating the improvement by 79% and statistically highly significant (P<0.001). patient had excessive worry with irritation is reduced to occasional worry or no worry after the treatment.

On positive Emotions

Effect on Dhairyam (courage): Before the treatment with Medhyavati mean score of the Dhairyam was 0.95 and it is increased to 2.5 after treatment and there was improvement of 62%, it was statistically highly significant ($P < 0.001$). Marked change from 'always fearful' or depressed emotions to fearful at reasonable cause.

Effect on Dhriti (firmness): The mean score of the Dhriti before the treatment was 1.15 and it is increased to 2.65 after the treatment with 56.6% of improvement and it was statistically highly significant ($P < 0.001$). This dhriti is assessed by emotion of greedy. Uncontrolled mind is improved to good controlled mind.

Effect on Harsha (Cheerful): Before the intervention with Medhyavati the mean score of the Harsha was 1.15 and it is increased to 2.55 after the treatment. The improvement was 54.4%. The change that occurred with the treatment is statistically significant ($P < 0.001$). Occasional happiness improved to cheerful in all the good circumstances.

Effect on Priti (pleasure): The mean score of the Priti was 1.2 before the drug intervention and it was increased to 2.65. This change in mean score revealed that there was 54.7% improvement after the treatment and it is statistically significant ($P < 0.001$). Severity of unpleasant emotions reduced.

Effect on Viryam (enthusiasm/ interest): The mean score of the Viryam was 1.15 before the treatment and it is increased to 2.8 and there was 58.9% of improvement after the treatment with Medhyavati and it is statistically significant ($P < 0.001$). Delayed or decreased working capacity improved to interest in work and started to do quickly.

Effect on Shraddha (Attitude): Before the treatment the mean score on Shraddha was 1.2 and it is increased to 2.5 and 52% of improvement was after the treatment with Medhyavati. And it was statistically significant ($P < 0.001$). Impaired attitude and interest enhanced to good in attitude .

Effect on Medha (grasping power): The mean score on Medha before the treatment was 1.3 and it is increased to 2.65 with 50.9% of treatment after the treatment with Medhyavati and the result was statistically significant ($P < 0.001$). Grasping with confusion stage changed to grasping the things properly.

Effect on Avasthan (stability): The treatment with Medhyavati on Avasthan, the mean score 1.25 before the treatment was increased to 2.65 after the treatment with 52.8% of improvement. And it is statistically significant ($P < 0.001$). Rarely or often stability and confidence upgraded to more stable in different situations.

Effect on Upadhi (degree of impact): The mean score on Upadhi was 1.35 before the intervention with Medhya vati and it is increased to 2.75 after the treatment. And there was 50.9% improvement and the result was statistically significant. Degree of impact in problem solving is improved.

Effect on Vijnana (motivation): Before the treatment the mean score on Vijnana was 1.25 and it was increased to 2.27 after the intervention with Medhyavati and it reveals that there was 54.5% of improvement and it is statistically significant ($P < 0.001$). Improvement in impaired motivation and functioning of brain.

Effect on Sheela (conduct): The mean score of the Sheela before the treatment with Medhyavati was 1.4 and it was reduced to 2.7 and this shows 48% improvement after the treatment and is statistically significant ($P < 0.001$). Impaired conduct markedly improved to good conduct.

Effect on Samjna (attention): The mean score of the Samjna before the treatment was 1.35 and it is increased to 2.7 after the treatment and it shows 50% of improvement after the intervention of Medhyavati and it was statistically significant ($P < 0.001$). Impaired attentiveness got improved by medhyarasyana.

Effect on Smruti (recalling capacity): The treatment with Medhyavati on Smruti, before the treatment the mean score was 1.4 and it was 2.6 in the after the treatment. This increase in mean score reveals that there is 46% of improvement and it is statistically significant. Delayed recall and remembers with confusion improved to good recalling capacity.

