JAiMS
INTERNATIONAL

Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences

Indexed

Maharshi Charaka
Ayurveda

Comparative study to evaluate the effect of *Vamana Karma* by *Madanaphala Kalka* and *Madanaphala Ksheerapak* in *Amavata*

Suhasini Ashok Mote[1], Ramesh N. Gennur[2]

[1]Post Graduate Scholar, Department of PG Studies in Panchakarma, Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad, Karnataka, India.

[2]Professor and HOD, Department of PG Studies in Panchakarma, Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad, Karnataka, India.

A B S T R A C T

Amavata is a *Vyadhi* having *Bahudoshavastha* where *Kapha*, *Vata*, *Pitta Doshas* are predominantly involved. It is named after the involvement of pathological factors *Ama* and *Vata*. Its *Udbhavasthana* is *Amashaya* and *Vyaktasthana* is *Sandhi*. It is correlated with Rheumatoid arthritis due to similarities. Rheumatoid arthritis presents with gradual onset of symmetrical arthralgia and synovitis of small joints of hands, feet and wrists. Large joints involvement, systemic symptoms and extra articular features may also occur. This is the condition that affects the quality of life of a person. As the condition affect personal health and working hours and there are several limitations and adverse effects in modern medicine for the same, its Ayurvedic management has great importance. According to Ayurveda the major cause of the disease is *Prakupita Kapha*, this can be included under *Amavata* caused by *Ama* and *Vata* with *Vamana Karma* may resolve this health problem.

Key words: *Vamana Karma, Madhanaphala Kalka, Madhanaphala Ksheerapak, Amavata, Rheumatoid Arthritis.*

INTRODUCTION

Ayurveda is a medical science which descended thousands of years ago. Ayurveda is the science of life which promotes positive health, prevents diseases and helps in achieving long life. The human being of the present era is running behind his endless desires. To meet these desires, he changes his lifestyle which includes irregular faulty dietary pattern, inadequate time for relaxation, no entertainment and suppression of natural urges and keeping away from the nature. Due to sedentary lifestyle, the man is getting diseases like *Amavata* etc. In today's life, people are fed up of side effects of modern drugs which lower the immunity. The use of natural herbs to get rid of diseases is as old as beginning of life. We must be proud that we are born in this country, where the eternal science of medicine Ayurveda grew. Ayurveda is a *Chikitsa Shastra* which maintains the *Swasthya* of *Swastha* person and does *Vikara Nasha* of *Atura*.

The main cause for almost all diseases is *Agnimandya*.[1]

Agnimandya leads to *Amautpatti*. This *Ama* is the pathological factor responsible for various diseases. In spite of *Mandagni*, person indulging in *Viruddha Ahara-Vihara*, in him vitiated *Vata* along with *Ama* gets settled in *Sandhis* which are *Shleshma Sthana* and leads to *Amavata*.

Amavata is a *Vyadhi* having *Bahudoshavastha*. Its *Udbhavasthana* is *Amashaya* and *Vyaktasthana* is *Sandhi*.[2-4] It is characterised by *Pratyatma Lakshanas* like *Sandhishoola, Shotha, Stabdhata, Vrischika Damshavat Vedana* and other associated *Lakshanas* like *Angamarda, Aruchi, Trishna, Alasya, Gaurava, Jwara, Apaka* etc. *Amavata* is a serious condition which may cause stress and frustration in the patient. Due to similarities *Amavata* can be correlated with Rheumatoid Arthritis. Several theories direct the cause of Rheumatoid arthritis to be an autoimmune mechanism. RA is the second common arthritis after Osteoarthritis and is the most common inflammatory arthritis. Females are more affected than men in the ratio of 3:1.[5] The figures of prevalence vary subsequently ranging from 0.3% to 2.1% of the population.[6] Indian data suggests the prevalence to be around 0.65% to 0.75% of the population. The incidence and prevalence of RA generally rising with increasing age until about 70years and then declines. About 60% of RA patients are unable to work 10years after the onset of the disease. The family history is an important factor.[7] Whatever may be the hidden pathology underlying, managing the symptoms like pain, swelling, stiffness in the joints remains the main priority while treating it for the physician. As the disease progresses, it disables the patient. There are many conservative drugs in modern science, they have side effects, and their action is also of shorter duration. So, there is a need of better and long-lasting management of the symptoms without side effects.

