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RESEARCH ARTICLE

A Comparative Clinical Study of Virechanakarma and KokilakshadiGhanvati in Amavata (Rheumatoid Arthritis)

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ABSTRACT

Despite of amazing diagnostic machines and designer-crafted medicines, our society is suffering from preventable epidemics of heart disease, cancer, Rheumatoid Arthritis, other infectious illnesses. *Ayurveda* has taken the foremost place in the management of crippling diseases. *Amavata* is one of them. From the modern point of view, this disease looks similar toRheumatological disorders called Rheumatoid Arthritis. **Aim & Objectives:** To assess the clinical efficacy of *VirechanKarma* and *KokilakshadiGhanvati* in the management of *Amavata*(Rheumatoid Arthritis) **Materials And Methods**: 28 patients having *Amavata* and fulfilling the Criteria were selected (15 in Group A and 13 in Group B) in two groups irrespective of their sex, caste, religion from OPD & IPD of I.P.G.T. & R.A., Hospital, Gujarat Ayurved University, Jamnagar. **Result:** Group A provided better result than Group B. **Statistical Analysis:** It has been done by Wilcoxon test, Student's "t" test and Chi square test.

Key words:*Amavata,Ayurveda,KokilakshadiGhanvati andVirechanaKarma*

INTRODUCTION

According to *Ayurveda,Amavata* word is composed of two words *"Ama"* and *"Vata"*.In terms of *Ayurveda* '*Ama*' means unripe, immature, undigested Ahara*Rasa* due to *Mandagni*[1]. According to *MadhavNidanaAma* carried by vitiated *Vayu* and travels throughout the body and accumulates in the joints at weaker side and*Amavata* occurs.*Ama* and *Vata* play main role in the *Samprapti* of *Amavata*[2].Rheumatoid Arthritis is characterized by inflammation of Synovial membrane of the joints. Onset of R.A. is most frequent between the ages of 40 to 50 years.About 60% of the patients become unfit to their work 10 years after onset of this disease[3].About 1% of world's population is afflicted by Rheumatoid Arthritis, women three times more than men[4].The similarities of clinical features of Rheumatoid Arthritis, like Pain and swelling in multiple joints, stiffness in the joints, Fever, redness in the joints, general debility are almost identical to that of *Amavata.KokilakshadiGhanvati* was selected for present study which contains three drugs could be good effective for management of *Amavata*, is mention in *Vatraktadhikara*by*Bheshjyartnavali*[5].*Panchakarma* is a science for purification of the body, because vitiation of *Doshas* beyond a particular level produces endotoxins which tend to accumulate in the *Srotasa* (minute channels) of the body which are to be removed for maintaining disease free health which is done by *Panchakarma*. For that, *Virechana* was selected as a *Panchkarma* procedure in present study.*Virechana* has direct effect on *Agnisthana* and hampered Agni is one of the initiating factors in *Amavata*and was mentioned in *AmavataChikitsa* by *Chakradata*[6].

AIMAND OBJECTIVES

To assess the clinical efficacy of *VirechanaKarma* and *KokilakshadiGhanvati* in the management of *Amavata*(Rheumatoid Arthritis)

MATERIALS AND METHODS

Selection of Patients:

30 patients having *Amavata* and fulfilling the Criteria were selected (16 in Group A and 14 in

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Group B) in two groups irrespective of their sex, caste, religion from OPD & IPD of I.P.G.T. & R.A., Hospital, Gujarat Ayurved University, Jamnagar.

Ethical committee clearance and consent: Institutional Ethics Committee (IEC) approval was taken prior to initiation of research vide its letter No PGT/7A/2012-13/1964. No any adverse drug reactions (ADR) were noted or reported.

Inclusion Criteria:

1. Patients fulfilling the diagnostic criteria, of either sex with age between 20 to 60 years
2. Willing and able to participate in the study.

Exclusion Criteria:

1. Patients having severe systemic illness diseases like hypertension, DM,MI, etc.
2. Patients below 20years and above 60years.
3. Pregnant/lactating women.
4. Chronicity more than 10 years.

Investigations

All these investigations were done before and after completion of the treatment in both the groups.

