



Research Article

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A COMPARATIVE STUDY TO EVALUATE THE RUJAHARA (ANALGESIC) EFFECT OF VIRECHANA KARMA AND VAITARANA BASTI IN AMAVATA (RHEUMATOID ARTHRITIS)

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ABSTRACT

In Amavata the most responsible issue Ama is caused because of derangement of Agni particularly Jatharagni. Ama associated with the vitiated Vata Dosha is termed as Amavata. The same disease is mentioned in modern system with the name of Rheumatoid arthritis. In modern Medicine NSAIDs, Glucocorticoids, DMARDs are used. These medicines have many toxic effects like osteoporosis, hypertension, diabetes etc. In present study Virechana Karma and Basti Karma were selected as Shodhana Chikitsa. It is directly mentioned in the Chikitsa Sutra of Amavata by Chakradatta and other texts. The present clinical study was conducted in Patients of age more than 25 year up to 50 year. Patients were randomly divided in two Groups, irrespective of religion, sex, occupation etc. In Group A Virechana was given and Group B Vaitarana basti was given. Group A- There was relief in Sandhishool 21.1%, VAS pain 16.1%, Tenderness 23.2 % Swelling 20.7%, DAS 10.8%, 12.1% in ESR. Group B- There was relief in Sandhishool 29.3%, VAS pain 18.2%, Tenderness 37.2 % Swelling 44.9%, DAS 28 18%, ESR 23.3%. At follow-up of 30 days Virechana Karma and Vaitarana Basti were almost equally effective to reduce Sandhishool. Vaitarana Basti is significantly effective than Virechana Karma to reduce Tenderness, Swelling.

Keywords: Amavata, Rheumatoid arthritis, Panchakarma, Virechana, Basti.

INTRODUCTION

Amavata is one of the most crippling disorders affecting day to day activities of the patients. It not only affects the joints but also affect the whole body the most responsible issue Ama is caused because of derangement of Agni particularly Jatharagni¹. Ama associated with the vitiated Vata Dosha is termed as Amavata. The same disease is mentioned in modern system of drugs with the name of Rheumatoid arthritis that could be a chronic, inflammatory disease-causing restriction of movement of the affected joints. About 0.8% (0.3% to 2.1%) of the population worldwide is affected by this disease. In India the prevalence of this disease is 0.5% to 0.75%. 80% of patients are developing the disease between 30 to 50 years of age². Community prevalence study shows that male female's ratio is 3:1²

In Contemporary system of Medicine, Presently NSAIDs, Glucocorticoids, and DMARDs are used. These medicines have many toxic effects like osteoporosis, hypertension, diabetes etc. Methotrexate and other DMARDs may cause hepatotoxicity, interstitial Pneumonitis, nausea and diarrhoea. NSAIDs cause gastritis, peptic ulcer and impairment of renal function. According to Various Acharyas, chikitsa sutra of Amavata should be started with Langhana (fasting) followed by deepana (improving appetite), Pachana (improving digestion), Swedana (fomentation therapy), Virechana (Purgation) and Basti (medicated enema) sequentially. In Amavata, Srotodha is present which is removed due to Srotoshodhana property of Virechana drugs. Virechana is described as the treatment procedure with special reference to Koshta Shuddhi in Pittaja

vikara, Amajanya roga, Udara roga and Aadhmaan³. As Agnimandya is the reason for Amottpatti, the treatment of Agnimandya as per Ayurveda includes Langhana, langhana-Pachana and Dosh avshechan.

MATERIAL AND METHODS

Method of study (protocol of study)

Pre-trial screening

This was done before the commencement of the clinical trial.

Complete medical history

Routine hematological tests

Total 38 patients were screened out of basis of inclusion and exclusion criteria from OPD of Ch. Brahm Prakash Ayurved Charaka Sansthan, Khera Dabar, Najafgarh and New Delhi.

Out of them patients 2 were dropped out. Nature and the purpose of the study was explained fully to the patients and written consent was taken from all enrolled patients.

Ethical clearance

This study was approved by Institutional Ethical Committee (IEC) of Ch. Brahm Prakash Ayurved Charka Sansthan, Khera Dabar, Najafgarh, New Delhi vide letter no. F1(553)/13/CBPACS/Adm./IEC/6709; dated 3/01/2019, before starting the clinical trial on patients of Amavata (Rheumatoid arthritis) and CTRI Reg. No. is CTRI/2019/02/017432 dated 21/02/2018.

Criteria of diagnosis

- The main criteria of diagnosis of patients was based on the associated cardinal sign and symptoms of disease based on the Ayurvedic and modern text.
- Patients who had 2010 ACR-EULAR criteria Grading more than and equals to 6⁴.

Inclusion criteria

- Patients with clinical features of Amavata as described in Madhava Nidana.
- Patients between the age group of 21 to 50 years.
- Patients fulfilling the 2010 ACR-EULAR criteria for Rheumatoid Arthritis.