Panchakarma attracted the attention of present-day population, as it has a positive role in treating chronic degenerative disorders. *Panchakarma* is a popular term used for *Shodhana Chikitsa. Vamana* is one among them, which helps in *Kaphadoshaharana* and *Vatashamana. Madanaphala* is specially indicated for *Vamana*. So, here *Madanaphala Kalka* and *Madanaphala Ksheerapak* were selected to know the effect of both in *Amavata* in the form of *Vamana* and to know which is most effective when compared to each other. Considering these both, here an attempt was made to find effect of *Madanaphala Kalka* and *Madanaphala Ksheerapak*. Acharya Charaka has said

that the *Doshas* controlled by *Samshamana* are having the possibility of recurrence while such prospect is absent when it is managed by *Samshodhana*, i.e. So the topic has been taken to evaluate the effect of *Vamana Karma* by *Madanaphala Kalka* and *Madanaphala Ksheerapak* in *Amavata*.

OBJECTIVES OF THE STUDY

1. To evaluate action of *Vamana Karma* with *Madanaphala Kalka* in *Amavata* (RA).

2. To evaluate action of *Vamana Karma* with *Madanaphala Ksheerapak* in *Amavata*.

3. To evaluate the comparative study of *Vamana Karma* with *Madanaphala Kalka* and *Madanaphala Ksheerapak* in the management of *Amavata*.

MATERIALS AND METHODS

Source of data

A) Clinical source: 30 patients of either sex of *Amavata* clinically diagnosed were selected from OPD and IPD of Bhagavan Mahaveer Jain Ayurvedic Medical College And Hospital, Gajendragad and also the patients who visited the camp conducted in Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad.

B) Therapy source:

a) *Deepana* and *Pachana* with *Vaishwanara Choorna* for 3-7days with *Sukhoshna Jala* according to *Koshta*.

b) *Snehapaana* with *Moorchita Ghrita* for 3-7days according to *Koshta*.

c) *Sarvanga Abhyanga* with *Saindhavadi Taila* followed by *Bhashpa Sweda* with *Dashamoola Kashaya* for 2 days.

d) *Vamana Karma* with *Madanaphala Kalka* 30mg with *Anupaana Sukhoshna Jala* for Group A patients.

e) *Vamana Karma* with *Madanaphala Ksheerapak* 50ml with *Anupaana Sukhoshna Jala* for Group B patients.

f) *Dhumapaana* with *Haridra Choorna Varti* for both the Groups A and B.

All the *Dravyas* required for full procedure were prepared in the Rasashastra and Bhaishajya Kalpana Department of Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad.

C) Literary source: Required literary information for the intended study was procured from;

a) Ayurveda Samhitas, Nighantus

b) Modern texts

c) Published articles from reputed journals

d) Related sources of internet.

D) Pharmaceutical source: The dravya *Vaishwanara Choorna, Moorchita Ghrita, Saindhavadi Taila, Dashamoola Kashaya, Madanaphala Kalka* and *Madanaphala Ksheerapak, Haridra Choorna Varti,* for the dissertation work were taken from Rasashastra and Bhaishajya Kalpana Department of Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad.

Methodology

Research Approach: The research was started with forming two groups namely Group A and Group B. *Vamana Karma* was the common Panchakarma Therapy carried out in both the groups with different *Vamana Yogas*. The *Vamana Karma* was done in the following order: *Nirameekarana* and *Agni-Deepana* with *Vaishwanara Choorna, Snehapaana* with *Moorchita Ghrita, Sarvanga Abhyanga* with *Saindhavadi Taila, Bhashpa Swedana* with *Dashamoola Kashaya, Kapha Utkleshakara Aahara* on the day of *Vishrama Kaala, Vamana Karma* with two *Yogas* of *Madanaphala Pippali Choorna, Dhumapaana* with *Haridra Dhuma Varti, Kavala* with *Ushna Jala* and *Samsarjana Krama*. After the completion of the therapy, the results were assessed by comparing the data collected during the therapy.