Discussion on action of treatment on MRS scale

In this study, Menopausal rating scale (MRS), a standard scale which is meant for assessing the menopausal syndrome. Questionnaire was used to assess the patients with menopausal syndrome and scoring was done before and after the treatment with Medhyavati. This scale is subdivided in to three subscales and effect of treatment before and after is mentioned below.

Effect on psychological symptoms: The mean score of Psychological symptoms before the treatment was 8.6 and it was reduced to 1.6 after the treatment and it shows improvement in Psychological symptoms by 81%. This result shows statistically highly significant ($P < 0.001$). Depressive mood, irritability, anxiety, forgetfulness, decreases in concentration. These symptoms are assessed and very good reduction is seen in these symptoms after the intervention with Medhyavati.

Effect on Somato-vegetative symptoms: The treatment with medhyavati on Somato-vegetative symptoms were 9.65 and it was reduced to 2.65. This remission indicates that there was 72.5% improvement after the treatment and it was statistically highly significant ($P < 0.001$). Hot flushes, sweating, heart discomfort, sleep problems, joint and muscular discomfort are the somatic symptoms found in menopause. After the treatment with medhyavati there is marked improvement.

Effect on Urogenital Symptoms: The mean score on urogenital symptoms was 2.4 before the treatment with Medhya vati and it is reduced to 1.7 after the treatment. There was 29% of improvement and the change that occurred with the treatment is statistically significant ($P < 0.008$). Sexual problems, bladder problems, dryness of vagina and related symptoms are included in urogenital symptoms of menopausal syndrome. There is not much improvement are noted. Because the intervention is mainly intended to reduce psychological symptoms.

Discussion on WHOQOL BREF Assessment

Quality of the life of the patients was assessed by WHOQOL scale questionnaire. Four domains assessment was done on Physical, Psychological, Social and Environmental factors. Explanations are given below;

Effect physical health: The mean score of the Physical health before treatment was 12.7 and it was increased to 15.23. The improvement shows 16.47% of change after the treatment and it is statistically significant ($P < 0.001$). This result reveals that after the treatment there is improvement in patient's activities in daily living, reduction in dependence on medicinal substances, fatigue, pain and discomfort. And sleep is improved and work capacity is enhanced.

Effect on Psychological health: Before the treatment the mean score on Psychological health was 15.220 and after the treatment it is increased to 16. This shows 4.8% of improvement after the treatment. And there is a statistically significant difference ($P = 0.044$). This result shows that there is improvement in patients' self-esteem, thinking, learning, memory and concentration after the treatment.

Effect on Social relationship: On Social relationship the mean score was 17.5 and it does not change after the treatment, the mean score remained as 17.5. It shows 0% improvement in Social relationship after treatment. The change that occurred with the treatment is not great enough to exclude the possibility that it is due to chance ($P = 1.000$). Personal relationships, social support and sexual activity remain the same after intervention with Medhyavati. These are not related with medicinal efficacy.

Effect on Environment of the patient: The mean score on Environment was 18 and it was increased to 18.46 after the treatment. 2.4% improvement was seen after the treatment on Environment. The change that occurred with the treatment is greater than would be expected by chance; there is a statistically significant difference ($P = 0.023$). This domain is related to financial resources, freedom, physical safety and security, health and social care, accessibility and quality, home environment etc. there is not significant changes after the treatment.

Discussion on mode of Action of Medhya rasayana (Medhyavati) in Psychological factors of Rajonivritti:

In the present study intervention was done with Medhyavati, the special combination of drugs such as Guduchi, Apamarga, Vidanga, Shankhapushpi, Vacha, Abhaya, Shunti and Shathavari. Each ingredients choorna in equal quantity and triturated with Brahmi swarasa and made into tablet form, prescribed for the diagnosed patients of Rajonivritti. Anupana is given as Ksheera. Especially intervention was done on Psychological symptoms of menopausal syndrome.

