ISSN 2456-3110
Vol 5 · Issue 3
May-June 2020

Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences

Charaka Publications

Indexed

Journal of
Ayurveda and Integrated Medical Sciences
ISSN 2456-3110
ORIGINAL ARTICLE May-June 2020

Role of *Jaloukavacharana* in acute pain management of *Amavata* with respect to Rheumatoid Arthritis : A pilot study

Dr. Santosh L. Yadahalli[1], Dr. Ananta Desai[2], Dr. Aishwarya Lakshmi BR[3]

[1]Associate Professor,[2]Head of the Department, [3]Post Graduate Scholar, Department of Post Graduate Studies in Panchakarma, Government Ayurveda Medical College, Dhanvantari Road, Bengaluru, Karnataka, INDIA.

ABSTRACT

Amavata is one of the most challenging diseases caused by *Ama* combining with vitiated *Vata Dosha*. The disease *Amavata* manifests where patient cries out of pain, severe stiffness, loss of appetite, vague body ache and crippling deformity of joints, which make them bed ridden. Having several features similar to Rheumatoid arthritis, *Amavata* is generally compared with it. Rheumatoid arthritis (RA) is a long-term autoimmune disorder that primarily affects joints. Pain and stiffness often worsen following rest. Pain medications, steroids, and NSAIDs are frequently used in contemporary science, to treat the disease. Disease modifying antirheumatic drugs (DMARDs), such as hydroxychloroquine and methotrexate, are also used to slow the progression of disease but these have their own side effects. *Jaloukavacharana* described in Ayurveda plays a major role in reducing pain and swelling. Hence an effort has been made in this present study to evaluate the efficacy of *Jaloukavacharana* in the acute management of pain in *Amavata*. 10 subjects between 20-60yrs with classical symptoms of *Amavata* were selected from IP section of SJIIM Hospital, Bengaluru. The assessment was done before the day of initiation of treatment, after the treatment and on 8th day. Clinically patients found significant relief in pain, swelling and range of movements after one sitting of *Jaloukavacharana*, hence it can be concluded that *Jaloukavacharana* is effective in management of pain in acute phase of *Amavata*.

Key words: *Amavata, Jaloukavacharana, Medical leech therapy, Rheumatoid Arthritis.*

INTRODUCTION

Amavata is one of the most challenging diseases caused by *Ama* combining with vitiated *Vata Dosha*. This disease belongs to both *Abhyantara* and *Madhyama Rogamarga*. The *Samprapti* originates in the *Annavaha Srotas* due to *Agnimandhya* and then moves through *Madhyama Rogamarga* with special affinity for *Kapha Sthanas*[1] especially *Sandhis* (joints) and thus the disease *Amavata* manifests where patient cries out of pain, severe stiffness, loss of appetite, vague body ache and crippling deformity of joints, which makes the patients bed ridden. Having several features similar to Rheumatoid arthritis, *Amavata* is generally compared with this disease.

Rheumatoid arthritis (RA) is a long-term autoimmune disorder that primarily affects joints. It typically results in warm, swollen, and painful joints. Pain and stiffness often worsen following rest. Most commonly, the wrist and hands which are symmetrically involved. The cause of RA is not clear, but the combination of genetic and environment is believed to be predisposing factor. The underlying mechanism involves the body's immune system attacking the joints. This results in inflammation and thickening of

Address for correspondence:
Dr. Aishwarya Lakshmi BR
Post Graduate Scholar, Department of Post Graduate Studies in Panchakarma, Government Ayurveda Medical College, Dhanvantari Road, Bengaluru, Karnataka, INDIA.
E-mail: chaitrabairy@gmail.com

Submission Date: 12/05/2020 Accepted Date: 17/06/2020

Access this article online

Quick Response Code

Website: www.jaims.in

DOI: 10.21760/jaims.5.3.6

ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2020

the joint capsule.[2] Worldwide, the annual incidence of RA is approximately 3 cases per 10,000 population, and the prevalence rate is approximately 1%, increasing with age and peaking between the ages of 35 and 50 years. Women are three times more prone to it. Signs and symptoms of RA include Polyarthritis (usually symmetrical), early morning stiffness of these joints for more than an hour, swelling, tenderness and inflammation of these joints. Other symptoms include reduced appetite, recurrent fever and low energy. The disease is being chosen for the study due to its widespread clinically, increased prevalence, and lack of effective management.