Dravyas used in different steps were,

Poorva Karma: *Vaishwanara Choorna* for *Deepana-Pachana, Moorchita Ghrita* for *Snehapana*

Saindhavadi Taila for *Abhyanga, Dashamoola Kashaya* for *Bhashpa Swedana.*

Pradhana Karma: *Ksheera* for *Aakanthapaana, Madanaphala Kalka* for *Vamana* in Group A patients, *Madanaphala Ksheerapak* for *Vamana* in Group B patients, *Yashtimadhu Phanta* as *Vamanopaga, Saindhava Jala* as *Vamanopaga*.

Paschat Karma: *Haridra Dhuma Varti* for *Dhoomapana*.

Materials used are: Big and Small vessels, *Vamana Peetha, Abhyanga Droni, Bashpa Swedana Yantra,* Measuring jar and buckets, *Dhumapaana Yantra.*

Data source: *Amavata* subjects indicated and fit for *Vamana Karma* were selected from out patient department and in patient department and camps conducted in Bhagavan Mahaveer Jain Ayurvedic Medical College and Hospital, Gajendragad.

Method of collection of data

30 patients fulfilling diagnostic and inclusive criteria were selected for study irrespective of sex, caste, religion etc. Subjects were thoroughly examined both subjectively and objectively. Detailed history pertaining to *Poorva Vyadhi, Poorva Vyadhi Chikitsa, Kula Vrittanta,* habits, *Ashtavidha Pareeksha, Dashavidha Pareeksha,* Physical examination and Joint examination findings were noted. Routine investigations were done to exclude any pathology. Subjects were registered for the present study with the help of proforma prepared for the study.

Sample size and grouping: A minimum of 30 patients diagnosed for *Amavata* were taken for clinical study excluding dropouts.

a) Group A - 15 patients were given *Vamana* with *Madanaphala Kalka*.

b) Group B - 15 patients were given *Vamana* with *Madanaphala Ksheerapak*.

Inclusive Criteria: Patients suffering from *Bahusandhi Shoola, Shotha, Stabdhata, Sparsha Asahishnuta, Amavata* history less than 2years, Patients between 21-60 years of age group, *Vamanaarha* patients.

ORIGINAL ARTICLE Sept-Oct 2021

Exclusive Criteria: Patients below 20 years and above 60 years of age group, *Garbhini*, *Prasuta Stree,* Patients suffering from confirmative other systemic diseases. *Vamana Anarha* patients, Patients suffering from rheumatic fever, Patients in need of surgical intervention.

Duration of the study

1. *Deepana* and *Pachana* for 3-7days
2. *Snehapaana* for 3-7days
3. *Sarvanga Abhyanga* and *Swedana* for 2days
4. *Vamana Karma* 1day
5. *Samsarjana Krama* for 3-7days.

Total duration of the study will be minimum 12-24 days for both the Groups A and B.

Interventions

Dravyas used for *Poorva Karma, Pradhana Karma* and *Paschat Karma*;

SN	Poorvakarma	SN	Pradhanakarma	SN	Paschatkarma
1.	*Deepana-Pachana* with *Vaishwanara Choorna*[8] 5gm BD with *Sukhoshna Jala* as per *Koshta* for 3-7days.	1.	*Vamana Karma* with *Madanaphala Kalka* 30gms with *Anupaana Sukhoshna Jala* after giving *Ksheera* for *Aakanthapaana* for Group A patients.	1.	*Dhumapana* with *Haridra Dhuma Varti* for both the groups A and B.
2.	*Snehapaana* with *Moorchita Ghrita* 25-120ml in *Arohana Krama* as per *Koshta* for 3-7days.	2.	*Vamana Karma* with *Madanaphala Ksheerapak* 50ml with *Anupaana Sukhoshna Jala* after giving *Ksheera* for *Aakanthapaana* for Group B patients.	2.	*Samsarjana Krama* depending on *Shuddhi Lakshanas* for 3-7days for both the groups A and B.
3.	*Sarvanga Abhyanga* with *Saindhavadi Taila*[9]for 25-30 minutes followed by *Bhashpa Swedana* for 2days.	3.	------	3.	-----
4.	*Kapha Utkleshakara Aahara* like *Ksheera, Ikshurasa* on previous day of *Vamana Karma*.	4.	-----	4.	-----

