



INTERNATIONAL JOURNAL OF AYURVEDA AND PHARMACEUTICAL CHEMISTRY

(A peer reviewed journal dedicated to allied Sciences)

PUBLISHED BY

Greentree Group Publishers (GGP)
greentreegrouppublishers@gmail.com

Volume 10 Issue 2 | 2019

CONTACT DETAILS

- submittoijapc@gmail.com
- www.ijapc.com
- e issn 2350-0204
- editor@ijapc.com

INDEXED IN

Open Access Scholarly Resources, ZB MED Germany, ZB MED Search Portal for Life Sciences, ZDB, Electronic Journals Library, Directory of Research Journals Indexing, I2OR, IP Indexing Portal, Geneva Foundation for Medical Education and Research, hbz composite catalog and many more..



An Observational Clinical Study of *Jalaukavacharana* in Management of Knee Joint Pain in Various Painful Joint Disorders

Jignesha Charel^{1*} and Jaimin R Patel²

^{1,2}Department of Panchakarma, J S Ayurveda Mahavidyalaya, Nadiad, Gujarat, India

ABSTRACT

INTRODUCTION

Arthritis and related diseases can cause debilitating, life-changing pain in the joints. Vitiated *Vata* is responsible for joint pain. In some clinical conditions like *Amavata* (rheumatoid arthritis), *Vatarakta* (gout) and *Sandhigatavata* (Osteoarthritis) *Raktamokshana* (bloodletting) is one of the ancient and important parasurgical procedures described in Ayurveda for treatment of various diseases. In classical texts it is mentioned that if disease is not relieved even after proper treatment of vitiated *Dosha*, then *Raktamokshana* should be done considering involvement of the *Rakta*.

MATERIALS AND METHODS: Total 11 patients having knee joint pain due to OA, RA and Gout were taken from OPD and IPD of P D Patel Ayurveda Hospital between ages from 30-70 years. *Jalauka* (Leech) were applied to affected knee joint as per described in Ayurveda textbooks.

RESULTS: Assessment of pain was done with Visual Analogue Scale (VAS) for pain before and after *Jalaukavacharana*. The mean score reduction in pain is 3 after treatment earlier which was 5.8 before treatment.

DISCUSSION: As per Ayurveda inflammation is because of vitiation of *vata* and (*pitta*) *raktadusti*. Leeches first suck the vitiated blood resulting in reduction in vitiated *rakta* and also there is removal of *srotoavrodha* of *vata* and *dosha* this both changes reduces the pain and inflammation.

CONCLUSION: *Jalaukavacharana* can be an ideal therapy for pain management in inflammatory painful joint disorders commonly due to RA, Gout and osteoarthritis, as it helps not only in reducing pain but also reduced swelling and redness without any side effects.

KEYWORDS *Jalaukavacharana, Painful Joints, Osteoarthritis, Rheumatoid Arthritis*



Greentree Group Publishers

Received 21/01/19 Accepted 08/02/19 Published 10/03/19



INTRODUCTION

Joint pain caused by various clinical conditions can be treated with Ayurveda treatment. Vitiated *Vata* is responsible for joint pain¹. In some clinical conditions like *Amavata* (rheumatoid arthritis) and *Vatarakta* (gout), *Ama* is also associated with vitiated *Vata*. In inflammatory conditions vitiated *Pitta* is also involved in the pathogenesis. If *Ama* is there, it is treated first and then Vitiated *Vata* is treated in such a way that *Ama* does not produced again. Where *Ama* is not involved, joint pain is treated with all anti *Vata* treatment. If vitiated *Pitta* is associated, it is also taken care along with the treatment of *Vata*².

The nonsteroidal anti-inflammatory drugs (NSAIDs) are the main drugs of choice in modern medicines which have lots of side effects; therefore they are not safe for long-term therapy³. *Raktamokshana*⁴, i.e., bloodletting is one of the ancient and important parasurgical procedures described in Ayurveda for treatment of various diseases. Out of them, *Jalaukavacharana* or leech therapy has gained greater attention globally, because of its medicinal values. The saliva of leech contains numerous biologically active substances, which has anti inflammatory as well as anesthetic properties. *CharakaSamhita* mentioned that if disease

is not relieved even after proper treatment of vitiated *Doshas*, then *Raktamokshana* should be applied considering involvement of the *Rakta*⁵. *Jalaukavacharana* (leech therapy) is a method of local *Raktamokshana* which is easy to apply on the painful joint. Considering all these facts, this study is planned to evaluate the effect of *Jalaukavacharana* in the management of joint pain in the patients who do not get relief in the pain even after proper Ayurvedic treatment.

AIM

To study the efficacy of *Jalaukavacharana* in the management of various painful joint disorders those are not responding to routine Ayurvedic management.

NULL HYPOTHESIS

(H₀): *Jalaukavacharana* (leech therapy) is not effective in relieving pain in painful joint disorders.

