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An Open Label Single Arm Clinical Study on Churna basti administered in Modified Kala Basti Schedule in Amavata

Research Article

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Abstract

Basti is considered to have multifaceted effect as it cures the diseases of *Shakha,Koshta,Marmas* and *Sarva Avayavas.*Acharya Chakrapani mentions the unique concept of Churna Basti comprising of *Saindhava Lavana, Sneha, Churnas(Rasna, Vacha, Bilwa, Shatapushpa, Ela, Putika, Madanaphala, Pippali, Devadaru, Kushta), Ushnajala* and *Amladravya* as the key ingredients. These drugs possess *ushna & teekshna gunas, Deepana-Pachana, Vata Kaphahara* and *Shula-Shothahara* properties which may help in attaining *Agni deepti, Laghutva, Nirama Lakshana* and *Shoolahara* effect.Based on this concept,the ingredients are modified and is practiced in the management of *Santharpanotha vikaras* like *Amavata. Amavata* is the disease affecting *Asthi* and *Sandhis* wherein *Ama* and *Vata* are the initiating factors in the pathogenesis. Moreover, the chief pathogenic factors, being contradictory in nature poses difficulty in planning the line of treatment. Rheumatoid Arthritis can be correlated to *Amavata* on the basis of etiology, pathology, therapeutic signs and symptoms. The figures of prevalence vary substantially ranging from 0.3% to 2.1% of the population, with peak incidence in the fourth decade of life. A combination of *Vaishwanara choorna, Rasna Saptaka Kashaya* and *Dhanyamla* administered in *Amavata* is yielding beneficial effects as the ingredients possess the properties opposite to that of *Amavata* and therefore acts positively on the disease. Therefore, due to wide spectrum of disease, much prevalence in the society and lack of effective medicaments the present study was planned based on this concept and statistically highly significant effects (P>0.0001) were observed in the various assessment parameters of *Amavata* such as *Sandhishoola, Sandhishotha, Sandhistabdhata , Sandhisparsa Asahyata* etc. In overall effect of therapy maximum number of patients (40.12%) got marked improvement. Therefore, *Churna Basti* comprising of drugs possessing properties opposite to *Ama* can be considered as a good remedy in the management of Amavata.

Key Words: *Amavata*, Rheumatoid Arthritis, *Panchakarma, Churna Basti.*

Introduction

Amavata (1)is most common debilitating joint disorder which makes the life of patient almost crippled. *Amavata* in the modern parlance can be correlated with Rheumatoid Arthritis which is a highly prevalent disease in the present life scenario due to the changing dietetic habits, social structure, environmental and mental stress. Ayurveda has a lot to offer in this regard. The *Chikitsa* explained for *Amavata* includes *Shodhana* as well as *Shamana* which includes *Langhana, Deepana, Swedana, Virechana, Snehapana, Basti* and *Upanaha*. *"Agni"* had been given importance in the pathogenesis as well as in the management of *amavata*. *Agnimandhya* causes formation of *ama* and thus aggravated *Ama*(2) occupies the *Shleshmasthana* like *Sandhi* with the help of vitiated *vata* and causes *Amavata*. *Vatahara, Kaphahara, Amahara* and *Rasayana* therapies are required for its management and are attained by *Langhana, Deepana, Swedana, Virechana, Snehapana, Basti* and *Upanaha* therapies(3). Among *Shodhana chikitsa, Basti* plays a major role in the management of *Amavata*. Though *basti* is contraindicated in *amaavastha* of *Amavata, Teekshna Niruha Basti* which is having *Agni deepaka, Pachaka and amahara* (4,5) properties are indicated. *Churnabasti* (6) is one among them and it contains *dravyas* which have *Ushna, Teekshna, Deepana-Pachana, Vata Kaphahara* and *Shula-Shothahara* properties.