Assessment Criteria

Disease features scoring pattern

*Pradhana Lakshanas***:** Scores of *Pradhana Lakshanas*

SN	Lakshanas	Complaint	Score
1.	Sandhishoola	No complaints	0
		Patients explains after enquired	1
		Patients frequently complains	2
		Excruciating condition	3
2.	Sandhishotha	No complaints	0
		Slight obvious	1
		Covers well bony prominence	2
		Much elevated	3
3.	Stabdhata	No stiffness for 5minutes	0
		Stiffness lasts for 5minutes	1
		Stiffness for 2-8hours	2
		Stiffness more than 8hours	3
4.	Sparsha Asahishnuta	No tenderness	0
		Patient winces on pressure	1
		Patient winces and withdraws	2
		Patient will not allow to touch	3

ORIGINAL ARTICLE Sept-Oct 2021

Anubandhi Lakshanas: Scores of *Anubandhi Lakshanas*

SN	*Lakshanas*	Complaint	Score
1.	*Angamarda*	No body ache	0
		Bodyache getting better after few minutes of activity	1
		Bodyache getting better after activity towards midday	2
		Bodyache all the time	3
2.	*Aruchi*	Able to perceive all rasas	0
		Able to perceive 4rasas	1
		Able to perceive 2rasas	2
		Not able to perceive aahara rasas	3
3.	*Thrushna*	Water intake upto 2litres per day	0
		Water intake 2-3litres per day	1
		Water intake 3-4litres per day	2
		Water intake more than 4litres per day	3
4.	*Alasya*	Interested in all activities	0
		Personal and daily activities with little interest	1
		Personal activities without interest	2
		No interest at all	3
5.	*Jwara*	Normal (98.4^{0}F)	0
		Mild (99-101^{0}F)	1
		Moderate (102-104^{0}F)	2
		Severe (>104^{0}F)	3
6.	*Apaka*	No digestion	0
		Heavy food not digested properly	1
		Delayed digestion of light foods	2
		Improper digestion	3

RESULTS [10-15]

1. *Sandhishoola*: There was significant effect on *Sandhishoola*. In Group A: The mean score was 2.73 before treatment, 1.87 during treatment, 1.07after treatment and 0.60 during follow-up. In Group B: The mean score was 2.53 before treatment, 2.00 during treatment, 1.53 after treatment and 1.00 during follow-up.

2. *Sandhi Shotha:* There was significant effect on *Sandhishotha*. In Group A: The mean score was 2.53 before treatment, 1.80 during treatment, 1.07 after treatment and 0.60 during follow-up. In Group B: The mean score was 2.67 before treatment, 2.20 during treatment, 1.20 after treatment and 0.93 during follow-up.

3. *Stabdhata*: There was significant effect on *Stabdhata*. In Group A: The mean score was 1.73 before treatment, 1.13 during treatment, 0.73 after treatment and 0.40 during follow-up. In Group B: The mean score was 2.27 before treatment, 1.47 during treatment, 1.20 after treatment and 0.87 during follow-up.

4. Grip Strength: There was significant effect on Grip strength. In Group A: The mean score was 2.60 before treatment, 2.13 during treatment, 1.40 after treatment and 0.73 during follow-up. In Group B: The mean score was 2.73 before treatment, 1.53during treatment, 1.20after treatment and 0.93 during follow-up.

5. Foot Pressure: There was significant effect on Foot pressure. In Group A: The mean score was 2.80 before treatment, 1.93 during treatment, 1.33 after treatment and 0.53 during follow-up. In Group B: The mean score was 2.80 before treatment, 2.00 during treatment, 1.47 after treatment and 1.07 during follow-up.

6. Range of movement: There was significant effect on Range of movement. In Group A: The mean score was 2.87 before treatment, 1.67 during treatment, 1.07 after treatment and 0.67 during follow-up. In Group B: The mean score was 2.67

before treatment, 1.67 during treatment, 1.33 after treatment and 0.93 during follow-up.

7. *Angamarda*: There was significant effect on *Angamarda*. In Group A: The mean score was 2.73 before treatment, 1.87 during treatment, 1.33 after treatment and 0.73 during follow-up. In Group B: The mean score was 2.67 before treatment, 1.67 during treatment, 1.27 after treatment and 0.87 during follow up.