Whatever may be the pathology underlying, physician's top priority must be giving a quick relief to patient by managing the main symptoms like pain, swelling and restricted movements in the joints and later treating according to the *Samprapti*. Pain medications, steroids and NSAIDs are frequently used in contemporary science, to treat the disease.[2] Disease-modifying antirheumatic drugs (DMARDs), such as hydroxychloroquine and methotrexate, are also used to slow the progression of disease but these have their own side effects. This explores the idea for an efficient, long lasting management of pain and swelling without any side effects. *Jaloukavacharana* described in Ayurveda plays a major role in reducing pain and swelling. Hence an effort has been made in this present study to evaluate the efficacy of *Jaloukavacharana* in the acute management of pain in *Amavata*.

Aims and Objectives

To evaluate the efficacy of *Jaloukavacharana* in the pain management of *Amavata*.

Materials and Methods

10 subjects of both the gender between 20-60yrs with classical symptoms of *Amavata* were selected from IP section of Sri Jayachamarajendra Institute of Indian Medicine, Bengaluru. Subjects were advised not to take any NSAIDS during study period and were allowed to take essential medicines for Diabetes and Hypertension etc.

Inclusion Criteria

1. Subjects with classical features of *Amavata* having pain, inflammation and restricted range of movements of ankle, knee, wrist, elbow and interphalangeal joints.
2. Subjects having normal values of bleeding and clotting time.
3. Subjects fulfilling min 3 signs according to ACR Classification Criteria for RA.

Exclusion Criteria

1. Subjects with RA > 3years
2. Subjects with severe Deformities
3. Pregnant and Lactating women.
4. Subjects with systemic illness like cardiac disorders, respiratory disorders, bleeding disorders, HIV etc.

Methodology

Initially these subjects were given one sitting of *Jaloukavacharana* on day one, along with *Vaishwanara Churna* 3gms tid before food[3] for *Ama Pachana*. Follow up was done on 8th day. Before commencement of the treatment whole procedure was explained and an informed consent was taken from the subjects. Subjects were evaluated for both subjective and objective parameters.

Total Study duration: 7 days

Materials

1. *Jalouka* - 3 in no.
2. *Haridra Churna* - Q.S
3. *Shatadhouta Ghritha* - Q.S
4. Cotton swab
5. Roller bandage
6. Gauze
7. Latex hand gloves - 1 pair
8. Water - Q.S

Jaloukavacharana

Procuring and maintenance of *Jaloukas* - *Nirvisha Jaloukas* were procured from licensed animal breeder. Required number of fresh *Jaloukas* were maintained

ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2020

in 1000ml glass bottle in clean potable water. Used *Jaloukas* were maintained in separate small glass bottles. All the bottles were kept in the Department of *Panchakarma* OPD, under room temperature. Bottles were cleaned once in three days and filled with fresh clean water.

Procedure

Subjects were explained about the procedure initially and were prepared psychologically. They were asked to lie down in supine position comfortably. *Jalouka* was put in turmeric water for proper activation for around 15-20 mins. The affected joint was cleaned with plain water, and maximum point of tenderness with raised temperature was selected. *Jalouka* was applied to that point and was supported till it attached properly. Once it raised its shoulders, sucking was observed. Leaving the mouth, rest of the body was covered with damp cotton piece. When patient develops itching sensation around the wound or when the *Jalouka* leaves by itself, the procedure is stopped and *Jalouka* is made to vomit blood completely by applying turmeric to its mouth. Once complete expulsion of blood is confirmed, *Jalouka* are put back into fresh water. The wound is cleaned and dressed by applying *Haridra*. Next day the bandage is removed and *Shatadouta Gritha* is applied over wound site.