Aims and Objectives

To evaluate the efficacy of *Churna basti* in modified *Kala basti* schedule in the management of *Amavata*

Materials and methods

Source of data:

80 patients of *Amavata* was taken for study from Sri Dharmasthala Manjunatheshwara College of Ayurveda And Hospital, Hassan, Karnataka.

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Methods of Collection of Data

Diagnostic criteria

- *Samanya Lakshana's* of *Amavata - Angamarda, Aruchi, Trusna, Alasya, Gaurava, Jwara, Sandhishotha, Sandhiruja, Gatrastambhata, Sparshasahyata* and *Nidraviparyaya*.
- 1987 American Rheumatism Association Revised criteria
  - Morning stiffness in and around joints for at least 1 hour
  - Soft tissue joint swelling observed by physician at least 3/14 joint groups (Right or Left : MCP-Meta-carpophalangeal joint, PIPProximal interphalangeal joint, wrist, elbow, knee, ankle, MTP-Meta-tarso phalangeal joints)
  - Soft tissue joint swelling in a hand joint (MCP, PIP or wrist)
  - Symmetrical swelling of joint area
  - Rheumatoid nodule
  - Positive Rheumatoid factor
  - Radiograph changes on wrist/hands

For the diagnosis of the patient must have at least four of the above symptoms present for atleast 6weeks.

Inclusion Criteria

- Patients were selected irrespective of their gender, caste or creed.
- Chronicity less than 5 years.
- Patients between the ages of 18 to 60 years
- The patients fit for *Basti Karma*.
- With systemic disorders
  - Hypertension < 150/90 mmHg
  - Controlled Type 2 Diabetes mellitus -FBS : <110 mg/dl and PPBS : <150 mg/dl

Exclusion Criteria

Rheumatoid Arthritis associated with

- Pregnancy
- Systemic Lupus Erythmatous
- Active Tuberculosis or other severe infections
- Moderate to severe cardiac insufficiency

Investigations

Blood

- Haemoglobin %
- Total Count
- Differential Count
- Erythrocyte Sedimentation Rate
- Fasting Blood Sugar
- Post Prandial Blood Sugar
- R.A. Factor

Research Design

It was an open labeled, single arm interventional clinical study with pre-test and post-test design wherein 80 patients suffering from *Amavata* were selected. The parameters of signs and symptoms were analyzed statistically.

Drug

Acharya Chakradatta opines that the drugs having *Deepana-Pachana* properties and *Katu Rasa (*pungent taste) dominance should be used for the management of *Amavata*.

Table 1: Ingredients of *Churna Basti*

Ingredients	In Pala	In ml/gms
Vaishwanara churna	1 *Pala*	50 grams
Rasnasaptaka kashaya	4 *Pala*	200 milliliters
Dhanyamla	2 *Pala*	100 milliliters
Total	7 *Pala*	350 milliliters

Table 2: Contents of Vaishwanara Churna

Drug	**Latin name**	***Rasa***	***Guna***	***Veerya***	***Vipaka***	***Doshaghnata***	***Karma***	**Proportion of the ingredient**
Saindava	Sodium chloride/ NaCl	*Lavana*	*Laghu, Snigdha*	*Sheeta*	*Madhura*	*Tridosha shamaka*	*Chedaka*	2 parts
Yavani	*Tachyspermum ammi* Linn.	*Katu, Tikta*	*Laghu, Ruksha, Tikshna*	*Ushna*	*Katu*	*KV*↓	*Deepana, Anulomana*	2 parts
Ajamoda	*Apium graveolens* L.	*Katu*	*Laghu, Ruksha*	*Ushna*	*Katu*	*KV*↓	*Pachana, Deepana, Anulomana*	3 parts
Nagara	*Zingiber officinale* Rosc.	*Katu*	*Guru, Ruksha, Tikshna*	*Ushna*	*Katu*	*Katu*	*Deepana Pachana*	5 parts
Haritaki	*Teminalia chebula* Retz.	*Pancha rasa (Lavana varjita)*	*Laghu, Ruksha*	*Ushna*	*Madhura*	*Tridosha shamaka*	*Pachana, Deepana, Anulomana*	12 parts