8. *Aruchi*: There was significant effect on *Aruchi*. In Group A: The mean score was 2.13 before treatment, 1.27 during treatment, 0.80 after treatment and 0.33 during follow-up. In Group B: The mean score was 2.33 before treatment, 1.53 during treatment, 1.13 after treatment and 0.93 during follow-up.

9. *Thrushna*: There was significant effect on *Thrushna*. In Group A: The mean score was 2.53 before treatment, 1.80 during treatment, 1.13 after treatment and 0.73 during follow-up. In Group B: The mean score was 2.73 before treatment, 1.73 during treatment, 1.40 after treatment and 1.20 during follow-up.

10. *Alasya*: There was significant effect on *Alasya*. In Group A: The mean score was 2.53 before treatment, 1.67 during treatment, 1.33 after treatment and 0.7 during follow-up. In Group B: The mean score was 2.67 before treatment, 1.73 during treatment, 1.47 after treatment and 0.93 during follow-up.

11. *Jwara*: There was significant effect on *Jwara*. In Group A: The mean score was 1.60 before treatment, 1.00 during treatment, 0.67 after treatment and 0.47 during follow-up. In Group B: The mean score was 1.67 before treatment, 1.33 during treatment, 1.07 after treatment and 0.60 during follow-up.

12. *Apaka*: There was significant effect on *Apaka*. In Group A: The mean score was 2.80 before treatment, 1.73 during treatment, 1.27 after treatment and 0.73 during follow-up. In Group B: The mean score was 2.53 before treatment, 1.87

during treatment, 1.27 after treatment and 0.93 during follow-up.

13. Functional Ability: There was significant effect on Functional ability. In Group A: The mean score was 2.53 before treatment, 1.80 during treatment, 1.07 after treatment and 0.67 during follow-up. In Group B: The mean score was 2.60 before treatment, 1.87 during treatment, 1.40 after treatment and 0.93 during follow-up.

14. Tenderness: There was significant effect on Tenderness. In Group A: The mean score was 2.67 before treatment, 2.00 during treatment, 1.07 after treatment and 0.40 during follow-up. In Group B: The mean score was 2.53 before treatment, 1.87 during treatment,1.33 after treatment and 0.93 during follow-up.

Following outcomes were observed after *Vamana Karma*,

1. Rheumatoid arthritis factor - Negative 66.6% in Group A and 46.7% in Group B.

2. Sandhishoola - Nil 40.0% in Group A and 13.3% in Group B.

3. Sandhishotha - Nil 40.0% in Group A and 6.7% in Group B.

4. Stabdhata - Nil 60.0% in Group A and 13.3% in Group B.

5. Grip strength weakness - Nil 26.7% in Group A and 13.3% in Group B.

6. Foot pressure weakness - Nil 46.7% in Group A and 0.0% in Group B.

7. Range of movement weakness - Nil 33.3% in Group A and 13.3% in Group B.

8. Angamarda - Reduced 26.7% in Group A and 13.3% in Group B.

9. Aruchi - Reduced 46.7% in Group A and 0.0% in Group B.

10. Thrushna - Reduced 26.7% in Group A and 0.0% in Group B.

11. Alasya - Reduced 26.7% in Group A and 13.3% in Group B.

ORIGINAL ARTICLE Sept-Oct 2021

12. Jwara - Reduced 40.0% in Group A and 33.3% in Group B.

13. Apaka - Reduced 26.7% in Group A and 6.7% in Group B.

14. Functional ability weakness - Nil 33.3% in Group A and 6.7% in Group B.

15. Tenderness - Reduced 33.3% in Group A and 13.3% in Group B.

Overall response of treatment

In Group A, out of 15 patients 53.3% (8 patients) showed marked response, 46.7% (7 patients) showed very marked response. In Group B, out of 15 patients 100.0 (15 patients) showed marked response.

Inference: Overall response is better in Group A compared to Group B with P<0.001**.

Study Design: A comparative two groups clinical study with 30 patients, 15 patients in Group A (*Vamana Karma* with *Madanaphala Kalka*), 15 patients in Group B (*Vamana Karma* with *Madanaphala Ksheerapak*) is undertaken to study.

