

A CLINICAL STUDY ON THE MANAGEMENT OF AMAVATA WITH SPECIAL REFERENCE TO RHEUMATOID ARTHRITIS BY KSHARA BASTI

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ABSTRACT

Rheumatoid Arthritis is a chronic multiple system disease of unknown cause. In present era, no cure or prevention is available on it. Only symptomatic management is done. Drugs such as NSAID (non steroidal anti-inflammatory drugs), DMARDs (disease modifying anti-rheumatoid drugs) and BRMs (body reaction modifiers) are used. Prolonged use of these drugs hampers patient's life economically and emotionally.

In *Ayurveda*, its symptoms can be correlated with that of *Amavata*. *Chakrapani* has recommended role of the *Kshara Basti*. 60 patients visiting OPD and IPD of *Kayachikitsa* department were diagnosed as per criteria, given by American Society of Rheumatoid Arthritis. These patients were allotted in Treated and Control Group by lottery method. Trial and Control Group patients were treated by *Kshara* and *Vaitarana Basti* respectively for 15 days. Assessment was done on the basis of degree of disease activity given by American association of Rheumatoid Arthritis. The results were optimistic and encouraging. The effect of the treatment on the degree of disease activity was better in individual groups but comparison between two groups proved to be insignificant.

Key words: *Amavata*, *Kshara Basti*, *Vaitarana Basti*, Rheumatoid Arthritis.

INTRODUCTION

Amavata derived from *Ama* and *Vata*. *Ama* means undigested form of food having contribution in the commencement of the disease. *Ama* is mentioned as the root cause of all diseases^[1]. *Amavata* might be correlated with the rheumatoid arthritis due to the similarities between their signs and symptoms. It is very crippling disease hampering not only patient physically but also family mentally. Keeping all these views in mind a study was planned to evaluate the effect of *Kshara Basti* mentioned by *Chakrapani*^[2].

AIMS AND OBJECTIVES

Evaluate the effect of *Kshara Basti* and to compare its effect with that of *Vaitarana Basti* on Degree of Disease Activity.

MATERIALS AND METHODS

Type of Study: Open Randomised Control Trial.

Selection of Sample: Patients visiting OPD irrespective of sex, religion, economical status.

Size of Sample: 30 patients in each group.

Randomisation technique: Lottery method.

Centre of study: Government Ayurved College, Nagpur

Selection of Drug: *Kshara Basti* used in Trial Group and *Vaitarana Basti* in Control group.

Table-1:

Table Showing Contents of Kshara Basti and Vaitarana Basti with Their Modified Doses

Sr.No.	Contents of Kshara Basti	Modified Parimana	Matra in present era	Contents of Vaitarana Basti	Modified parimana	Matra in present era
1	Amlika	1 Pala	40gm	Amlika	½ Pala	20gm
2	Guda	1 Pala	40gm	Guda	½ Shukti	10gm
3	Saindhava	½ Aksha	5 gm	Saindhava	½ Karsha	5gm
4	Shatavha	½ Aksha	5 gm	Tiltaila	1/8 th Gomutra	10ml
5	Gomutra	4 Pala	160ml	Gomutra	½ Kudava	80ml

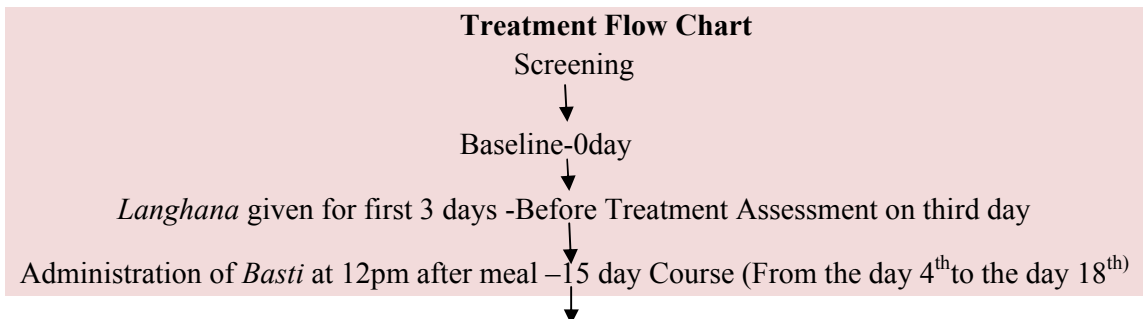
Table-2: Table showing properties of contents of Kshara Basti^[3]

