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Ayurvedic Management Of Janusandhigata Vata (Knee Osteoarthritis) By Jalaukavacharana And Adjuvasnt Ayurvedic Medication: A Case Report

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Abstract

Background: Knee osteoarthritis is a chronic degenerative joint disorder characterized by pain, stiffness, tenderness, swelling, crepitations, and restricted joint movements, leading to functional disability and reduced quality of life. In Ayurveda, the clinical features of Knee osteoarthritis resemble Janusandhigata Vata. Jalaukavacharana (leech therapy), a parasurgical procedure described in Ayurveda, is traditionally indicated for conditions associated with pain and inflammation. This case report evaluates the clinical outcome of Jalaukavacharana in a patient with bilateral knee osteoarthritis.

Methods: A patient diagnosed with bilateral knee osteoarthritis presented with pain, tenderness, swelling, crepitations, stiffness, and pain during knee movements. Baseline assessment was performed using the Visual Analogue Scale (VAS) for pain and clinical parameters including tenderness, swelling, crepitations, stiffness, and pain on movement. The patient underwent a multimodal Ayurvedic treatment regimen including Panchakarma procedures, adjuvant Ayurvedic medication, and Jalaukavacharana. Two sittings of Jalaukavacharana were administered at a 15-day interval. Clinical evaluations were conducted before and after each sitting and at a follow-up visit on Day 30.

Results: At baseline, the patient reported bilateral knee pain with a VAS score of 4, along with tenderness, mild swelling, crepitations, stiffness, and pain during knee movement. Following the first sitting, pain reduced to VAS 1 in both knees, with improvement in all associated clinical parameters. Swelling resolved completely in the left knee and reduced in the right knee. The clinical improvement was maintained until the second sitting. At the Day 30 follow-up, complete relief was observed in both knees. Pain reduced to VAS 0, and tenderness, swelling, crepitations, stiffness, and pain during knee movement were absent bilaterally. No adverse events were observed during the treatment or follow-up period.

Conclusion: Jalaukavacharana was associated with progressive and sustained improvement in the clinical manifestations of bilateral knee osteoarthritis in this patient. The intervention resulted in complete resolution of pain and other assessed clinical parameters at the 30-day follow-up. These findings suggest that Jalaukavacharana along with adjuvant Ayurvedic drugs is a viable therapeutic option in the management of knee osteoarthritis; however, further controlled clinical studies are required to establish its efficacy and safety.

Keywords: Jalaukavacharana; Leech Therapy; Knee Osteoarthritis; Janusandhigata Vata, Ayurved.

Introduction :

Osteoarthritis is a degenerative joint disorder caused by extracellular matrix breakdown and abnormal inflammatory responses following joint injury. The disease initially presents as a molecular disturbance with abnormal joint tissue metabolism and subsequently progresses to anatomical and physiological changes, including cartilage degradation, bone remodelling, osteophyte formation, and joint inflammation, impairing normal joint function and ultimately resulting in clinical illness^[1] It is classified as primary (idiopathic) or secondary osteoarthritis; the latter develops due to conditions such as trauma, congenital abnormalities, inflammatory arthropathies, and metabolic disorders.^[2]

The knee is one of the most commonly affected joints, and knee osteoarthritis causes pain, stiffness, restricted mobility, and disability, particularly among older adults.^[3] A community-based study across five sites in India involving 5,000 participants reported a prevalence of primary knee osteoarthritis of 28.7%, with age, obesity, and female sex^[4] and sedentary work as significant risk factors. Globally, osteoarthritis remains a major cause of pain and functional limitation, with the knee being the most frequently affected joint.^[5]

Management of Knee osteoarthritis aims to reduce pain and improve function, mobility, and quality of life. Conventional approaches include lifestyle modification, exercise, physiotherapy, analgesics, non-steroidal anti-inflammatory drugs, intra-articular therapies, and joint replacement in advanced disease. Prolonged pharmacological therapy may cause adverse effects, while surgery is

generally reserved for severe disease^[6]