Assessment Criteria

The assessment of the Subjective and Objective parameters were done by scoring method. The patients were assessed on the day of admission (before starting the treatment), 2nd Day (after 1st sitting of *Jaloukavacharana*) and on 8th day (Follow up).

Subjective criteria

a) Pain - By using Visual Analog Scale

- Grade 0 : No pain, Alert smiling
- Grade 1-2: mild pain, no humor, but pain can be ignored.
- Grade 3-4 : Moderate pain, furrowed brow,Pursed lips, Breath holding, interferes with the tasks
- Grade5-6 : moderate pain, wrinkled face, raised upper lips, rapid breathing, interferes with concentration
- Grade 7-8 : Severe pain, slow blink, open mouthand interferes with basic needs.
- Grade 9-10 : Worst pain possible, eyes closed, moaning, crying, bed rest required

b) *Sandhi Shotha* (Joint Swelling)

- Grade 0 : no swelling
- Grade 1 : mild swelling
- Grade 2 : moderate swelling and present in more than 2 affected joints
- Grade 3 : excessive swelling over all the affected joints

c) *Sandhi Stabdhata* (Stiffness)

- Grade 0 : no stiffness or stiffness lasting 10-20 mins
- Grade 1 : stiffness lasting for 20mins-2hrs
- Grade 2 : Stiffness lasting for 2-5hrs
- Grade 3 : Stiffness lasting for 5-8hrs

Objective criteria

a) *Sparshasahyta* (Tenderness in joints)

- Grade 0 : No tenderness
- Grade 1 : tenderness with no physical response
- Grade 2 : tenderness with grimace or flinch
- Grade 3 : tenderness with withdrawal, positive jump sign
- Grade 4 : Resist touching

b) Degree of Flexion of Knee Joint

- Grade 0 : >135°

ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2020

- Grade 1 : 90°-135°
- Grade 2 : 45°-90°
- Grade 3 : 0°-45°

c) Degree of Flexion of Wrist Joint

- Grade 0 : 60°-75°
- Grade 1 : 40°-60°
- Grade 2 : 20°-40°
- Grade 3 : 0°-20°

OBSERVATIONS

12 subjects had registered for the present study, amongst them 2 dropped out for their own personal reasons. Out of 10 subjects, 40% (maximum) were in the age group of 46-55 years, and 10% (minimum) were in the age group of 16-25years, majority of the subjects were females (70%) and the rest of the subjects (30%) were males, Maximum no. of subjects (50%) were House wives, 30% were doing physical labor, 10% were Desk worker and 10% were doing other jobs. 80% of the patients preferred mixed diet and 20% were vegetarians. Overall *Vata Prakruti* (40%) and *Vatakaphaprakruti* (30%) persons were more compared to the other *Prakrutis*. 20% of the patients had *Samagni*, 30% patients had *Vishamagni* and 50% of the patients had *Mandagni*. No cases of *Teekshnagni* were found. 60% of the patients had *Madhyamakoshta*, 10% of the patients had *Krurakoshta* and 30% of the patients had *Mrudukoshta*. 3 patients (30%) had 6months to 1year history of illness, 2 patients (20%) had 1-2 years of illness. Maximum 5patients (50%) had >2years history of illness. 40% of the patient had history of *Viruddhaahara*, 90% of the patients had history of *Viruddhacheshta*, and 10% of the patients had history of *Vyayama* after *Snigdhabhojana*.