ALTERNATE HYPOTHESIS

(H₁): *Jalaukavacharana* (Leech Therapy) is effective in relieving pain in various painful joint disorders.

MATERIALS AND METHODS

The ethical committee approval no. JSAM/IECHR/71/11-2017



STUDY DESIGN AND SAMPLE SIZE:

Total 11 patients enrolled in the study have age between 30 to 70 years from OPD and IPD of Kayachikitsa and Panchakarma department of P D Patel Ayurveda Hospital, Nadiad.

INCLUSION CRITERIA

- Patients of osteoarthritis, rheumatoid arthritis and gout who do not get relief in joint pain even after performing of *dosha* pacifying and *ama* reducing (in cases of *ama* involvement) ayurvedic treatment.
- Patients having pain in either of knee joint were selected.

EXCLUSION CRITERIA:

- Patient who is under anti-coagulant treatment, suffering from hemophilia or having bleeding tendencies.

-Patients having increased prothrombin time than normal.

-Patient having Hemoglobin less than 10gm%

-Patients having uncontrolled diabetes mellitus.

INVESTIGATIONS:

Hemoglobin, Erythrocyte Sedimentation Rate, Blood Sugar (Post prandial), Bleeding Time, Clotting Time, Prothrombin Time, Serum Uric acid

Urine routine and microscopic

WASHOUT PERIOD:

One week washout period was kept for the patients taking any conventional medicine for relief of pain. All types of medicaments were stopped before 1 week.

JALAUKAVACARANA (Figure 1)

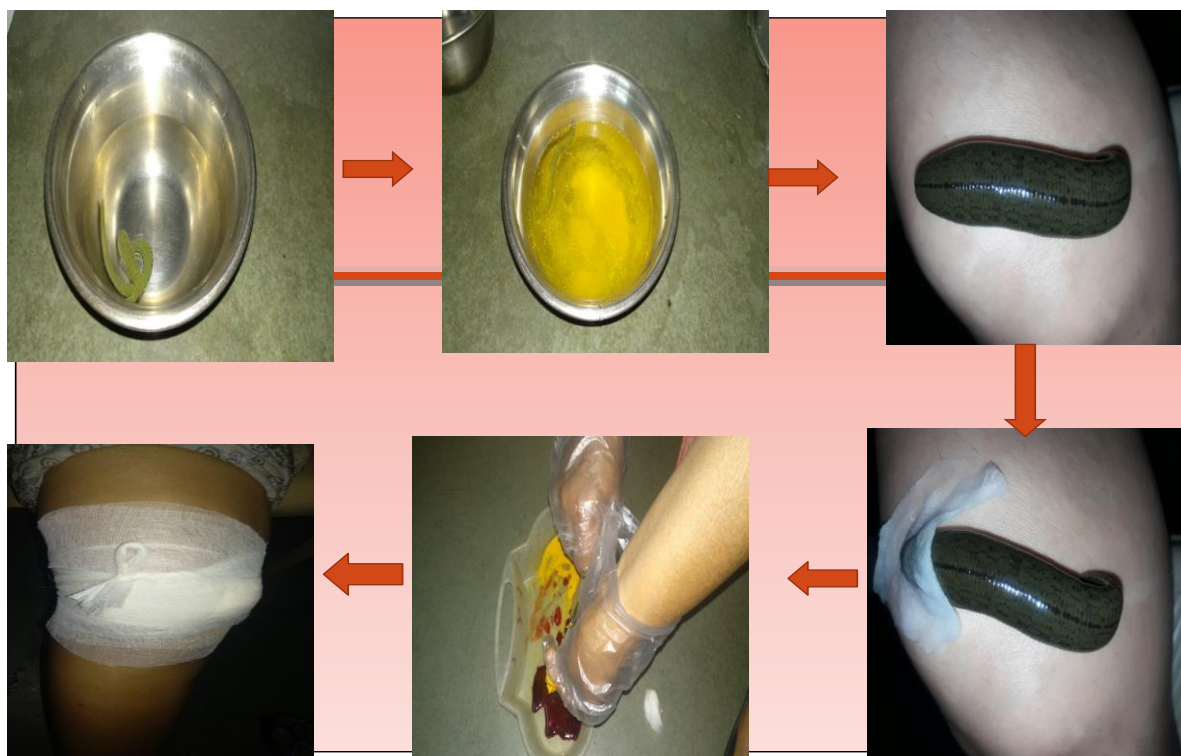


Fig 1 Jalaukavacarana procedure



PURVA KARMA:

MATERIALS

Cotton, gauze piece, gloves, turmeric, water, *Jalauka* (leech) and bandage.

Preparation of *Jalauka*:

Jalauka was taken from the pot and then kept in turmeric water for 5-10 minutes. It was then kept in normal water for 5 to 10 min and then applied on the affected part.

Preparation of the patient:

Examination and preparation of patient for *Jalaukavacarana* including identification of most painful point at knee joint. All the procedure were fully explained to the patients in their local language. The patient was instructed not to use any ointment before and after treatment on that part.