Exclusion criteria

- Patients having severe crippling bone deformities and severely damaged joint with bed ridden patients.
- Patients having any type of Arthropathy such as neoplasm of spine, Gout, Ankylosing spondylitis, Traumatic arthritis and pyogenic osteomyelitis and any other type of arthritis.
- Patients having associated Cardiac disease, Tuberculosis, malignant hypertension, Impairment of Liver functions, Impairment of Renal functions, malignancy, HIV-AIDS etc.
- Pregnant women and lactating mother
- Patients who developed secondary complication of RA e.g. Pleuro-pericardial diseases.

Grouping

Group A - In this group Virechana was given.

Group B – In this group Vaitarana basti was given.

Table 1: Group A: Procedure Protocol

Procedure	Drug, Dose	Duration
1. Deepana and Pachana	500 mg Chitrakadi vati twice a day after taking meal	Till pachana Achieved
2. Snehapana	Snehapana with Shunthi ghrita as per koshta and Agni. (in morning on empty stomach 07.00 AM)	3-7 days
3. Abhyanga and Swedana (on Vishrama kala)	Abhyanga with Laghuvisgarbha oil (35 min) Sarvanga sweda (10-15 min)	3 day
4. Virechana karma	Trivritadi churna ⁵ as per koshta and Agni (In Pitta kala.).	1 days
5. Sansarjana karma	Diet as per shuddhi ⁶ (from the evening of virechana day)	3-7 days

Group B: Basti Schedule

Vaitarana basti⁷ was administered after taking Mudga Yusha for 8 days in the sequence of Yoga basti.

Duration of clinical trial and follow up study

Total Duration of trial

30 days for each patient including follow-up.

Follow up screening

Initial assessment – 0 day, Follow up after Virechan, after basti and on 8th and 16th day after completion of treatment

Study Design

Single Centre, open label, Randomized, Interventional and Comparative study

Criteria of Assessment

Subjective Criteria: DAS criteria (DAS28)

Interpretation of DAS 28

DAS28 score of higher than 5.1 are indicative of high disease activity, whereas a DAS28 below 3.2 indicates low disease activity. A patient is considered to be in remission if they have a DAS28 lower than 2.6.⁸

Subjective Criteria as per Ayurvedic Classics

Table 2: Sandhishool (Pain in joints)

Severity of Pain	Grade
No pain	0
Mild pain	1
Moderate, but no difficulty in moving	2
Slight difficulty in moving due to pain	3
Much difficulty in moving the bodily parts	4

Objective Criteria

Inflammation assessed by ESR reading is before and after treatment.

Summary of clinical observation are as follows

Maximum 36.1% of patients were from the age group of 31-40 years, 88.9% were female, 83.3% were married, 58% were Rural habitat, 63.9% were from middle class, 97.2% patients having no addiction, 69.4% were of vegetarian history, 55.6% were having irregular bowel, 66.7% were having medium appetite, 50% were having Mandagni, 33.3% belongs to Vata- Kaphaja/Kapha - Vata Prakriti and 61% were having Madhyam, Satva, 61% were having Madhyama Satmya, 88.9% were having Madhyama Samhanana, 88.9% were having Madhyama Pramana, 80.6% were having Madhyama Ahara shakti, 88.9% patients were taking Madhur Rasa Ati sevana.

RESULT

Statistical Analysis

Comparison Group A and Group B (By Unpaired t Test)

Table 3: Sandhishool

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	0.666	0.485	1.844	0.0739
	Group B	18	0.944	0.416		
BT vs. AT8	Group A	18	1.111	1.500	1.686	0.1009
	Group B	18	0.758	0.618		
BT vs. AT16	Group A	18	0.833	0.923	1.767	0.0862
	Group B	18	1.333	0.767		

Table 4: VAS

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	1.222	0.942	0.651	0.5188
	Group B	18	1.444	1.097		
BT vs. AT8	Group A	18	1.444	1.464	1.717	0.0950
	Group B	18	2.278	1.447		
BT vs. AT16	Group A	18	1.333	1.495	1.959	0.0584
	Group B	18	2.444	1.886		

Table 5: Tenderness

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	3.778	4.918	1.638	0.1107
	Group B	18	6.500	5.056		
BT vs. AT8	Group A	18	4.056	5.363	2.639	0.0237
	Group B	18	8.167	5.044		
BT vs. AT16	Group A	18	4.222	5.151	1.714	0.0956
	Group B	18	7.778	7.134		

Table 6: Swelling

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	2.389	4.272	2.314	0.0268
	Group B	18	6.833	6.939		
BT vs. AT8	Group A	18	2.444	4.718	2.908	0.0064
	Group B	18	8.222	6.984		
BT vs. AT16	Group A	18	2.444	4.668	2.656	0.0120
	Group B	18	7.500	6.591		

Table 7: DAS 28

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	0.727	0.766	1.964	0.0578
	Group B	18	1.233	0.768		
BT vs. AT8	Group A	18	0.488	0.810	3.977	0.0003
	Group B	18	1.494	0.703		
BT vs. AT16	Group A	18	0.550	0.830	2.317	0.0267
	Group B	18	1.206	0.866		