According to Ayurveda, Knee osteoarthritis can be correlated with Janusandhigata Vata, a localised manifestation of Sandhigata Vata involving the knee. It is associated with aggravated Vata Dosha and characterized by *Sandhi Shoola*, *Shotha*, *Stambha*, *Sphutana*, and restricted or painful movements.^[7-8] Ayurvedic management includes Shodhana and Shamana therapies according to clinical condition and Dosha predominance.^[9-10] Jalaukavacharana, a form of Raktamokshana, is described for painful and inflammatory conditions.^[11] Contemporary studies report improvement in pain and function with medicinal leech therapy in knee osteoarthritis^[12] The therapeutic effects of leech therapy are attributed to biologically active substances in leech saliva, including anticoagulant, anti-inflammatory, analgesic, and other bioactive components.^[13]

In the present case, a patient with Janusandhigata Vata with special reference to knee osteoarthritis was managed with Jalaukavacharana. Snehan and Swedana were administered as Purva Karma before the procedure, and clinical outcomes were assessed for pain, stiffness, crepitus, and knee movement.

Patient Information

In this study, on 15th June ,2026, a 56-year-old female patient presented to the Shalya-tantra outpatient department at D.Y. Patil Ayurvedic Hospital with complaints of pain in B/L knee joints for the past 4–5 years, which had progressively worsened over the preceding two months. She also complained of chronic low back pain of 4–5 years duration, with recent aggravation. The patient experienced difficulty in walking and performing

routine daily activities due to persistent pain and stiffness. She had a past history of carcinoma of the endometrium, treated surgically in 2023, and was on regular six-month follow-up. She had previously received conservative treatment with symptomatic relief only. As the symptoms persisted and progressively affected her quality of life, she visited D. Y. Patil Ayurvedic Hospital, Navi Mumbai, for Ayurvedic management. Based on clinical examination, she was diagnosed with *Janusandhigat Vata* (Knee Osteoarthritis) and was admitted for *Jalaukavacharana* (leech therapy), Panchakarma procedures, and adjuvant Ayurvedic medications.

Clinical Findings

A 56-year-old postmenopausal female presented to the Department of Shalyatantra, D. Y. Patil Ayurvedic Hospital, Navi Mumbai, with bilateral knee pain for 4–5 years, worsening over the past two months. She reported stiffness after rest, crepitus, and difficulty in walking, stair climbing, prolonged standing, and squatting, along with chronic low back pain. There was no history of recent trauma.

Her medical history included carcinoma of the endometrium, for which she underwent robotic surgical staging with total hysterectomy, bilateral salpingo-oophorectomy, and pelvic lymph node dissection in 2023, with no evidence of recurrence on follow-up. She also had a past history of pulmonary tuberculosis and had completed antitubercular treatment.

On examination, she was moderately built, conscious, cooperative, and hemodynamically stable. Vital signs were within normal limits.

Pallor, icterus, cyanosis, clubbing, oedema, and lymphadenopathy were absent. Local examination revealed bilateral medial joint-line tenderness, crepitus, painful restriction of knee flexion, and difficulty with weight-bearing, without erythema or local warmth.

Rogi Samanya Pariksha (General examination as per Ayurveda)

Ashtavidha Pariksha (eightfold physical examination) of the patient was performed, which showed *Hamsa Gati* (slow and steady) *Nadi* (pulse) at 80/min, *Mala* (~stools) 1-2times/day and *Mutra* (~urine) 5-6times/ day were found to be *Prakruta* (normal), *Jivha* (tongue) of the patient was *Sama* (~white-coated tongue), *Shabda* (~speech), *Sparsha* (~temperature), and *Drukha* (~vision) of the patient were *Prakruta* (~within normal limits). Similarly, the patient had *Madhyam Akriti* (~properly nourished) and *Pitta Pradhan Kapha Anubandhi Prakriti* (~inherent characteristic).