1. **Haematological:** - CBC, E.S.R. (Westergrenmethod) (1st hour)
2. **Biochemical:** Blood Urea (mg/dl), Serum Uric Acid (mg/dl), Serum Creatinine (mg/dl) ,S.G.O.T.(A.S.T.) (U/L), S.G.P.T. (A.L.T.) (U/L),RA (Quantitative), CRP(Quantitative).
3. **Urine analysis:** Routine and Microscopic urine analysis.

Grouping: The selected patients were divided into two groups.

GroupA: In this group *VirachanaKarma***(Table1)** was done and then *KokilakshadiGhanavati*[1]**(Table2)** was given in the dose of 2tab (500mg each) BD after meal with warm water for 1 month.In group A, 15 patients were completed the treatment and 1 patient discontinued treatment in between.

Group B: In this group *Kokilakshadighanavati* was given without performing *Virechana Karma*.In group B, 13 patients were completed the treatment and 1 patient discontinued treatment.

Local *Swedana:**Valukapottalisweda* was done in the patients of both the group.

Table1: Method of Drug Administration for Virechana Karma

S. No	Procedure	Drug & dose	Duration
1	*Dipana – pachana*	*Trikatuchurna* 2gm TDS with warm water	4 days
2	*Snehapana*	*Go-Ghrita*	3 to 7 days
3	*Abhyanga&svedana*	*Balataila 2 times/day*	3 days
4	*Virechana karma*	*Errand taila*:20-30ml approx *Trivrutchurn*:20-30gm approx *TriphalaKvath*:100ml	1day
5	*Sansarjana karma*	Diet as per *shuddhi*	3 to 7 days

Table2: Ingredients of KokilakshadiGhanvati

S. No	Drug Name	Botanical Name	Family	Part used	Part
1	*Kokilaksha*	*Haygrophilaspinosa*	Acantheceae	Whole plant	1
2	*Guduchi*	*Tinosporacordifolia*	Menispermaceae	Stem	1
3	*Pippali*	*Piper longum*	Piperaceae	Fruit	1

Pathyapathya (Dietary Restrictions):

The patients were strictly advised to follow the restrictions regarding food, food habits and life style. They were instructed to avoid the possible causative factors of disease and causes for *Agnimandya.*

Follow-Up:

A follow-up was done for one month after completion of the treatment at fortnight intervals to check any recurrences.

Assessment Criteria:

Theefficacy of the therapy was assessed before and after treatment on the basis of subjective as well as objective criteria.

- Improvement in Physical and clinical Parameters
- Serum Rheumatoid Factor
- C-reactive protein
- Disability Index(The Indian Health Assessment Questionnaire)

RESULTS

Relief found in chief complaints like *Sandhishula*, *SndhishothaSandhigraha* and *Sparshasahatva* was, 60.64%, 57.36%, 70.00% and 71.50% respectively in Group A. while in Group B relief found was 50.0%, 47.52%, 51.69% and 48.06% respectively. Which was statistically highly significant in both the groups (P=0.0001)

Table3: Effect of Therapy on Chief Complaints

Sandhishoola											
Group		**BT**	**AT**	**Diff.**	**%**	**W**	**T+**	**T-**	**N.P.**	**'p'**	**HS / S/ IS**
A (n=15)	Mean	3.06	1.20	1.86	60.64	120	120	0	15	<0.0001	HS
	S.D.	0.45	0.77								
	S.E.	0.11	0.20								
B (n=13)	Mean	2.76	1.38	1.38	50	91	91	0	13	<0.0001	HS
	S.D.	0.43	0.50								
	S.E.	0.12	0.14								
Sandhishotha											
Group		**BT**	**AT**	**Diff.**	**%**	**W**	**T+**	**T-**	**N.P.**	**'p'**	**HS / S/ IS**
A (n=15)	Mean	1.86	0.80	1.06	57.36	66	66	0	11	0.001	HS
	S.D.	1.06	0.67								
	S.E.	0.27	0.17								
B (n=13)	Mean	1.76	0.92	0.84	47.72	55	55	0	10	0.002	HS
	S.D.	0.83	0.49								
	S.E.	0.23	0.13								
Sandhigraha											
Group		**BT**	**AT**	**Diff.**	**%**	**W**	**T+**	**T-**	**N.P.**	**'p'**	**HS / S/ IS**
A (n=15)	Mean	2.00	0.60	1.40	70.00	120	120	0	15	<0.0001	HS
	S.D.	0.65	0.50								
	S.E.	0.16	0.13								
B (n=13)	Mean	2.07	1.00	1.07	51.69	91	91	0	13	0.0002	HS
	S.D.	0.49	0.40								
	S.E.	0.13	0.11								
Sparshasahatva											
Group		**BT**	**AT**	**Diff.**	**%**	**W**	**T+**	**T-**	**N.P.**	**'p'**	**HS/S/ IS**
A (n=15)	Mean	1.80	0.66	1.13	62.77	66	66	0	11	<0.0001	HS
	S.D.	1.01	0.61								
	S.E.	0.26	0.15								
B)(n=13	Mean	1.84	1.00	0.84	45.65	55	55	0	10	0.002	HS
	S.D.	0.89	0.70								
	S.E.	0.24	0.19								