Table 3: Ingredients of Rasna Saptaka Kashaya

Drug	Latin name	*Rasa*	*Guna*	*Veerya*	*Vipaka*	*Doshaghnata*	Proportion of the ingredient
Rasna	*Pluchea lanceolata* (DC.) Oliv.& Hiern,	*Tikta*	*Guru*	*Ushna*	*Katu*	*Kaphavata hara*	1 part
Amrita	*Tinospora cordifolia* (Thunb.)	*Tiktha, Kashaya*	*Guru, Snigdha*	*Ushna*	*Madhura*	*Tridoshagna*	1 part
Aragvadha	*Cassia fistula* L.	*Madhura*	*Guru, Snigdha*	*Sheeta*	*Madhura*	*Vatapittaghna*	1 part
Devadaru	*Cedrus deodara* (Roxb.)	*Tiktha*	*Guru, Snigdha*	*Ushna*	*Katu*	*Kaphavata hara*	1 part
Trikantaka	*Tribulus terrestris* L.	*Madhura*	*Guru Snigdha*	*Sheeta*	*Madhura*	*Vata pitta shamaka*	1 part
Eranda	*Ricinus communis* L.	*Madhura*	*Snigdha Tikshna Sookshma*	*Ushna*	*Madhura*	*Kaphavata hara*	1 part
Punarnava	*Boerhavia diffusa* L.	*Madhura, Tiktha*	*Laghu, Ruksha*	*Ushna*	*Madhura*	*Tridoshagna*	1 part

Method of Preparation: All the ingredients are procured in the form of coarse powder and *Kashaya* is prepared by adding 200grams of *Kwatha churna* to 800ml of water and reduced to 1/4th quantity.

Table 4: Contents of *Dhanyamla*

Drug	Latin name	*Rasa*	*Guna*	*Veerya*	*Vipaka*	*Doshaghnata*
Shashtika	*Oryza sativa*	*Madhura*	*Laghu, Snigdha, Mridu, Grahi.*	*Shita*	*Madhura*	*Pitta vatahara*
Nagara	*Zingiber officinale* Rosc.	*Katu*	*Guru, Ruksha, Tikshna.*	*Ushna*	*Katu*	*KV*↓
Rajika	*Brassica juncea* L.	*Katu*	*Tikshna, Ushna, Ruksha*	*Ushna*	*Katu*	*KV*↓
Moolakam	*Raphanus sativus* L.	*Katu*	*Laghu*	*Ushna*	*Katu*	*Tridoshahara*
Saindava Lavana	Sodium Chloride	*Lavana*	*Laghu, Snigdha*	*Sita*	*Madhura*	*Tridosha shamaka*

Brihat Saindhavadi Taila

Brihat Saindhavadi Taila is prescribed by Cakradatta and Bhavamishra in the treatment of *Amavata* especially in the form of *Pana* (oral intake), *Basti* (enema) and *Abhyanga (oleation)* measures. The base of this *Taila*(oil) is Eranda Taila and is mainly *Vata Kapha Shamaka* (pacifies vata and kapha). The ErandaTaila is medicated by different drugs which are also of *Ushna Virya* (hot in potency), *Agni dipana* and *Vata kapha Shamaka*. Thus, for *Anuvasana basti* (oil enema) in the *Amavata* patients, Eranda Taila seems to be best and so this preparation of Eranda Taila i.e. Brihat Saindhavadi Taila was selected.

Treatment Plan

All subjects were administered with 350ml of Churna Basti and *Anuvasana Basti* with 80ml of *Brihat Saindavadi Taila* in Modified *Kala Basti* Schedule wherein *Anuvasana Basti* was administered on the same day afternoon of *Niruha Basti* by which the 15 days schedule of *Kala basti* was be completed in 9 days.