Table 1. Laboratory Investigation

Investigations	Results
Hb	11.2gm/dl
WBC	8,500/cumm
Platelet count	2.84lakhs/cumm
HIV	Non-Reactive
HBsAg	Negative
HCV	Non Reactive



Figure 1. X-Ray Findings Of Right And Left Knee Joint AP/LAT view .(Dt -07/05/2026)

Finding- Mild osteoarthritic changes with mildly reduced medial joint space and patellar osteophytes bilaterally. Bone density was normal, and the surrounding soft tissues appeared normal.

Table 2. Local Examination of Bilateral Knee Joints

Examination	Parameter	Right Knee	Left Knee
Inspection	Swelling	Mild	Mild
	Deformity	Absent	Absent
	Skin changes	Absent	Absent
	Muscle wasting	Absent	Absent
	Gait	Antalgic gait due to pain	Antalgic gait due to pain
Palpation	Local temperature	Normal	Normal
	Tenderness	Present over medial joint line	Present over medial joint line
	Crepitus	Present	Present
	Joint line tenderness	Present	Present
	Effusion	Absent	Absent
Range of Motion (ROM)	Flexion	Painful terminal flexion	Painful terminal flexion
	Extension	Full, painful at terminal range	Full, painful at terminal range
Functional Examination	Walking	Painful	Painful
	Stair climbing	Painful and difficult	Painful and difficult
	Squatting	Difficult	Difficult

Clinical Assessment Parameter

To determine therapeutic outcomes, patients underwent a structured clinical assessment before and after treatment. The evaluation focused on the disease's major signs and symptoms. Each clinical parameter was graded on a four-point scale ranging from 0 (absent) to +++ (severe), based on its intensity and its impact on the patient's daily activities. The parameters assessed included pain (*Sandhishoola*), tenderness (*Sparshasahatwa*), crepitus, stiffness (*Sandhigraha*), and pain during knee flexion and extension (*Sandhi Akunchana-Prasaran Vedana*). Pain intensity was measured using the Visual Analogue Scale (VAS). The findings of the clinical assessment are summarized in Table No. 4.

Table No.4 Clinical Assessment Parameters with Gradation^[14]

Sr . No.	Symptoms	Absent	Mild	Moderate	Severe
1	Pain in knee joint (<i>sandhishool</i>) VAS Scale (0-10 score)	0	+(0-3)	++(4-7)	+++ (7-10)
2	Tenderness as around knee joint (<i>sparshasahatwa</i>)	0 No Tenderness	+ Mild pain on pressure, bearable	++ Moderately painful on pressure, bearable	+++ Severe pain on touch, bearable

Sr. No.	Symptoms	Absent	Mild	Moderate	Severe
3	Swelling at knee joint (Sandhi Shoth)	0 No Swelling	+ Mild Swelling	++ Moderate Swelling	+++ Severe Swelling
4	Crepitations	0	+	++	+++
5	Stiffness in joints (Sandhigrah)	0 No Stiffness	+ Occasionally present	++ After long sitting and walking	+++ Whole day and night
6	Knee joint movements (Sandhi Akunchan prasara Vedana)	0 Complete movement without pain	+ Mild pain, Completely can walk without support	++ Painful, incomplete, can walk with support	+++ Painful restricted movements Unable to walk

Diagnosis -

After Detailed Assessment - history taking, physical examination and radiological reports, the patient was diagnosed with case of knee -osteo arthritis i.e. Janu-Sandhigat Vata.

Therapeutic Intervention

The patient received an integrative Ayurvedic treatment protocol from 15 June 2026 to 27 June 2026. Panchakarma included Abhyanga (Snehan) with Tila Taila, Dashamoola Swedana, Matra Basti with Ashwagandha Taila (13 days each), Janu Basti with Mahanarayana Taila (10 days), and two sittings of Jalaukavacharana on 20 June 2026 and 6

July 2026. Supportive therapies comprised Dashanga Lepa over both knee joints (10 days), therapeutic yoga (5 days), and physiotherapy (3 days). *Shamana Chikitsa* consisted of Rasnadi Guggulu, Ashwagandha Churna Vati, Shankhavati, Arogyavardhini Vati, Hingwashtaka Churna, Capsule Palsineuron, and Tablet Immunocin for 13 days with warm water as the adjuvant to alleviate pain, reduce inflammation, pacify Vata, and improve joint function.