RESULTS

Results of before treatment and after the first sitting of *Jaloukavacharana*: Statistically Highly Significant results ($P < 0.01$) in parameters like Pain in joint, Tenderness at joint, Flexion of knee joint and Flexion of wrist joint. In case of other parameters, i.e., *Sandhi Shotha* there was Statistically Significant result ($P < 0.05$) but there was no Significant results ($P > 0.05$) in *Sandhi Stabdhata*. (Table 1)

Table 1: Results of before treatment and after the first sitting of *Jaloukavacharana*

Parameter (Df=9)	Mean		Mean Diff. (BT-AT_1)	SD	SE	t	P
	BT	AT_1					
Pain (*Sandhi Shoola*)	7.40	6.80	0.60	0.489	0.163	3.674	SHS
Swelling (*Sandhi Shotha*)	1.90	1.40	0.50	0.501	0.167	3.000	SS
Stiffness (*Sandhi Stabdhata*)	1.80	1.50	0.30	0.459	0.153	1.964	SI
Tenderness (*Sparshaasahyata*)	2.30	1.70	0.60	0.489	0.163	3.674	SHS
Flexion of Knee Joint	2.00	1.40	0.60	0.489	0.163	3.674	SHS
Flexion of Wrist Joint	1.70	1.00	0.70	0.459	0.153	4.582	SHS

SHS - Statistically Highly Significant, SS - Statistically Significant, SI - Statistically Insignificant.

Results of before treatment and after Follow-up: Statistically Highly Significant results ($P < 0.01$) in parameters like Pain in joint, Tenderness at joint. In case of other parameters, i.e., Sandhi Shotha there was Statistically Significant result ($P < 0.05$) but there were no Significant results ($P > 0.05$) in Sandhi Stabdhata, Flexion of knee joint (15%) and Flexion of wrist joint. (Table 2)

ISSN: 2456-3110 ORIGINAL ARTICLE May-June 2020

Table 2: Results of before treatment and after follow-up

Parameter (Df=9)	Mean		Mean Diff. (BT-AT_2)	SD	SE	t	P
	BT	AT_2					
Pain (*Sandhi Shoola*)	7.40	6.70	0.70	0.459	0.153	4.582	SHS
Swelling (*Sandhi Shotha*)	1.90	1.50	0.40	0.489	0.163	2.449	SS
Stiffness (*Sandhi Stabdhata*)	1.80	1.60	0.20	0.399	0.133	1.500	SI
Tenderness (*Sparshaasahyata*)	2.30	1.70	0.60	0.489	0.163	3.674	SHS
Flexion of Knee Joint	2.00	1.70	0.30	0.459	0.153	1.964	SI
Flexion of Wrist Joint	1.70	1.50	0.20	0.399	0.133	1.500	SI

SHS - Statistically Highly Significant, SS - Statistically Significant, SI - Statistically Insignificant.

DISCUSSION

Jaloukavacharana is one of the safe, effective, locally acting blood-letting therapy which was widely used in different parts of world. Among the different modalities of *Raktamokshana*, *Jaloukavacharana* is *Ashastrakruta*, painless and easier procedure, which can be carried out even in *Stree*, *Sukumaras* and *Bala.*[4] *Jalouka* is one among the *Anushastras*. Management of pain, stiffness and restoring the range of movements is the challenge for physician while treating such conditions. *Lakshanika Chikitsa* plays an important role along with the main line of treatment to lessen the patient's suffering and to gain their confidence. The fleeting nature of the *Samarasa*, causes *Sandhi Shoola* and *Shotha* settling in the joint causing inflammatory (*Vidagdhata*) signs and increasing vascularity is supported by modern pathology explained for inflamed knee joint affected by R.A. The further damage to the cartilage and deformities could be correlated to the *Dhatugataavastha* of *Amavata*. *Jaloukavacharana* helps to prevent the *Dhatugataavastha* of the disease and checks the progression of the disease in early stage itself.