Results are presented as Mean$^+$- SE, Mann Whitney U test between two groups comparision, Friedman test within group analysis between BT, DT, AT and DF.

DISCUSSION

Amavata is a systemic, chronic disease mainly affecting the joints. *Ama* and *Vata* are the prime causes i.e., cause for inflammation and degenerative process and it gets deposited in different parts of the body by the *Dooshita Vata*. The disease gets initiated by *Mandagni* due to *Nidana Sevana*. Though *Ama* and *Vata* are the prime factors, *Kapha* and *Pitta* are also involved in the *Samprapti*. *Samprapti* starts in the *Annavaha Srotas* extending to the *Madhyama Rogamarga*, getting located in *Shleshmasthana* i.e., especially in *Sandhipradesha*. *Sandhishoola, Sandhishotha, Stabdhata, Sparsha Asahishnuta* are the *Pratyatma Lakshanas* of *Amavata*. *Angamarda, Aruchi, Thrushna, Alasya, Jwara, Apaka, Angashoonata* are the *Anubandhi Lakshanas* of *Amavata*. Due to its chronicity, *Upadravas* like *Jaadya, Sankocha, Anga Vaikalya* may occur if the disease is not subsided in the preliminary stage. The

Poorvaroopa of *Amavata* are not mentioned directly in the classics, the *Lakshanas* produced during *Amotpatti*, get involved with *Vata* during the *Samprapti* process and further get lodged in the *Sandhi Sthanas.*

Amavata is similar to Rheumatoid arthritis, so many hypothesis have been put forward to explain the aetiology but still the research is going on to find out the exact cause. Theories of autoimmune mechanism, free radical and genetic susceptibility have the most common role in aetiology of arthritis. Due to the absence of some suitable remedy, it is imposing great challenge to the medical world. It runs a very long course and not only makes the patients to cripple but may also restrict the patients to be bedridden. *Snehana, Swedana* and *Mrudu Shodhana* are the line of treatment in all *Vata Vyadhis*.

Vamana Karma is one of the major *Shoshana* modalities indicated for *Dooshita Kaphadosha* and the diseases originated from that, which has quoted since Vedic Ages. Separate chapters have been devoted to explain *Vamana* in detail by most of the *Samhitakaras*.

Vamana Karma has been studied under three headings - *Poorvakarma*, *Pradhanakarma* and *Paschatkarma*.

1. ***Poorvakarma***

a) *Deepana* and *Pachana*: The *Shodhana* is contraindicated in *Amavata*, hence *Nirameekarana* is essential and the first step, which will be achieved by administering the *Dravyas* having *Deepana* and *Pachanakarma*. In this study for *Deepana* and *Pachana* pupose, *Vaishwanara Choorna* was used.

b) *Snehana* : It includes both *Snehapaana* and *Abhyanga*. It is the important step prior to *Shodhana*. As it does *Vatashaman, Deha Mrudukarana, Mala Mrudukarana* and removes *Sanga*. This action is the prime requisite in *Shodhana*. Here in this study, *Moorchita Ghrita* was used for *Snehapaana* and *Saindhavadi Taila* was used for *Abhyanga*.

Suhasini Ashok Mote et al. Effect of Vamana Karma by Madanaphala Kalka and Ksheerapak in Amavata

ISSN: 2456-3110 **ORIGINAL ARTICLE** Sept-Oct 2021

c) *Swedana* : It does the *Vilayana* of *Doshas* and brings them to *Koshta* from *Shakha*. So, it gives way to expel the *Dooshita Doshas* through the procedure. In this study, *Dashamoola Kashaya* was used for *Bhaspa Swedana.*

d) *Manasopachara* : It plays a vital role in the smooth conduction of *Vamana Karma* and contributes a major part to get desired result.

e) *Kaphotkleshakara Aahara* :-To conduct *Vamana*, *Kapha* should be in *Utklishtavastha*. To maintain the *Utklishtavastha* of *Kapha* and to produce more *Utklesha, Kaphotkleshakara Aahara* are advised. In this study *Ksheera* was used for *Kaphotkleshana.*

2. *Pradhanakarma*

Performing *Vamana Karma* during *Pratahkaala* is of importance to obtain fruitful effects from *Vamana*, as *Kaphadosha* dominance will be there at that time. Adoption of rituals also plays important role. There are many *Yogas* have been explained for *Vamana Karma*. Here in this study, *Madanaphala Kalka* and *Madanaphala Ksheerapak* were used for the *Vamana Karma*, as *Madanaphala* is *"Shreshtha Vamaka"* and "*Nirapayitvat*".