While analyzing each ingredient, Guduchi is having Medhya, vayastapaka, rasayana, balya etc. properties and it is Tridoshagna. These properties would have help to enhance the brain function and strengthen the brain cells so that it leads to balance the emotions. Aqueous extract of guduchi root has been shown to enhance the learning and memory and neuro protective and nootropic action of guduchi is proved in rats study. These actions might have help to improve the concentration, reduced memory and other cognitive functions of the patients.

Apamarga have tikta katu rasa, sara teekshna guna, ushna veerya and deepana, pachana, rochana etc. karma. And it reduces vataroga, krimiroga, shula, anaha, visha etc. it is best diuretic, spasmolytic, hypotensive, cardiac stimulant, cardiac depressant, vasodilator, these pharmacological action would have help improve the equilibrium of the body. Its immune modulatory, immune stimulatory, anti-oxidant and DNA protective activity is proved in experimental studies. Immune system of the patient might have been improved by these

properties of this ingredient. And especially it may be acted upon palpitation, which was one symptom present in minimum patients.

Vidanga is having katu tikta rasa, teekshna, ushna, laghu guna, katu vipaka and krimigna as action. It is agnivaradhaka and kapha vata shamaka. Soola, shiro roga, akshepaka, apasmara, pakshaghata etc are the main rogagnata property. The Estrogenic action of the vidanga would have enhanced the estrogen production in the glands. Most of the symptom in menopause is due to estrogen deficiency. This estrogenic action may acted upon hot flushes, mood swings, irritation, sleep disturbances etc. and have got reduction in symptoms.

Shathavari is present with madhura tikta rasa, guruguna, sheetha veerya and madhura vipaka. It is medhakarak, shukravardhaka, balya, hridya, rasayana, pushtidayaka. These karmas might have enhanced the cognitive functions and provide all rasayana effect on patients. Its action in central nervous system, neither depressant nor stimulant action and anti-depressant activity, nootropic, anti-amnesic activity are proved. These pharmacological action would have been acted on all manovikara. And this Shatavari also contains Shatavarin I-IV phytoestrogen. These are having similar action of estrogen. Due to adaptogenic activity phytoestrogen is beneficial in both reduced and excess estrogen condition. Thus all the symptoms related with estrogen deficiency might have reduced by this activity.

Vacha is having katu tikta rasa, laghu teekshna sara guna, ushna veerya, katuvipaka and its prabhava its medhya. It is indicated in Unmada and Apasmara. Its pharmacological actions are intellect promoting, carminative, anticonvulsant, tranquilizing, and sedative. And it is a best nervine tonic also. These actions would have helped in stabilizing all negative and positive emotions of the patients.

Abhaya have lavana varjita pancharasa, laghu rooksha guna, ushna veerya, madhura vipaka and tridoshahara action. It is having medhya, vrushya, prajasthapaka as karma. And it is indicated in nadidourbalya, masthishkya vikara, indriyadourbalya, budhimandhya, garbhashya dourbalya etc. Its medhya property might have helped in improving manovikara.

Shankapushpi is tikta katu kashya rasa, snigdha pichila sara guna, sheeta veerya, madhura vipaka. Its karma is medhya, vrushya, smriti vardhaka, rasayana, balya, swarya and vishaghna. Shankha pushpi is known as best medhya dravya among all medhya drugs. Tridoshashamaka is its doshagnata. It is indicated in Unmada, Apasmara and masthishkya dourbalya. Its medhya and rasayana action might have acted on positive and negative emotions of the patients. Sedative, intellect promoting, brain tonic, these pharmacological actions would have been helped to reduce anxiety, irritation, sleep disturbances, difficulty in concentration.

Shunti is having katurasa, laghu, snigdha, guru, ruksha, teekshna guna, ushnaveerya, madhura vipaka. Vatanulomana, shoolaprashamana, hridya, nadi uttejaka, vata shamaka, deepana, pachana, vrushya etc. karma. It is indicated in samanya dourbalya, vatavyadhi, udarashoola, amavata etc. Antioxidative stress effects- the antioxidative property of ginger and its components have been explored in various invitro and invivo study. Strengthening the body's defenses by improving the antioxidant property might have been worked on patient's general health.