Statistically insignificant changes were observed on almost all the hematological and Biochemical investigations except significant increase in monocytes in group B and highly significant decrease SGPT in group A.

Table4 : Effect of therapy on Haematological and Biochemical parameters in both the groups

Hematological parameters	**Group**	**Mean**		**Dif.**	**Change %**	**Paired "t" test**				
		BT	**AT**			**S.D**	**S.E**	**T**	**P**	**S/IS**
Hb	A (n=15)	11.55	11.08	-0.18	-0.15	0.791	0.211	-0.882	0394	IS
	B (n=13)	11.54	11.61	0.069	0.60	0.79	0.219	-0.31	0.75	S
Monocytes	A (n=15)	2.26	2.133	0.133	5.88	0.915	0.236	0.564	0.582	IS
	B (n=13)	2.15	2.76	-0.61	-28.3	0.65	0.18	-3.4	0.005	S
Biochemical parameters	**Group**	**Mean**		**Dif.**	**Change%**	**Paired "t" test**				
		BT	**AT**			**S.D**	**S.E**	**T**	**P**	**S**
SGPT	A (n=15)	16.800	12.66	4.13	24.6	4.6	1.21	3.41	0.004	S
	B (n=13)	14.92	15.07	-0.15	1.03	7.2	2.01	0.076	0.940	IS

To assess the effect on RA, CRP and ESR, Decrease in RA factor after treatment was 37.90 % in group A and 6.13 % in group B. ESR was decreased 21.26% in group A and increased 21.01% in group B after treatment. Decreased in CRP after treatmentwas 32.05% in group A and 24.10% in group B which was statistically insignificant in both groups.

Table5: Effect of therapy On ESR, RA and CRP in both the Groups

Parameter	**Group**	**Mean**		**Diff.**	**Change%**	**Paired 't' test**				
		BT	**AT**			**S.D.**	**S.E.M**	**'t'**	**'p'**	**S**
ESR	A (n=15)	33.24	28.73	7.07	21.26	15.94	3.97	1.13	0.275	IS
	B (n=13)	27.07	32.76	-5.69	-21.01	27.86	7.72	-0.73	0.476	IS
RA (Quan.)	A (n=15)	76.92	47.76	29.16	37.90	29.16	20.52	1.42	0.17	IS
	B (n=13)	24.69	23.17	1.515	6.13	22.15	6.14	0.24	0.80	IS
CRP (Quan.)	A (n=15)	6.65	4.52	2.13	32.05	8.18	2.11	1.009	0.330	IS
	B (n=13)	5.60	4.25	1.35	24.10	4.99	1.38	0.975	0349	IS

Disability index 33.85% changes in group A and 32.11% in group B was found and all these findings were statistically highly significant in both the groups.

Table6: Effect of therapy on Disability index in both the groups

Item	Gr.	Mean		Dif.	Change (%)	Paired 't' test				
		BT	AT			S.D.	S.E.M	't'	'p'	S
Disability index	A (n=15)	1.272	0.839	0.43	33.85	0.10	0.043	9.86	<0.001	HS
	B (n=13)	1.372	0.92	0.44	32.11	0.17	0.048	9.126	<0.001	HS

Overall effect of therapy reveled that, in group A moderate improvement was found in 46.66% patients while in Group B it was found in 30.76% of the patients, and mild improvement was observed in 33.33% patients in Group A and 53.84 % of the patients in Group B. 20.00% of the patients in Group A and 15.38 % of the patients in Group B, remained unchanged whereas complete remission or marked improvement was not found in any of the patients.