Drug	Guna	Rasa	Virya	Vipaka	Doshghnata	Karma
Amlika	Guru, Ruksha, Khara	Amla Madhur	Ushna	Amla	Kapha Vata	Deepan
Guda	Guru, Snigdha	Madhur	Shita	Madhur	Vata-Pitta	Balya, Brihana, Mansa-Meda Vardhana, Srutha Shakrut Mutra
Saindhva	Snigdha, Tikshna, Laghu	Lavana	Shita	Madhur	Tridosha	Deepan, Pachana, Sara, Vikasi, Margashodhaka, Adhasransi, Vrushya
Shatavha	Laghu Ruksha Tikshna	Katu Tikta	Ushna	Katu	Vata-Kaph	Deepan, Vedana sthapana, Jvaraghna, Trishnahara, Dahanara, Medhya
Gomutra	Laghu, Tikshna, Sukshma	Katu, Lavana	Ushna	Katu	Kapha-Vata	Agnideepan, Medhya, Vishanashaka, Krimighna

To evaluate the *Rasa*, *Virya* and *Vipaka* of *Kshara Basti* marking system as used by Kabra P.R. was followed^[4]. The results obtained are might be because of pharmacological action of *Lavan-Katu Rasa*, *Katu Vipaka* and *Ushna Virya* of contents in the *Kshara Basti*.

CRITERIA OF DIAGNOSIS: Criteria given by American Criteria of Rheumatoid Arthritis (1967) as well as signs and symptoms mentioned in *Ayurved* literature.

MANAGEMENT OF GROUPS



Assessment On 19th day- After Treatment Assessment

CRITERIA OF ASSESSMENT

All the patients included in the study were assessed on the basis of following criteria.

Degree of disease activity: For diagnostic and therapeutic purpose, it was done on the basis of criteria of American Rheumatism Association. In this criterion the maximum

score is 30 representing an average grade of 3. After dividing the total score by 10 the grade of the disease was obtained and was denoted by grade zero to three. The Table-3 is described herewith.

Table-3: Table Showing Criteria of Estimation of Degree of Disease Activity

Grade	0	1	2	3
Morning stiffness	No morning stiffness	Morning stiffness >1/2 hr but <1hr	Morning stiffness >1 hr but <6 hrs	Morning stiffness throughout the day
Fatigue	No fatigue	Work fulltime despite fatigue	Patient interrupts work to take rest	Fatigue at rest
Pain	No pain	Mild pain not disturbing routine	Moderate pain hampering routine	Sever pain interrupting routine
General function	All activities without difficulty	Most activities but with difficulty	Few activities, care for self	Little self care, mainly chair and bedridden
Grip strength in mmHg	>70	70-50	50-30	<30
Spread in joints	None	0-5	5-10	>10
ESR in mm/Hr	0-20	20-40	40-60	>60
Hb gm%	>12	12-10	10-9	<9
Physician's estimate	Inactive	Minimum	Moderately active	Severely active
Patient's estimate	Fine	Almost Well	Pretty Good	Pretty Bad

OBSERVATIONS AND RESULTS

The changes in the status of signs and symptoms, investigations were recorded. The history recorded in this study on the case record form revealed the facts and findings which are presented herewith

in the tabular form. Some of them are highlighted with the help of graphical presentations.

Table-4: Table Showing Effect on Degree of Disease Activity by Wilcoxon-Ranked Signed Test

S N	Parameters	Groups	W	T+	T-	Median	Mean ± SD		SD	Z	P
							BT	AT			
1	Morning Siffness	TG	46	46	0.0	1.0	2.20±0.61	0.77±0.43	48.6	4.7	<0.0001
		CG	43	43	0.0	2.0	2.37±0.49	0.87±0.63	48.6	4.1	<0.0001

2	Fatigue	TG	46 5	46 5	0.0	2.0	2.33±0. 55	0.80±0. 76	48.6 2	4.7 7	<0.00 01
		CG	43 5	43 5	0.0	1.0	2.20±0. 41	0.93±0. 69	48.6 2	4.1 5	<0.00 01
3	Pain	TG	46 5	46 5	0.0	1.0	2.40±0. 50	0.93±0. 52	48.6 2	4.7 7	<0.00 01
		CG	43 5	43 5	0.0	1.0	2.40±0. 50	1.07±0. 52	48.6 2	4.1 5	<0.00 01
4	General Function	TG	46 5	46 5	0.0	1.0	1.90±0. 66	0.57±0. 50	48.6 2	4.7 7	<0.00 01
		CG	43 5	43 5	0.0	1.0	2.17±0. 46	0.93±0. 69	48.6 2	4.1 5	<0.00 01
5	Grip Power	TG	23 2	25 4	22	1.0	2.63±0. 61	1.93±0. 74	48.6 2	0.4 3	<0.00 01
		CG	30 0	30 0	0.0	1.0	2.97±0. 18	2.17±0. 38	48.6 2	1.3 8	<0.00 01
6	Spread in Joints	TG	46 5	46 5	0.0	1.0	2.70±0. 47	1.43±0. 50	48.6 2	4.7 7	<0.00 01
		CG	40 6	40 6	0.0	1.0	2.53±0. 57	1.30±0. 54	48.6 2	3.5 6	<0.00 01
7	Hemo-globin	TG	0.0 5	10. 5	10.	0.0	1.77±0. 97	1.77±0. 86	48.6 2	- 4.5	>0.99 99
		CG	30 91	67 72	37	0.0	1.73±0. 91	1.60±0. 72	48.6 2	- 3.4	<0.42 40
8	ESR	TG	19 6	23 6	40	1.0	1.87±0. 73	1.23±0. 90	48.6 2	0.0 6	<0.00 12
		CG	12 1	13 7	16	0.5	1.67±0. 84	1.17±0. 83	48.6 2	- 1.9	<0.00 18
9	Physician Estimate	TG	43 5	43 5	0.0	1.0	2.50±0. 57	1.37±0. 49	48.6 2	4.1 5	<0.00 01
		CG	46 5	46 5	0.0	1.0	2.27±0. 52	1.17±0. 46	48.6 2	4.7 7	<0.00 01
10	Patient Estimate	TG	46 5	46 5	0.0	1.0	2.67±0. 48	1.30±0. 70	48.6 2	4.7 7	<0.00 01
		CG	43 5	43 5	0.0	1.0	2.77±0. 43	1.40±0. 62	48.6 2	4.1 5	<0.00 01