Brahmi is having tikta rasa, laghuguna, ushnaveerya, katuvipaka, and it is having medhya prabhava and karma. It is indicated in unmade, apasmara, hridaya dourbalya. Its nootropic and neuroprotective action would have been stimulated the brain and lead to reduce the psychological symptoms.

IV CONCLUSION

The present study was conducted on 20 diagnosed women with ICD-10 code N95.1 criteria. Who were in age group of 45-55 years, had attended the OPD or IPD of Sri Dharmasthala Manjunatheswara Ayurveda Hospital, Udupi. These women were selected after screening for signs and symptoms subjected to an Open clinical study with pretest and posttest design with paired t test, were treated by Medhyarasayana giving much importance to Psychological Manifestations of this condition. And after the completion of the study conclusion are described.

Manasa bhava of Rajonivrutti are assessed with ayurvedic and modern parameters. Ayurvedic classics clearly mentioned the age of rajonivrutti is around fifty years and Susruta cited it as starting phase of Jaravastha. As rajonivrutti is a physiological process, it is considered under swabhavika vyadhi and its signs and symptoms are correlated with menopausal syndrome in the contemporary science. In the literature there is no explanation about its nidana, lakshana, roopa, samprapti etc. But this study made an effort to make out related cause and symptoms of rajonivrutti, a swabhavikavyadhi, where strikarabhava dushti and its relation with dhathu kshaya and ojokshaya and an effort was done to manage its co existing Manasika vikara or psychological symptoms associated with it.

Medhya rasayana in the form of medhya vati has been prescribed to the diagnosed women, 2 tablets thrice in a day with anupana milk for the duration of 90 days. Medhya rasayana provides statistically highly significant result in Manasika bhava of rajonivrutti.

The menopausal syndrome is assessed by Menopausal rating scale (MRS), there is 81% of improvement after the treatment in psychological symptoms, 72.5% in Somatic symptoms and 29% in Urogenital symptoms.

Quality of the life of the diagnosed patients is assessed before and after the treatment by using WHO QOL-BREF questionnaire. It is assessed in four Domains, categorized as Physical, Psychological, Social relationships and environment of the patients.

Moderate improvement is seen in maximum patients after the treatment with medhyavati. Overall assessment is given below as tabulated and graphical representation.

Table no. 1: overall assessment of treatment

Assessments	Complete	Good	Moderate	Average	Poor
Manasika bhava positive	0%	0%	90%	0%	10%
Manasika bhava negative	5%	50%	35%	10%	0%
MRSscale	0%	30%	70%	0%	0%
WHOqol	0%	0%	100%	0%	0%