Table7: Overall effect of therapy in both the groups

Effect	Group A=15		Group B=13	
	No. of patients	%	No. of patients	%
Complete remission	0	0%	0	0%
Markedly improved	0	0%	0	0%
Moderately improved	07	46.66%	04	30.76%
Mild Improved	05	33.33%	07	53.84%
Unchanged	03	20.00%	02	15.38%

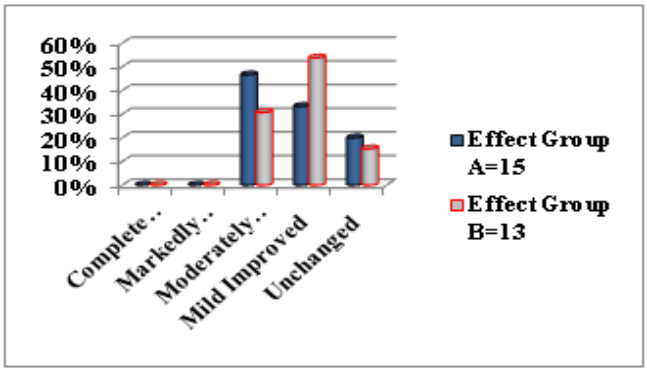

Figure1: Overall effect of therapy in both of the groups

DISCUSSION

In the disease *Amavata* the main pathogenesis occurs due to the *Vimargagamana*i.e. the *Gati* of *Doshas* are *Kostha* to *Shakha*. So the line of treatment for this could be that type which brings the *VimargagamitaDoshas* from *Shakha* to *Kostha*[8]. *AcharyaChakradatta* was the pioneer in describing the principles of treatment of *Amavata* which are *Langhana*, *Swedana*, drugs having *Tikta, Katu Rasa* and *Deepana* property, *Virechana, Snehapana* and *Basti*[9]. *Kokilakshadighanvati* prepared from *KokilakshadiKashaya, Kaidevanighantukara*has mentioned it in *Amavata* for its *Shothahara* and *Amahara* property[10]. *Guduchi* has *UshnaVirya, Tikta, Kashay* in *Rasa*. It has analgesic, anti-inflammatory and *Rasayana* property[11]. *Pippali* has *UshnaVirya* and *Katu*in *Rasa*. It has *Deepan, Pachan, Vatakaphahshamaka* property[12]. *Trikatu* was prepared by mixing equal amounts of *Pippali*powder, *Sunthi*powder and *Maricha*Powder. It has *Deepan, Pachan*and*Amapachak* properties[13]. *ErandaTaila*has *VataKaphaShamaka* properties.Along with this it is also having *UshnaVirya* and *AmaPachana* properties and very useful in *Amvat*[14].*Triphala* has *Laghu, Ruksha* and *Kashaya* also having *kaphapittashamak* properties[15]. *Trivrita* acts by its *VirechakaPrabhava*. It is also said to be anti-inflammatory[16].One among *Panchakarma* procedure having less complication & stress among others, yielding higher benefits in almost all types of disorders, proves beneficial in *Tridosha*& even can appreciate *Rasayana* effect also[17].Chi square was applied for all subjective parameters for comparison of effect of therapies in A and B group.Students “t” test was applied for all objective parameters for comparison of effect of therapies in A and B group.

CONCLUSION

Amavata is the disease having *Vata* and *Kapha* predominance. But, in fact it is *Tridoshika* with origin from *Amashaya*. It can be concluded from the following study that *ViruddhaAhara* in *AharajaNidana, Diwaswapa* in *ViharajaNidana, Chinta* in *ManasikaNidana* was the most leading causative factor in the pathogenesis of the disease *Amvata*, which supports the classical reference. On the basis of Percentage it can be said that *Virechana* Group (group A) provided better results on all chief complains, associated complains, functional parameters, RA value, CRP and ESR. It can be said that even in Group B *KokilakshadiGhanvati* has provided good results in chief complains and associated complains without Virechana Karma. Most of patients were found Recurrence immediately after omitted treatment, so it can be said that, in *Amavata* required long duration treatment for better results. *Virechana* can be better treatment modality in the management of *Amavata*.

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