Table No.5. Timeline of clinical Intervention

Sr.No.	Treatment Period	Intervention	Route / Site	Dose, Frequency & Administration
Internal medications				
1	15-27 Jun 2026	Rasnadi Guggulu	Oral	2 tablets (280 mg each), twice daily after meals, with warm water
2	15-27 Jun 2026	Ashwagandha Churna Tikdi	Oral	2 tablets (420 mg each), twice daily after meals, with warm water
3	15-27 Jun 2026	Shankhavati	Oral	2 tablets (330 mg each), twice daily after meals, with warm water
4	15-27 Jun 2026	Arogyavardhini Vati	Oral	2 tablets (330 mg each), twice daily after meals, with warm water
5	20-27 Jun 2026	Hingwashtaka Churna	Oral	3 g, twice daily before meals, with warm water

Standard Operating Procedure of

medicinal leeches were selected. The patient was

Sr.No.	Treatment Period	Intervention	Route / Site	Dose, Frequency & Administration
6	20–27 Jun 2026	Palsineuron Capsule	Oral	1 capsule, twice daily after meals, with warm water
7	19–27 Jun 2026	Imunocin Tablet	Oral	1 tablet, once daily after meals, with warm water
Procedural and Supportive interventions				
8	15–27 Jun 2026	Snehan with Tila Taila	External	As per treatment protocol
9	15–27 Jun 2026	Swedana with Dashamoola Bharada	External	As per treatment protocol
10	15–27 Jun 2026	Matra Basti with Ashwagandha	Rectal	As per treatment protocol
11	15–20 & 24–27 Jun 2026	Janu Basti with Mahanarayana Taila	Bilateral knee joints	As per treatment protocol
12	15–20 & 25–27 Jun 2026	Dashanga Lepa	Bilateral knee joints	Local application
13	16–20 Jun 2026	Yoga therapy		As per prescribed regimen
14	25–27 Jun 2026	Physiotherapy		As per prescribed regimen
15	20 Jun & 6 Jul 2026	Jalaukavacharana	Bilateral knee joints	2 sittings

Jalaukavacharana ^[15]

Jalaukavacharana was done on affected site, 2 sitting on 20/06/26 & 6/ 7/26

Purva Karma

Before the procedure, the patient was counseled regarding Jalaukavacharana, and written informed

consent was obtained. Five healthy and active

made comfortable, and the skin over both knee joints was cleaned thoroughly with normal saline. The most tender points on both knees were identified and marked for leech application.

Pradhana Karma (Main Intervention)

Each leech was gently held from its posterior end and applied over the marked tender point (At Right knee 2 leeches at medial aspect & left knee 1 at medial aspect and other 2 at lateral aspect). After successful attachment, the leeches were allowed to suck blood naturally. Wet sterile gauze was placed over the leeches to maintain moisture and facilitate continuous feeding. The leeches were closely observed throughout the procedure and were allowed to detach spontaneously after approximately 45 minutes.

Paschat Karma (Follow Up Measures)

After spontaneous detachment, the bite sites were cleaned, and Haridra (turmeric) powder was applied to control oozing and promote healing. Sterile dressing was applied over the bite sites. The same procedure was carried out for all leech bite sites. The patient was monitored for any immediate adverse effects, such as excessive bleeding, itching, redness, allergic reaction, or infection. No complications were observed following the procedure.