Table-5: Table Showing Comparison between Two Groups of Amavata with respect to Degree of Disease Activity by Mann-Whitney Test

SN	Symptoms	Mean ± SD of Trial Gr	Mean ± SD of Control	T1	T2	U'	U stat	Z	P
1	Morning stiffness	1.43±0.50	1.50±0.57	878.5	951.5	486.5	413.5	0.5322	<0.6058
2	Fatigue	1.53±0.51	1.27±0.52	1027	803	562	338	1.6484	<0.0833
3	Pain	1.47±0.51	1.33±0.55	968	862	503	397	0.7762	<0.4610
4	General function	1.33±0.48	1.23±0.50	955	875	490	410	0.5840	<0.5977
5	Grippower (mmHg)	0.70±0.70	0.80±0.41	888	942	477	423	0.3918	<0.6220

6	Spread in joints	1.27±0.45	1.23±0.57	922	908	457	443	0.0961	>0.9999
7	Hb _{gm} %	0.00±0.45	0.13±0.68	861	969	504	396	0.7910	<0.2779
8	ESR in mm/Hr	0.63±0.89	0.50±0.73	967	863	502	398	0.7614	<0.4179
9	Physician's estimate	1.33±0.43	1.10±0.31	931.5	898.5	466.5	433.5	0.2366	<0.7065
10	Patient's estimate	1.37±0.49	1.37±0.56	909.5	920.5	455.5	444.5	0.0739	>0.9999

DISCUSSION AND CONCLUSION

Effect on Degree of Disease Activity:

Statistical analysis was carried out in each of the criteria with the help of Wilcoxon-Ranked Signed Test which has been presented in Table-4

Effect on morning stiffness: It can be highlighted from above tables that the *Kshara Basti* in Treated Group and *Vaitaran Basti* in Control Group exhibited very highly significant reduction in the morning stiffness. In the same manner it has also shown beneficial effect on ranks of fatigue, pain, general functions and grip power, spread in joints, ESR, physician estimate and patient estimate which were very highly significant in respective groups.

Effect on Haemoglobin Rank: The results obtained in Trial Group from statistical tables were insignificant as sum of ranks was 0.0, $Z=4.58$, $P>0.9999$. Similarly in Control Group results were insignificant because $P>0.05$.

Comparison between Two Groups with respect to Degree of Disease Activity:

Effect on Morning Stiffness:

The mean of difference in Treated Group for Morning Stiffness was $1.43±0.50$ and in case of Control Group it was $1.50±0.57$. Statistical analysis was further carried out by Mann-Whitney U test for the comparison of two independent

quantitative data. T1 and T2 were 878.5 and 951.5 respectively. U' and U stat were 486.5 and 413.5 respectively. Z was 0.532, $P<0.6058$. The result showed insignificant result in case of morning stiffness (Table-5).

Effect on other Criteria of Degree of Disease Activity:

As explained above, the mean of difference of fatigue, pain and general function, grip power, spread in joints, haemoglobin, ESR, physician estimate and patient estimate were analysed by Mann-Whitney test for the comparison of two independent quantitative data.

However, when this increase was statistically tested by Mann-Whitney Test, the results were insignificant (Table-5).

Comparison between Two Groups with Respect to Degree of Disease Activity:

Effect on Morning Stiffness: The mean of difference in Treated Group for Morning Stiffness was $1.43±0.50$ and in case of Control Group it was $1.50±0.57$. Statistical analysis was further carried out by Mann-Whitney U test for the comparison of two independent quantitative data. T1 and T2 were 878.5 and 951.5 respectively. U' and U stat were 486.5 and 413.5 respectively. Z was 0.532, $P<0.6058$. The result showed insignificant result in case of morning stiffness.

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However, when this increase was statistically tested by Mann-Whitney Test, the results were insignificant.

The results obtained are might be because of pharmacological action of *Lavan-Katu Rasa, Katu Vipaka* and *Ushna Virya* of contents in the *Kshara Basti*.

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