Research Article

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EFFECT OF ERANDA TAILA AND RUKSHA (BALUKA) SWEDA IN THE TREATMENT OF AMAVATA WITH REFERENCE TO RHEUMATOID ARTHRITIS

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ABSTRACT

Rheumatoid arthritis, an autoimmune inflammatory disorder, has similar clinical presentation as amavata. Modern system of medicine is effective in alleviating agony of pain but there is no complete remission of this disease. Researchers have proved that Ayurvedic management is effective in curing and checking progression of the disease. The objective of this study was to evaluate the effectiveness of eranda taila and ruksha baluka sweda in the management of amavata vis-à-vis rheumatoid arthritis. Present clinical trial was carried out on 16 patients selected from the Sir Sundar Lal Hospital, IMS, BHU, Varanasi, India; for this study, eranda oil and dry fomentation by sand (ruksha baluka sweda) were used which is described in Chakradutta. There was significant improvement in symptoms and it was evident clinically and statically too. The therapy was proved quite effective in the management of amavata (Rheumatoid arthritis).

Keywords: Ama, autoimmune disease, Chakradutta.

INTRODUCTION

In Ayurveda, ama is the basic concept for the genesis of diseases. It is produced due to erroneous life style of the individual. Amavata is one of such disease which affects all small and big joints of the body. In recent past it has been concluded that most of the diseases occurring this time are consequences of our unwholesome life style. As per Ayurveda human being is a composite of three matters viz. body, soul and mind. These three realms of life provide support like a pillar.¹ Another important factor for sustenance of life is Agni. The agni in common term means, fire. However, in the context of functioning of a living organism, this term does not actually mean fire. In living organisms agni maintains its integrity and performs its vital activities (the foods consumed in various ways- licked, masticated, drunk etc get converted by bio-physical and bio-chemical processes) not only into its various structural and functional constituents but also to provide the energy necessary for proceeding with its innumerable vital activities. In these sequences, the term agni comprehends various factors which participate in and direct the course of digestion and metabolism, in a living organism. When there is malfunctioning or derangement in homeostasis of agni, there occurs improper digestion and metabolism which leads to formation of ama at gross or subtle level i.e. either at jatharagni, dhatvagni or at bhutagni level.² There are factors which lead to malfunctioning of agni (i.e. mandagni) and thus formation of ama. Charaka samhita, the most authoritative writing of the ancient medical system of India states that there are physical, mental and dietetic etiologies which leads to formation of ama.^{3,4} This explains psych-neuro-immunologic relation of the disease. When this ama get mixed to vitiated vata and gets seat of small and large joints, produces disease amavata.⁵ As far as treatment is concerned, it was Chakrapanidutta in 11th century who first described the treatment modalities of amavata in his

text Chakradutta.⁶ All the six treatment procedure aim to correct the status of agni and digest the ama. In this context he had described so many therapeutic procedures and dosage forms. Rheumatoid arthritis (RA) is an autoimmune inflammatory disorder affecting all the small and big joints. There is no complete remission of the disease, despite a good range of NSAIDs, effective immunosuppressive and DMARDs. NSAIDs are necessary evil of this era and immunosuppressive and DMARDs have grievous side effects. Keeping these side effects in mind, it may be said that Ayurveda is a good hope for the remedy of this disease. Thus people are looking forward with a hope towards this system of medicine. An US study shows efficacy of Ayurvedic medicines in rheumatoid arthritis cure. Personalised Ayurvedic interventions have demonstrated clinically significant improvement in rheumatoid arthritis at par with allopathic treatment with added advantage of lesser side-effects, according to a study.⁷ Again a study sponsored by WHO depicted that classical Ayurvedic treatment was effective in the first cohort of patients who completed the treatment, even patients with functional limitations showed significant improvement.⁸ For this study, Eranda oil and dry fomentation was used which has been proved effective with good outcome.

MATERIAL AND METHODS

The patients were selected for this trial after fulfilment of diagnostic criteria of amavata (RA). Patients were thoroughly examined and questioned on both subjective and objective parameters. Ethical clearance and informed consent was obtained before conducting the clinical trial (Dean/2011-12/169 on 14/18-5-2011).

Selection of Drug

Eranda taila is a well known prescribed medicine for amavata by Bhaishajyaratnavali.⁹ It was purchased from

the market (Dabur Company). Ruksha sweda (dry fomentation) of sand bag was prepared by heating the sand and making a cloth bag (pottali) for application.

Dose

Eranda oil - 10 ml twice daily (12 hourly)

Ruksha sweda-Intermittent application for 5-10 minutes twice daily

Selection of Cases

A total 20 patients of RA were randomly selected for this study from the Kayachikitsa OPD and IPD, Sir Sunder Lal Hospital, BHU, Varanasi, India of which 16 patients completed 3 months follow-up at 1 month interval. The case selection was regardless of sex, occupation, socio-economic, seropositive and seronegative condition. Both acute and chronic cases of RA were taken under consideration following the EULAR-2010¹⁰ criteria and the clinical feature of amavata as described in Madhava Nidana.¹¹

Inclusion Criteria

- Diagnosed cases of Amavata and RA.
- Age between 20 and 60 years.
- Patients willing to participate in the above trial.