Table 5: Schedule of The Basti

Day	D1	D2	D3	D4	D5	D6	D7	D8	D9
M		N	N	N	N	N	N		
AF	A	A	A	A	A	A	A	A	A

A. Anuvasana Basti; N.Niruha Basti; M-Morning; AF-Afternoon

Duration of the Study

- 1-9th day: Basti in Modified *Kala Basti* schedule
- *Pariharakala* of 30 days.
- Follow up after 30 days.

Assessment Criteria

Follow up during Treatment / Follow up after the treatment :

Panchakarma parameters

- *Samyak Niruha Basti Lakshanas*(7)
- *Samyak Anuvasana Basti Lakshnas*(8)

RogaLakshanas

Subjective parameters: *Lakshanas* of *Amavata* will be assessed after self scoring. *Samanya Lakshanas* of *Amavata* are *Angamarda*, *Aruchi*, *Trusna*, *Alasya*, *Gaurava*, *Jwara*, *Apaka*, *Sandhishotha*, *Sandhiruja*, *Sandhi stabdhata* and *Sparshasahyata*.

Scoring pattern

Subjective parameter	Grading
Angamarda	
Nobodyache	0
Generalized bodyache of and on during the day	1
Generalized bodyache during most part of the day not affecting any work	2
Generalized bodyache throughout the day but person is able to do normal routine	3
Generalized (sarvanga) bodyache/pain enough to affect routine work for all the day	4
Aruchi	
Normal desire for food	0
Eating timely without much desire	1
Desire for food, little late, than normal time	2
Desire for food only after long intervals	3
No desire at all	4
Trishna	
Feeling of thirst (7–9times/24hours) & relieved by drinking water	0
Feeling of moderate thirst (>9-11times/ 24hours) & relieved by drinking water	1
Feeling of excess thirst (>11–13times/ 24hours) not relieved by drinking water	2
Feeling of severe thirst (>13times) not relieved by drinking water	3
Alasya	
No Alasya (doing satisfactory work with proper vigor & in time)	0
Doing satisfactory work/late initiation, like to stand in comparison to walk	1
Doing unsatisfactory work/late initiation, like to sit in comparison to stand	2
Doing little work very slow, like to lie down in comparison to sit	3
Don' t want to do work/no initiation, like to sleep in comparison to lie down	4
Gaurava	
No feeling of heaviness	0
Occasional feeling of heaviness	1
Continuous feeling of heaviness, but patient does usual work	2
Continuous feeling of heaviness which hampers usual work	3
Unable to do any work due to heaviness	4
Jwara	
No fever	0
Occasional fever subsides by itself	1
Daily once subsides by itself	2
Daily once subsides by drug	3
Continuous fever	4
Apaka	
No Apaka /Indigestion	0
Indigestion / prolongation of food digestion period occasionally related to heavy meal	1
Avipaka occurs daily after each meal takes four to six hour for Udagara shuddhi etc Lakshana	2
Eat only once in a day and does not have hunger by evening	3
Never gets hungry, always feeling heaviness in abdomen	4
Sandhi shotha	
No swelling	0
Felling of swelling	1
Felling of swelling + Heaviness	2
Apparent swelling	3
Huge (Synovial effusion) swelling	4
Sandhiruja	
No pain	0
Distress	1
Annoying	2 – 3
Uncomfortable	4
Dreadful	5 – 6
Horrible	7 – 8
Unbearable distress	9
Agonizing	10
Sandhi sthabdata	
No stiffness	0
< 15 min.	1
< 30 min.	2
< 1 hrs.	3
> 1 hrs	4
Sparsha asahyata	
No tenderness	0
Says tender	1
Patient winces	2
Winces and withdraws	3
Not allowed to be touched	4

Objective Parameters

- Range of movement measured with the help of Goniometer

Overall assessment of the therapy

- Remission(DAS 0- <2.6)
- Low Disease Activity(DAS 2.6 to <3.2)
- Moderate Disease Activity(DAS 3.2 and ≤5.1)
- High Disease Activity(DAS above 5.1)