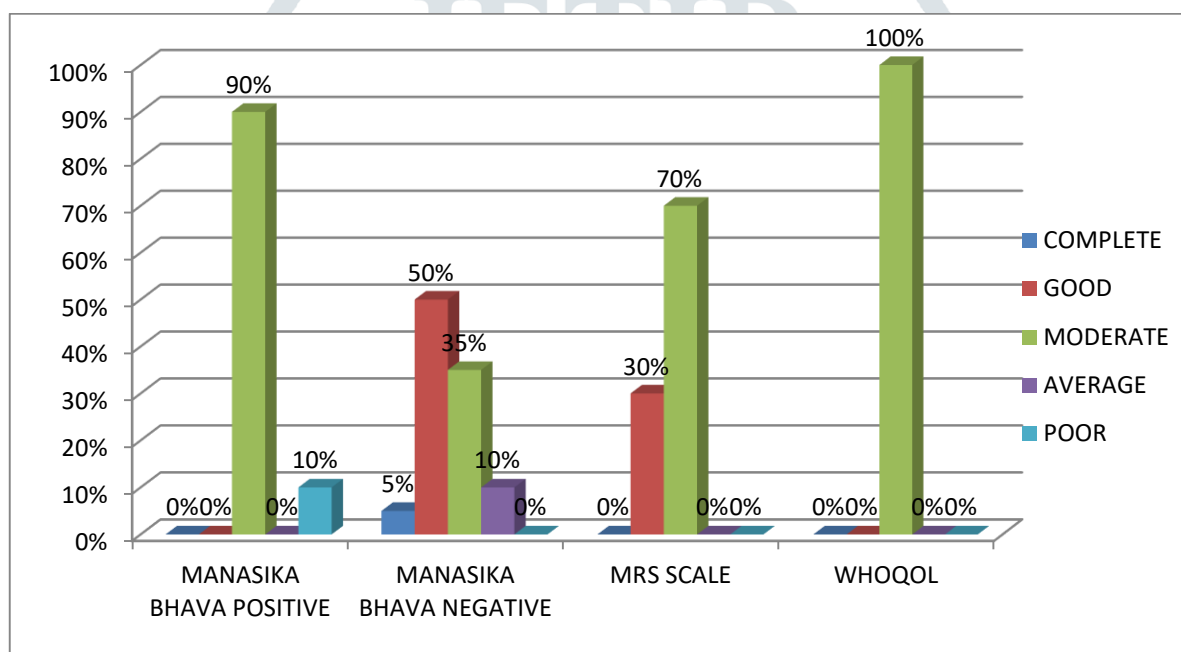


Figure no. 1: overall assessment of treatment

REFERENCES:

1. Acharya Jadavaji Trikamji, editor. Susruta Samhita. Varanasi; Chaukambha Snskrit Sansthan: 2019 edition. Pp.824. p.352-353
2. Acharya Jadavaji Trikamji, editor. Caraka Samhita. Varanasi: Chaukambha Sanskrit sansthan: 2017 edition.Pp.738. p.318
3. Harisastri Paradakara,editor. Astangahridayam.Varanasi; Chaukambha Orientalia. 2017 edition. Pp.956. p. 363
4. Pratap Kumar&Narendra Malhotra. Jeffcoate's Princilples of Gynaecology. Seventh edition. New Delhi, Jaypee Brothers Medical Publishers (P) LTD. 2008. Pp.964 P.862-63
5. Bijoy sree Sengupta et al. Gynecology for Post graduates and Practitioners, second edition. Elsevier, read Elsevier India Private Ltd, New Delhi.2007. Pp. 820. p. 292-293.
6. <https://menomartha.com/health-topic/world-menopause-day-2019>.
7. Barbara L. Hoffman, John O, Schorge, Joseph I. Scaffer et al. Williams Gynecology. Third edition, University of Texas South western Medical centre at Dallas. 2016. Pp. 1385. p. 471
8. Pratap Kumar&Narendra Malhotra. Jeffcoate's Princilples of Gynaecology. Seventh edition. New Delhi, Jaypee Brothers Medical Publishers(P) LTD. 2008. Pp. 964. p.868
9. <https://pubmed.ncbi.nlm.nih.gov/6824255/>

10. Acharya Jadavaji Trikamji, editor. Caraka Samhita. Varanasi: Chaukambha Sanskrit sansthan: 2017 edition.Pp.738. p.280
11. Acharya Jadavaji Trikamji, editor. Caraka Samhita. Varanasi: Chaukambha Sanskrit sansthan: 2017 edition.Pp.738. p.248
12. www.menopause-rating-scale. (Developed byBerlin Center for Epidemiology and Health Research).
13. http://www.who.int/substance_abuse/research_tools/en/english_whoqol.pdf
14. Acharya Siddhi Nandan Mishra. Abhinava Navajeevanam. First edition, Varanasi.Chaukambha Orientalia.2000. Pp. 299. P.191