Exclusion Criteria

- Patients with deformities and systemic complication.
- Patients suffering from diabetes, hypertension, tuberculosis, asthma or other disease.
- Pregnant and lactating women.
- Patients discontinuing the trial drug and non-willing patients.

Calculation of Data

Statistical calculation was done by using Friedman Test.

Investigation

All patients were advised to the following blood investigations

Haemoglobin,

Total leucocyte count,

Blood sugar,

Liver function test,

Renal function test,

Anti-streptolysin O titre (to exclude rheumatic disease),

HLA B-27 and ANA to exclude other autoimmune and collagen disease

Only patients having normal levels were included in the study. CRP, ESR, RF, anti-CCPab were also done before initiation of treatment and after completion of the therapy.

Criteria for the Assessment of Amavata (Rheumatoid Arthritis)

- Symptomatic improvement.
- Side / toxic effect of the drugs, if any.

Parameters for the Assessment of Symptoms

Intensity of the symptoms was assessed on the following analogue scale:

0. No symptom
1. Mild
2. Moderate
3. Severe but not restricting daily activity
4. Severe and restricting daily activity

RESULT

Selected patients were allowed to take the drugs as advised. Assessment was done on the subjective and objective parameters. Significant changes were observed which are shown in the table. However no change was observed in the routine blood examination.

DISCUSSION

As shown in observation Table 1 there was significant improvement in symptoms. It was evident clinically as well as statistically. Thus Eranda oil and dry fomentation by sand bag was proved effective in the management of amavata (RA).

Therapeutic Effect of Eranda oil (Castor oil)

Eranda taila is prepared from the seeds of castor plant (*Ricinus communis* Linn.) a member of family euphorbiaceae. It is a perennial plant. The castor seeds contain ricin, a toxic protein. Oil is a source of ricinoleic acid, a monounsaturated, 18- carbon fatty acid. Besides these 37- 61 % oil and up to 30 % fibre is found. Oil is prepared mainly by 2 methods¹²⁻¹⁵:

Cold process

In this method oil is prepared by compressing the seeds without heating it.

Hot process

Seeds are boiled in water or heated during compression. The prepared oil by this method is poison free as during heating process ricin is denatured and inactivated.

Eranda taila by virtue of its different pharmacological properties overcomes the pathology of the disease. Ushna virya is kapha-vata pacifying, the chief doshas involved in pathogenesis of the disease. It is best vata pacifying agent. Vata pacifying property helps in improving pain and inflammation. Usna property also acts as deepana and potentiates agni. Tikshna property does shodhana (purification) after penetrating the micro channels and acts as ama-pachaka. By virechana, oil improves agni and removes toxic substances from the gut. Sukshma property does sroto-mukhavishodhana (clearing the opening of micro channels) and thus it brings doshas from shakhas to koshtha (GIT) which further removed by virechana. So eranda oil has properties which alleviates the sama state, potentiates agni, pacifies vata and acts as a good anti-inflammatory agent. Eranda, by pacifying vata, removes stiffness hence named Eranda.

Table 1: Changes in Symptoms of Amavata in 16 Patients

Symptom	Score	BT		F ₁		F ₂		F ₃		F-test
		No.	%	No.	%	No.	%	No.	%	
Body ache	0	0	0	0	0	3	18.7	7	43.8	$\chi^2 = 41.21$ p<0.001
	1	3	15	9	45	10	62.2	8	50	
	2	8	40	6	30	3	18.7	1	6.2	
	3	8	40	4	20	0	0	0	0	
	4	1	5	1	5	0	0	0	0	
Heaviness	0	2	10	5	25	5	31.2	10	62.5	$\chi^2 = 28.42$ p<0.001
	1	8	4	8	40	9	56.2	5	31.2	
	2	5	25	3	15	1	6.2	0	0	
	3	4	20	4	20	1	6.2	1	6.2	
	4	1	5	0	0	0	0	0	0	
Indiges-tion	0	0	0	2	10	4	25	8	50	$\chi^2 = 37.74$ p<0.001
	1	6	30	9	45	9	56.2	7	43.8	
	2	9	45	5	25	3	18.8	1	6.2	
	3	4	20	4	20	0	0	0	0	
	4	1	5	0	0	0	0	0	0	
Pain	0	0	0	1	5	0	0	4	25	$\chi^2 = 38.39$ p<0.001
	1	3	15	6	30	10	50	9	56.2	
	2	5	25	4	20	5	25	3	18.8	
	3	6	30	7	35	1	5	0	0	
	4	6	30	2	10	0	0	0	0	
Joint swelling	0	5	25	5	25	6	37.5	11	68.8	$\chi^2 = 29.25$ p<0.001
	1	5	25	8	40	9	56.2	5	31.2	
	2	6	30	7	35	1	6.2	0	0	
	3	4	20	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	
Stiffness	0	0	0	1	5	3	18.8	4	25	$\chi^2 = 37.75$ p<0.001
	1	5	25	6	30	6	37.5	10	62.5	
	2	5	25	9	45	6	37.5	2	12.5	
	3	8	40	3	15	1	6.2	0	0	
	4	2	10	1	5	0	0	0	0	
Loss of taste	0	7	35	9	45	8	50	12	75	$\chi^2 = 27.93$ p<0.001
	1	3	15	6	30	6	37.5	4	25	
	2	7	35	4	20	2	12.5	0	0	
	3	3	15	1	5	0	0	0	0	
	4	0	0	0	0	0	0	0	0	
Thirst	0	9	45	10	50	10	62.5	12	75	$\chi^2 = 13.05$ p<0.01
	1	6	30	9	45	6	37.5	4	25	
	2	5	25	1	5	0	0	0	0	
	3	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	
Lack of enthusiasm	0	2	10	4	20	4	25	8	50	$\chi^2 = 36.10$ p<0.000
	1	4	20	3	15	8	50	8	50	
	2	8	40	9	45	4	25	0	0	
	3	6	30	4	20	0	0	0	0	
	4	0	0	0	0	0	0	0	0	
Tenderness	0	10	50	11	55	15	93.8	16	100	$\chi^2 = 17.08$ p<0.01
	1	9	45	9	45	1	6.2	0	0	
	2	1	5	0	0	0	0	0	0	
	3	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	