3. *Paschatkarma*

Procedures explained under this heading, helps the body to come back to normalcy reducing stress and strain. The assessment of the *Vamana* was done based on *Vaigiki, Maaniki, Laingiki* and *Aantiki Lakshanas*. Here the *Laingiki Lakshanas* are the indicative of *Samyak Yoga* or *Ayoga* of *Vamana* and *Aantiki Shuddhi* helps to end the procedure. Whereas *Maaniki* and *Vaigiki Lakshanas* help to assess *Pravara, Madhyama* or *Avara Shuddhi*. Thus, help in planning the *Samsarjanakrama*.

Mode of action of *Vamana Aushadhi*

The *Vamana Aushadhi* possesses *Gunas* like *Ushna, Teekshna, Sukshma, Vyavayi* and *Vikasi* with dominance of *Agni* and *Vayu Mahabhutas* with the major contribution of *Urdhwa Bhagahara Prabhava*. The *Dravyas* due to their *Veerya*, will reach *Hridaya* and *Dhamani*, thereby reaches *Sthula* and *Anu Srotases* of the body. The *Vyavayi Guna* of the *Dravya*

will help in quick absorption and movement of the *Dravya. Vikasi Guna* will help in breaking the binding of the morbid *Dosha-Dushya*. Due to *Ushnaguna, Dravya* will cause *Vishyandana*. Due to *Teekshnaguna, Dravya* will cause *Chedana* of the *Doshas*. The *Sukshma Guna* helps to reach minute channels. *Agni* and *Vayu Mahabhutas* because of their *Laghu Guna* and due to *Urdhwa Bhagahara Prabhava* brings the act of *Vamana*.

Procedure assessment

Time taken for the initiation of *Vega*: *Kalka Yoga* Group i.e., Group A initiated *Vamana Vega* earlier than the *Ksheerapak Yoga* Group i.e., Group B. Total duration of the procedure: In *Kalka* group, procedure completed earlier than the *Ksheerapak* group. Number of *Vega*: The mean effect was same in both the groups. By comparing the mean values, it can be said that *Vegas* were forceful in *Kalka* group than the *Ksheerapak* group. *Maaniki Shuddhi*: By comparing the mean values, it can be said that *Maaniki Shuddhi* was more in *Kalka* group than *Ksheerapak* group. *Aantiki Shuddhi*: The mean effect was same in both the groups. *Laingiki Shuddhi*: The mean effect was same in both the groups. By comparing the mean values, it can be said that *Laingiki Shuddhi* was slightly more in *Kalka* group than *Ksheerapak* group.

Conclusion

Among the joint disorders *Amavata* is considered to be most serious, due to its chronicity, crippling nature and pain. *Amavata* is distressing and frustrating ailment for the patient. By considering the *Lakshanas*, *Amavata* can be correlated to Rheumatoid arthritis. Description of *Amavata* is not found in *Brahatrayees*, but scattered information is seen in later treatise. *Amavata* is a disease in which *Ama* plays the main role in the disease formation, causing inflammation, degenerative processes, associating with vitiated *Vata* thereby gets deposited in *Sandhi Pradesha. Sandhishoola, Sandhishotha, Stabdhata, Sparsha Asahishnuta* are the salient features of the disease. Maximum of patients 80% were from age group between 30-40 and 41-50years. Maximum of patients 33.3% were from poor economic status Maximum of

Suhasini Ashok Mote et al. Effect of Vamana Karma by Madanaphala Kalka and Ksheerapak in Amavata