Probable mode of action

Jaloukavacharana proves to be helpful when *Amavata* is *Utthana Dhatu Gatavyadhi* (in its early stage). It's not only the effect of the blood-letting or the post-bleeding, but along with this, the saliva of leech has different amino acids which enters into the blood circulation. The active ingredients in Leech saliva like Hirudin - A 65 anticoagulant protein acts as Diuretic and Antibiotic. Bdellins, Eglins acts as Anti-inflammatory, the component like Carboxypeptidase inhibitor increases the inflow of blood at the bite site.[5] Histamine like substances and Acetylcholine acts as Vasodilator. Due to the Anesthetics substances, the bite is painless and also reduces the Local Pain. Contents of Saliva have also got an Anti-biotic property. All these helps in reduction of *Shoola* and *Shotha*.

This phenomenon can be co-related as, due to the action of Leech saliva, the *Samadoshas* in *Shotha* becomes *Nirama* and removed out of the body by means of *Raktamokshana.*[5] With the quantity of blood obtained after *Vamana* of *Jaloukas* (10-15 ml) in every patient, the reduction of swelling in the range from 1 to 3 cm was observed which suggests that, quantity of bloodletting has no direct relation with reduction in swelling. By this we can infer that, apart from reduction in volume, there may be some other action on joint effusion can be noted.

Vaishwanara Churna is one among the effective formulations used in the treatment of *Amavata*. The *Deepana–Pachana Guna* improves the digestive fire and helps in attaining *Niramaavastha.* It is also commonly used as immunostimulant, laxative, analgesic and anti-inflammatory agent.

ISSN: 2456-3110 **ORIGINAL ARTICLE** May-June 2020

CONCLUSION

Apart from the main line of treatment there is absolute necessity of a locally acting *Bahirparimarjana Chikitsas* to reduce the signs of inflammation and to improve the range of movements. Main aim of a physician is to reduce the Patient's agony, which is fulfilled by single sitting of *Jaloukavacharana* initially. Clinically patients found significant relief in pain, swelling and range of movements after one sitting of *Jaloukavacharana* in this study. All these 10 subjects were given *Amavata* line of treatment later viz. *Tikta*, *Deepaniya Katu Dravyas*, *Virechana*, *Basti* etc. after assessing the *Tara-Tama Bhava* of *Doshas*, *Dushyas* and *Bala* of the patients.

REFERENCES

1. Acharya Madhavakara. Madhava Nidana with Madhukosha commentary and Vidyotini Hindi Tika by Shri Sudarshana Shashtri revised and edited by Pro. Yadunandana Upadhyaya. Reprint ed. 25/2 Varanasi: ChaukhambhaPrakashana; 2009. p. 508.
2. Handout on Health: Rheumatoid Arthritis, National Institute of Arthritis and Musculoskeletal and Skin Diseases. August 2014. Archived from the original on June 30, 2015. Retrieved July 2, 2015.
3. Sri Chakrapani dutta. Chakradutta, edited by pandit Ramanath Dwivedy, Varanasi: Chaukamba Sanskrit Bhavan; Reprint 2012; Chapter 25/15-18
4. 18 Sushruta. Sushrutasamhita, with Nibandhasangraha commentary of Dalhanacharya & Nyayachandrika Panjika of Sri Gayadasacharya on Nidanasthana Edited by Vaidya Yadavji Trikamji Acharya & the rest by Narayan Ram Acharya 'Kavyatirtha', Varanasi: Chowkambha Surbharati Pratishthan; Reprint 2014, Sutrastana 13/3
5. Dr. Ashwini A Kulkarni, A Comparative Study of Jaloukavacharana & Jatamayadi Lepa in Janu Sandhi Shoola&Shothaw.s.r. to *Amavata*, MD Thesis, (The Rajiv Gandhi University of Health Sciences, Bangalore), 2010.

How to cite this article: Dr. Santosh L. Yadahalli, Dr. Ananta Desai, Dr. Aishwarya Lakshmi BR. Role of Jaloukavacharana in acute pain management of Amavata with respect to Rheumatoid Arthritis : A pilot study. J Ayurveda Integr Med Sci 2020;3:32-37. http://dx.doi.org/10.21760/jaims.5.3.6

Source of Support: Nil, **Conflict of Interest:** None declared.

****