Observations and results

Effect of therapy on chief complaints such as *Sandhishoola*, *Sandhishotha*, *Sandhistabdhata* and *Sandhisparsa Asahyata* is found to be statistically highly significant (P>0.001) on applying Freidman's test.(Table 7) Also statistically highly significant (P>0.001) results were found on general symptoms such as *Angamarda*, *Aruchi*, *Gaurava* etc and Statistically significant results on functional capacity parameters. The retention time of *Choorna Basti* up to 5- 9mins was observed in maximum number of patients (80%) and retention time of *Anuvasana Basti*-3 to 6 hours was observed in 83.66% patients.

Niruha and *Anuvasana Basti samyak lakshanas* were analysed by using Cochran's 'Q' test. Cochran's 'Q' test showed statistically highly significant (P<0.001) change in *samyak Basti lakshana* of both *Niruha* and *Anuvasana basti* from day 1 to day 6 in all patients.

Subjective Parameters were analysed in 80 patients at the intervals of BT, AT and AFU.

Table 6: General Observations

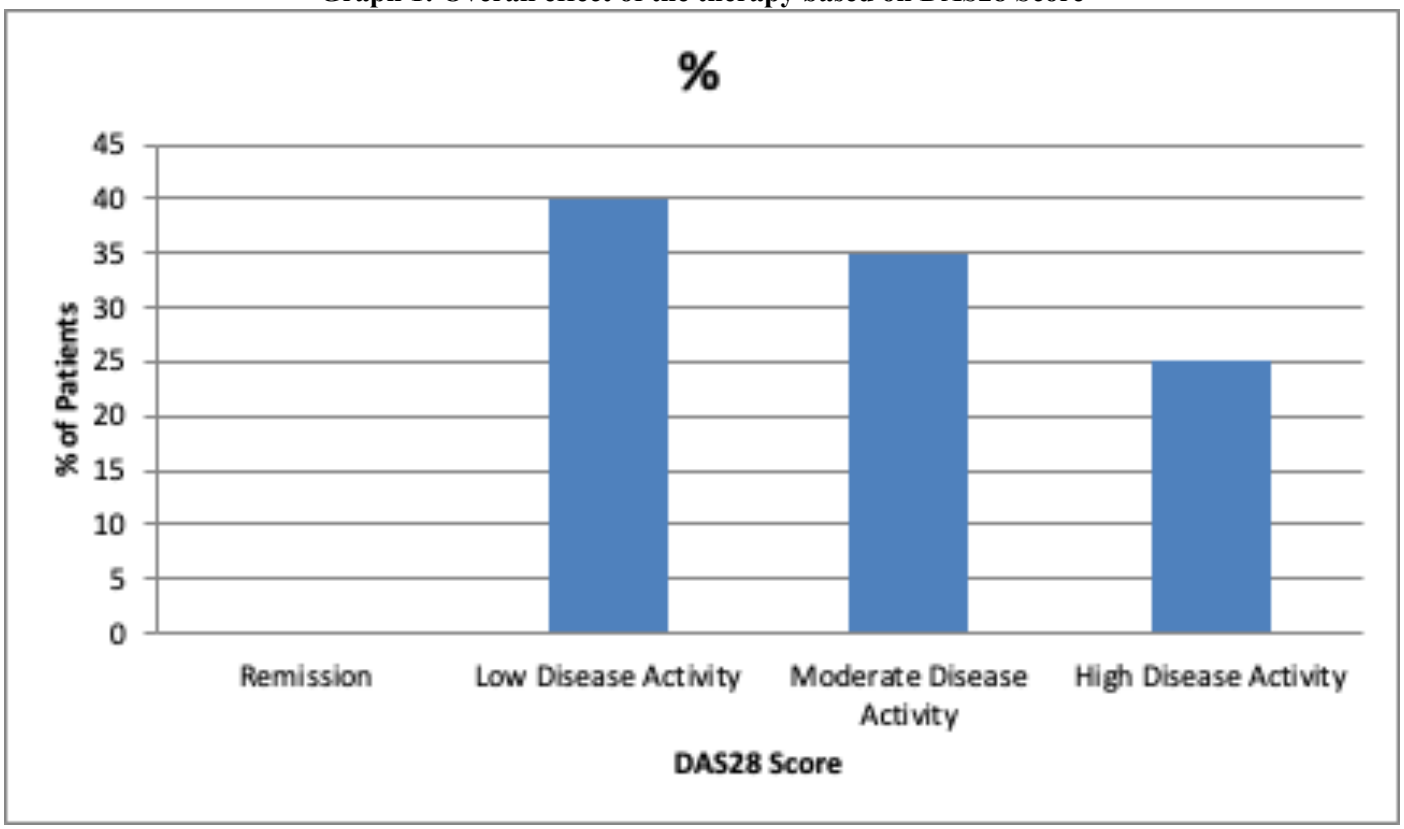
Criteria	Group With Maximum %	Group With Minimum %
Age	41-50 Yrs(46.3%)	21-30 Yrs(04%)
Sex	Female (87.1%)	Male (12.9%)
Relegion	Hindu (92%)	Christian & Muslim (04% Each)
Educational Status	Primary & Middle (32% Each)	Graduation (04%)
Marital Status	Married(72%)	Unmarried(08%)
Socio Economic Status	Lower Class(44%)	Upper Middle Class(24%)
Occupation	Labour(48%)	Service(04%)
Desha	Sadharana(76%)	Jangala(08%)
Diet	Mixed(92%)	Vegetarian(08%)
Addictions	No Addiction(48%)	Alcohol, Smoking & Tobacco (04% Each)
Prakruti	Vata-Pitta(41.9%)	Vata-Kapha(25.8%)
Vayah	Madhyama(96%)	Baala(4%)
Satwa	Madhyama(60%)	Pravara(04%)
Samhanana	Madhyama(76%)	Pravara(04%)
Sathmya	Avara(88%)	Madhyama(12%)
Saara	Madhyama(56%)	Pravara(00%)
Aharashakti-Purvakaleena	Pravara(44%)	Madhyama & Avara(28% Each)
Aharashakti-Adhyatana	Avara(91.02%)	Madhyama(8.98%)
Vyayama Shakti-Purvakaleena	Madhyama(64%)	Avara(04%)
Vyayamashakti-Adhyatana	Avara(96%)	Pravara(00%)