ISSN: 2456-3110   **ORIGINAL ARTICLE**   Sept-Oct 2021

patients 60% were consuming mixed diet. Maximum of patients 36.7% were having the habit of chewing tobacco. Maximum of patients 63.3% were having the history of disturbed sleep. Maximum of patients 66.7% were having *Mandagni*. Both the groups showed highly significant improvements in the parameters. No complications were observed during the study. In Group A, out of 15 patients, 53.3% (8) patients showed marked response, 46.7% (7) patients showed very marked response. In Group B, out of 15patients, 100% patients showed marked response. Inference was drawn on the basis of overall response observed. Overall response is found to be better in Group A when compared to Group B with $P<0.001$** *Vamana*, a *Shodhana Roopi Chikitsa* has been dealt in detail as an important Panchakarma therapy. Among the various formulations of *Madanaphala* mentioned by *Acharyas* to perform *Vamana*, very few yogas are in practice. Hence two such yogas (*Kalka* and *Ksheerapak*) were studied to see the efficacy of these *Vamaka Yogas* to perform *Vamana*. Both the *Yogas* showed good efficacy. *Kalka* group completed the procedure early compared to the *Ksheerapak* group. In *Kalka* group, *Roga Lakshanas* were markedly reduced compared to *Ksheerapak* group.

REFERENCES

1. Kaviraj Atridev Gupta, Vidyotini, Vidyalankar Bhishagratna, edited with Vidyotani hindi commentary Ashtanga Hridaya, Nidanasthana Udara Nidana Adhyaya 12/1, Chaukambha Prakashan, Varanasi, Reprint, 2014; Page.No.339.

2. Vaidya Madhavakar, Madhava nidana with Madhukosha commentary by Sri.Vijayarakshita and Shrikanthadatta with the Vidyotini hindi commentary by Sudarshana Shastri, revised and edited by Prof. Yadunandan Upadhyaya,30th edition, 2000, Chaukambha Sanskrit Sansthan, Varanasi, Page.No.508-512.

3. Yogaratnakar with Vidyaprada hindi commentary by Indradeva Tripathi and Dr.Dayasagar Tripathi,1st edition, 1998, Krishnadas Academy, Varanasi,Page.No.452-459.

4. Bhavamishra, Bhavaprakash nighantu, edited with Vidyotini hindi commentary by Pandit Brahmashankar Mishra Part 2,11thedition, 2007, Chaukambha Sanskrit Bhavan, Varanasi, Page.No.277-293.

5. MacGregor AJ, Sineder H, Rigby AS, Koskenvuo M, Kaprio J, Aho K, etc all characterizing the quantitative genetic contribution to rheumatoid arthritis using data from twins. Arthritis and Rheumatism 2000; 43:30-7. Whqlibdoc.who.int/bulletin/2003/vol.11,No.9/bulletin-2003-81(9)-646-656pdf.

6. Fauci.S.Anthony, Braaunwald Eugene, Kasper, L.Dennis, Hauser L, Stephen Longo L.Dan, Jameson Larry J, Loscalzo Joseph etc all editors, Harrison's principles of internal medicine; 17th edition, New York, Mc Graw Hill; Volume 2,Page.No.2083.

7. https://www.who.int/healthinfo/statistics/bod-rheumatoidarthritis.pdf.

8. Kaviraja Shri Govindadas Sen, Bhaishajya Ratnavali edited with Siddhiprada hindi commentary by Prof.Siddinandan Mishra,1st edition, 2005, Chaukhambha Surbharati Prakashana, Varanasi, Page no.596-614.

9. Kaviraja Shri Govindadas Sen, Bhaishajya Ratnavali edited with Siddhiprada hindi commentary by Prof.Siddinandan Mishra, 1st edition, 2005, Chaukhambha Surbharati Prakashana, Varanasi, Page no.596-614.

10. Bernard Rosner (2000), Fundamentals of Biostatistics, 5th Edition, Duxbury, page 80-240.

11. Robert H Riffenburg (2005), Statistics in Medicine, second edition, Academic press. 85-125.

12. Sunder Rao P S S, Richard J (2006) : An Introduction to Biostatistics, A manual for students in health sciences, New Delhi : Prentice hall of India, 4thedition, 86-160.

13. Suresh K.P. and Chandrasekhar S (2012). Sample Size estimation and Power analysis for Clinical research studies. Journal Human Reproduction Science, 5(1), 7-13.

14. IBM Corp, Released 2013, IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

15. R Core Team (2013). R:A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria.

****