BT- before treatment, F1- 1st follow up, F2- 2nd follow up, F3- 3rd follow up, F-test- Friedman test

Attributes of Castor Oil

The castor oil is used internally and externally as well. Externally it is used as oil packs on the affected areas. Its application enhances blood circulation and lymphatic activity. The lymph assumes several important roles in the body. It transports antibodies and white blood cells and also distributes vital nutrients, such as lipids, throughout the body. It is responsible for the elimination of cellular waste and actively participates in the detoxification. The castor oil pack is a key resource for comprehensive health and well being. Castor oil is a very effective natural anti-inflammatory agent. High vitamin E content contributes significantly to the anti-inflammatory properties of castor oil. The natural vitamin E present in castor oil has a

number of tocopherol specific moisturizing, anti-inflammatory and anti-oxidant property. Also vitamin E contributes to improved microcirculation and UV protection. Castor beans have a total tocopherol 291 µg/g. Vitamin E found in castor oil has anti-inflammatory effect. γ -tocopherol and γ -CEHC {2,7,8-trimethyl-2- (β-carboxy ethyl) -6- hydroxyl chroman}, inhibit cyclooxygenase activity and thus possess anti-inflammatory properties. In a study conducted in 2009, it is found that castor oil effectively relieves arthritic symptoms. Also in 2000 it was proved that topical application of ricinoleic acid, the main component of castor oil, exerts remarkable analgesic and anti-inflammatory effects. Pharmacological characterisation has shown similarities between the

effects of ricinoleic acid and those of capsaicin (a potent analgesic), suggesting a potential interaction of this drug on sensory neuro-peptide mediated neurogenic inflammation.¹⁶⁻²¹

Ruksha Sweda

Swedana (fomentation) is the process by which perspiration is produced in the body using various methods. It is the procedure which relieves stiffness, heaviness and coldness of the body and produces sweating. Swedana increases dhatwagni at the level of joint, thereby improving joint function and its mobility.²² Baluka sweda is a dry type of sweda used in kaphaja disorders as well as in the disease originated out of ama, especially indicated in amavata by almost all the authors who have dealt with it. Being dry in nature it does pachana kriya i.e. digestion of ama and it also cleans the micro channels. It also removes stiffness of joints and alleviates the pain. In amavata stambha, gaurava, and shula are the chief symptoms so swedana gives relief in these symptoms and helpful in the treatment of amavata. There are other benefits of the swedana karma- it removes the sankocha (contraction), supti (numbness), from the body. Amavata affects the whole body and has an upadrava like sankocha, khanja, supti etc. So swedana is very helpful in the Amavata²²⁻²⁵.

CONCLUSION

Amavata is a disease which arises due to defect in agni. Ama is formed due to defective metabolism of food. This ama acts as auto antigen to the synovial membrane and thus producing inflammation therein. Mainstay of the therapy is to potentiate the agni and to remove ama. The specific Ayurvedic line of management and drugs helps in decreasing the auto antigens and may acts as modifying the immune response to auto antigens. At the same time the drugs are safe and can be given for longer duration without any adverse effects. On the basis of observations and the results of this present study it can be concluded that effect of the trial drug i.e. eranda taila along with Ruksha Sweda are effective in majority of the symptoms with a good prognostic result. The general digestion was found to be good with the trial drug. Hence, the Ayurvedic drug i.e. eranda taila along with ruksha sweda can be used in the chronic as well as acute patients of amavata with good hope and wish that the present study would prove a boon for humanity.

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