Table 8: ESR

BT/AT	Group	N	Mean	SD	T	P
BT vs. AT	Group A	18	5.722	9.767	0.877	0.3863
	Group B	18	9.389	14.79		
BT vs. AT8	Group A	18	-3.389	21.93	0.636	0.5289
	Group B	18	1.667	25.60		
BT vs. AT16	Group A	18	-3.556	26.46	0.564	0.5760
	Group B	18	0.888	20.37		

Intra-group analysis (By Paired t Test)

A. Sandhishool

Table 9: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	13.91	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)
Group B	18	47.73	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)

B. VAS

Table 10: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	10.92	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)
Group B	18	27.68	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)

C. Tenderness

Table 11: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	9.79	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)
Group B	18	18.55	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)

D. Swelling

Table 12: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	4.623	0.0062	BT > AT (p < 0.05) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)
Group B	18	16.69	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)

E. DAS 28

Table 13: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	6.50	0.0008	BT > AT (p < 0.01) BT > AT8 (p < 0.05) BT > AT16 (p < 0.01)
Group B	18	29.99	< 0.0001	BT > AT (p < 0.01) BT > AT8 (p < 0.01) BT > AT16 (p < 0.01)

F. ESR

Table 14: Repeated measure ANOVA Test: in Group A and in Group B

Group	N	F	P	Dunnnett Post Test
Group A	18	1.822	0.1549	BT > AT (p > 0.05) BT > AT8 (p > 0.05) BT > AT16 (p > 0.05)
Group B	18	2.082	0.1141	BT > AT (p > 0.05) BT > AT8 (p > 0.05) BT > AT16 (p > 0.05)

Changes in parameters before and after treatment**Table 15: Effect of therapy (% Relief in parameters Group A)**

S. No.	Symptoms	Group A		
		AT	AT8	AT16
1	Sandhishool	21.1	35.1	26.3
2	VAS pain	16.1	19	17.5
3	Tenderness	23.2	24.9	25.9
4	Swelling	20.7	21.2	21.2
5	DAS28	10.8	7.25	8.16
6	ESR	12.1	-7.14	-7.49

Table 16: Effect of therapy (% Relief in parameters Group B)

S. No.	Symptoms	Group B		
		AT	AT8	AT16
1	Sandhishool	29.3	46.6	41.4
2	VAS pain	18.2	28.7	30.8
3	Tenderness	37.5	47.1	44.9
4	Swelling	44.9	54	49.3
5	DAS28	18	21.8	17.6
6	ESR	23.3	4.14	2.21

Statistical Analysis

All the results were calculated by using Graph pad Instat software. For inter-group comparison parametric data: "By unpaired t Test" was used and the results calculated in each group. For Intra group Repeated measure ANOVA and paired t test were applied. ANOVA was applied in Group A and Group B to analyze follow-up wise effect.

DISCUSSION**On subjective parameters****Sandhishool**

Vata dosha is the main pathological factor along with Kapha Dosha and Rasa dhatu, Rasavaha Srotodushti are mainly seen. Vaitarana Basti removes Rasavaha Srotodushti due to Ushna and Tikshna properties. Shoola is mainly due to Vata Dosha and Basti is the main treatment modality for Vata dosha⁹. Virechana eliminates the vitiated Kapha and Pitta, removes Avarana of Vayu, and in turn results in Vatanulomana.

Shotha (Swelling)

Shotha, Sparshasahatva, signifies the presence of Ama. Chinchha and Gomutra helped in Amapachana. Virechana karma corrects vitiation of Vata by removing the obstruction of channels. Sandhigraha and Sandhishotha may be due to the chronicity and Avarana of Kapha. Virechana has Srotoshodhana and Agni deepana effect, which elevates the Agni and checks further Ama formation

Sparshasahisnuta (Tenderness)

Tenderness may be due to the chronicity and Avarana of Kapha. Virechana has Srotoshodhaka and Agni deepana properties, which elevates the Agni and checks further Ama formation. In this Basti, maximum quantity is of Gomutra, which is having Kshara Guna. Kshara has the property of Lekhana and Vishoshana¹⁰, which are antagonistic to Ama. Shodhana Karma has to be said beneficial in chronic condition.

Objective parameters**ESR**

Chinchha and Gomutra, have antioxidant and anti-inflammatory properties, which reduces the inflammatory process in the body i.e. the ESR was reduced by Vaitarana Basti. Virechana drugs due to their virtue liquefy the morbid Dosha and bring them up to the Amashaya. Due to toxin removal, there is reduces in inflammation which leads to decrease ESR.

CONCLUSION

The statistical data showed significant result in subjective parameters of Sandhishool Score in both groups. Comparing the symptomatic improvement in all two groups it was found that average percentage of relief was higher in Group B (Vaitarana basti) in comparison to Group A (Virechana). It showed that efficacy of Vaitarana basti is more but statistically the difference between the effects of two therapies was insignificant, so it's being concluded that patients can be given Basti or Virechan according to condition, Chronicity, Dosha, Dushya, Ritu, Vaya etc. At follow up of 30 days Virechana Karma and Vaitarana Basti are almost equally effective to reduce Sandhishool. Vaitarana Basti is significantly effective than Virechana Karma to reduce Tenderness, Swelling.

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