Pradhana karma:

Jalauka was applied on the most painful point of the affected knee joint. The *Jalauka* was observed whether it was sucking properly or not. The *Jalauka* was kept on the affected area till it detaches itself but if the patient feels any discomfort in the form of itching burning etc on that area *Jalauka* were detached by sprinkling the turmeric powder over its mouth.

Paschat karma:

Haridra(Turmeric) powder has used for local application to stop bleeding after removal of *Jalauka*. Bandage has applied to the site of *Jalaukavacarana*. *Vamana* of the *Jalauka* has done after its removal.

CRITERIA FOR ASSESSMENT:

Assessment of pain before and after of *Jalaukavacarana* with the help of visual analogue scale from 0 to 10. 0 has considered no pain and 10 has considered for the maximum severity of the pain.

Visual analogue scale grade score of pain. (Table 1). OBSERVATIONS (Table 2)

Table 1 Visual Analogue Scale

Intensity of pain	Grade score
No pain	0-1
Mild pain	2-3
Uncomfortable	4-5
Distressing	6-7
Intense	8-9
Worst pain	10

Table 2 Observations

S.no.	Observations	No. of patients	
1.	Diagnosed as	Osteoarthritis	4
		Rheumatoid arthritis	5
		Gout	2
2.	Onset of Pain	Gradual	8
		Insidious	3
3.	Time of onset	Less than 1 year	2
		1-3 years	8
		More than 3 years	1

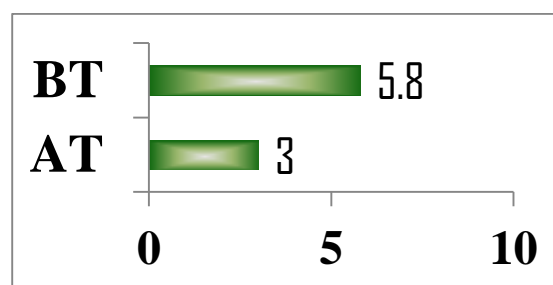


Fig 2 Graph Showing mean score improvement in pain

RESULTS

Improvement in pain was assessed before and after using paired ‘t’ test (Table



3).Highly significant reduction in pain wasfound after one time application of *Jalauka*

Mean Score Improvement in pain (VAS score) (**Figure 2**)

Table 3 Results

Clinical test	Mean score				Paired 't' test			
	BT	AT	Difference	% relief	Standard deviation	Standard error	t- value	P-value
Pain	5.8	3	2.8	51.6%	1.99	0.601	9.52	P<0.001

DISCUSSION

Reduction in pain after *Jalaukavacharana* is highly significant. This suggests that in various painful joint diseases, *Jalauka* reduces pain satisfactorily. This study shows a highly significant decrease in joint pain by *Jalaukavacharana*. improvement in pain might be due to the main pathology in knee joint disorders is inflammation. As per Ayurveda this inflammation is because of vitiation of *vata* and (*pitta*) *raktadusti*. Therefore, by applying *jalauka* there is reduction of inflammation as it is well versed that leeches first suck the vitiated blood resulting in reduction in vitiated *rakta* and also there is removal of *srotoavrodha* of *vata dosha*. This both changes reduced the pain and inflammation.

According to modern view, Leech saliva having anti-phlogistic actions. This removes local obstruction of the blood and prevention from inflammation. (Indian Materia Medica). Hirudin has anti-thrombine activity, Calin, another constituent of leech saliva prevents the

blood coagulation, analgesic effect when leech sucks, pain killer chemical releases in blood which stops patient from feeling of bite.The salivary glands also produce Cornucopia of other pharmacologically active substance including an antihistamine, protease and antibiotic.

CONCLUSION

Jalaukavacharana can be an ideal therapy for pain management in inflammatory painful joint disorders commonly due to RA, Gout and osteoarthritis, as it helps not only in reducing pain but also swelling and redness without any side effects.More clinical studies on large samples with long follow-up period as well as multiple application of *Jalauka*are required.



REFERENCES

- 1 Agnivesh, charak, Dridbala, Charaksamhita, Chikitsasthana, adhyaya28/12, edited by Vaidya Yadavji Trikamji Acharya. 2nd Ed. Varanasi Chaukhamba Sanskrit sansthan; 1990.
- 2 Yogratnakara with Vidyotinihindi commentary by vd. Lakshmipati Shastri, Chaukhamba Prakashan, Varanasi, ed. Reprint 2012. Uttaradh, premehanidanma pg-85.
- 3 Lichtenstein DR, Syngal S, Wolfe MM. Nonsteroidal anti-inflammatory drugs and the gastrointestinal tract. The double-edged sword. Arthritis Rheum. 1995;38:5–18.
- 4 Sushruta, Suaruta Samhita, Sutrasthana, Adhyaya 13/15. Edited by Vaidya Yadavji Trikamji Aacarya and Narayanram Acarya. 4th ed. Varanasi; Chaukhamba Orientalia: 1980.