Table 7: Effect of Basti on Subjective parameters by Friedman's test

Sl .No	Parameter	Mean Rank			Chi-square	df	P value	Remark
		BT	AT	AFU				
1	*Angamarda*	2.95	1.84	1.21	142.647	2	0.001	Highly Significant
2	*Aruchi*	2.73	1.75	1.53	108.500	2	0.001	Highly Significant
3	*Trishna*	2.06	1.97	1.97	10.000	2	0.007	Significant
4	*Alasya*	3.00	1.81	1.19	149.488	2	0.001	Highly Significant
5	*Gaurava*	2.99	1.76	1.24	147.736	2	0.001	Highly Significant
6	*Jwara*	2.28	1.86	1.86	44.000	2	0.001	Highly Significant
7	*Apaka*	2.72	1.77	1.51	107.140	2	0.001	Highly Significant
8	*Sandhi shotha*	2.96	1.89	1.14	146.990	2	0.001	Highly Significant
9	*Sandhi Ruja*	2.99	1.98	1.04	156.077	2	0.001	Highly Significant
10	*Gatra sthambata*	3.00	1.78	1.23	148.845	2	0.001	Highly Significant
11	*Sparsha asahyata*	2.78	1.89	1.34	117.113	2	0.001	Highly Significant

Overall effect of therapy describes that maximum number of patients (40.12%) got marked improvement with low disease activity.(Graph 1)

Graph 1: Overall effect of the therapy based on DAS28 Score



Discussion

Majority of patients belonged to the age group of 41-50 yrs. (46.3%) followed by 24% of subjects belonging to age group more than 55 years. Rheumatoid arthritis can begin at any age but has its peak between ages 30 to 55 Years(9). 87.1% female were registered in study against 12.9% of male patients. The occurrence of RA is relatively common in women population. The female: male is about 3:1. Majority of the patients were having *Mandagni* (91.02%). *Mandagni* is the root cause of all the disease, particularly of *Amavata*. Maximum 41.9 % patients in the study belonged to *Vata Pitta Prakriti*, whereas minimum patients 25.8% were reported in *Vata Kapha* group. Hemadri comments that *Vata-Pitta Prakriti* is *Hinatama* and the individuals possessing this *Prakriti* are more prone to disease. *Vaishwanara churna*(10) consists of *Saindava, Yavani* (Trachyspermum ammi), *Ajamoda* (Trachyspermum roxburghianum), *Nagara* (Zingiber officianale) and *Haritaki* (Terminalia chebula). *Rasna Saptaka kashaya(11)* comprises of *Rasna* (Alpinia galanga), *Guduchi* (Tinospora cordifolia), *Aragwadha* (Cassia fistula), *Devadaru* (Cedrus deodara), *Gokshura* (Tribulus terrestris), *Erandamoola* (Roots of Ricinus communis), *Punarnava* (Boerhavia diffusa)(12). Both these combinations have *Vata-kaphahara, Deepaniya, Sothahara* and *Amahara* properties. In the present study, *Dhanyamla* is used as *Amladravya* and for *Avapa* which is having *Amahara* and *vatahara* property(13). *Brihat Saindavadi Taila* is used for *Anuvasana Basti*. The base of this *Taila* is *Eranda Taila* and is mainly *Vata Kapha Samaka*. The *Eranda Taila* is medicated by different drugs which are also of *Usna Virya, Agnidipana* and *Vatakapha Samaka*. Thus, for *Anuvasanabasti* in the *Amavata* patients, the *Eranda Taila* seems to be best and so this preparation of *Eranda Taila* i.e. *Brihat saindhavadi Taila* was selected. The contents of *Brihat Saindavadi Taila* are *Saindava Lavana, Gaja Pippali* (Scindapsus officinalis), *Rasna* (Pluchea lanceolata), *Shatapushpa* (Anethum sowa), *Yavani* (Carum copticum), *Sarja Kshara, Marica* (Piper nigrum), *Kusta* (Saussurea lappa), *Shunti, Souvarchala Lavana, Vida Lavana, Vacha* (Acorus calamus), *Ajamoda* (Apium graveolens), *Madhuka* (Madhuka longifilia), *Jeeraka* (Cuminum cyminum), *Pushkara Moola* (Inula racemosa), *Kana* (Piper longum)(14). *Basti* administered with *Ushna* and *Teekshna* properties may aggravate the *Vata*. To pacify the aggravation of *Vata, Anuvasana basti*(15) with *Brihat Saindavaditaila* is given in modified *Kala Basti* Schedule as *Amavata* is a *Gambheera dhatugata vyadhi*. According to authorities, after giving *Niruha Basti* in the morning, on the same day *Anuvasana Basti* can be given(16). If this schedule is followed then *Yoga Basti* can be completed in 5 days, *Kala Basti* 9 days and *Karma Basti* in 18 days. In this way duration of the *Basti* schedules can be reduced significantly.

Conclusion

It can be concluded that *Amavata* in the modern parlance can be correlated with Rheumatoid Arthritis which is a highly prevalent disease in the present life

scenario. Therefore, *Churna Basti* comprising of drugs possessing properties opposite to *Ama* can be considered as a good remedy in the management of the disease.

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