Figure.2 Leech therapy at B/L Knee joints

Observations:

Clinical Parameter	First Sitting				Second Sitting			
	Before Treatment (Day 1)		After Treatment (Day 7)		Before Treatment (Day 15)		After Treatment Follow up (Day 30)	
	Right knee	Left knee	Right knee	Left knee	Right knee	Left knee	Right knee	Left knee
Pain (Sandhishoola) – VAS (0–10)	++ 4	+ +	+ 1	+ 1	+ 1	+ 1	0	0
Tenderness (Sparshasahatwa)	++	+ +	+	+	+	+	0	0
Swelling (Sandhi Shotha)	+	+	+	0	+	0	0	0
Crepitations	++	+ +	+	+	+	+	0	0
Stiffness (Sandhigraha)	++	+ +	+	+	+	+	0	0
Pain on Knee Movement (Sandhi Akunchana–Prasarana Vedana)	++	+ +	+	+	+	+	0	0

Follow-up and Outcomes

The patient was assessed systematically before and after each sitting of *Jalaaukavacharana* (Leech Therapy) and during the subsequent follow-up period. At baseline (Day 1), both knees showed pain (VAS 4), along with tenderness, mild swelling, crepitations, stiffness, and pain with knee movement. After the first sitting, Day 7 assessment showed a marked reduction in pain, with the VAS score decreasing from 4 to 1 in both knees. Tenderness, crepitations, stiffness, and pain during knee movement decreased from moderate (++) to mild (+). Swelling showed improvement, with complete resolution in the left knee, while mild swelling persisted in the right knee.

Before the second sitting (Day 15), the improvement achieved after the first sitting was maintained. The patient reported only mild pain (VAS 1) in both knees, with mild tenderness, crepitations, stiffness, and pain on knee movement.

Swelling remained mild in the right knee but was absent in the left knee. Symptoms did not worsen during this period, indicating a sustained therapeutic response following the initial sitting of *Jalaaukavacharana*. The progressive reduction in both subjective symptoms and objective clinical findings suggested improved functional status of the knee joints.

At the final follow-up on Day 30, the patient achieved complete clinical relief bilaterally. The VAS score reduced to 0 in both knees, while tenderness, swelling, crepitations, stiffness, and pain during knee movement were completely absent. Thus, the patient demonstrated progressive and sustained improvement across all assessed

clinical parameters following Jalaukavacharana. Complete resolution of the evaluated signs and symptoms by Day 30 indicates a favourable short-term clinical outcome in this case, with no recurrence of the assessed symptoms during the follow-up period.

Discussion :

Knee osteoarthritis is a chronic degenerative joint disease characterized by pain, stiffness, crepitus, and limitation of joint movements, leading to impaired quality of life. In Ayurveda, these clinical features closely resemble Janusandhigata Vata, which develops due to the aggravation of Vata Dosha in the knee joint. The main aim of treatment is to reduce pain, stiffness, and inflammation, improve joint mobility, and restore functional ability.

In the present case, the patient had bilateral knee pain for 4–5 years with recent worsening of symptoms. Previous conservative treatment provided only temporary relief. Therefore, we planned an integrative Ayurvedic treatment consisting of Jalaukavacharana, Panchakarma procedures, and adjuvant Ayurvedic medications.

Jalaukavacharana was the principal intervention in this case. According to Sushruta Samhita, *Jalaukavacharana* is indicated in painful and inflammatory conditions and is considered an effective method of *Raktamokshana* (Blood Letting). Studies have shown that medicinal leech saliva contains several active substances with different effects. Hirudin prevents blood clotting by inhibiting thrombin. Calin prevents platelet aggregation caused by collagen. Destabilase helps dissolve fibrin and

blood clots. Hirustasin inhibits enzymes such as kallikrein, trypsin, and cathepsin G. Bdelin and Eglin have anti-inflammatory effects and inhibit certain enzymes involved in inflammation. Carboxypeptidase A inhibitors increase blood flow at the leech bite site. Histamine-like substances and acetylcholine act as vasodilators and increase local blood flow. An anesthetic substance present in the saliva reduces pain and produces local anesthesia at the bite site.^[16-17]

The Panchakarma procedures further enhanced the therapeutic outcome. Abhyanga with Tila Taila and Dashamoola Swedana helped reduce stiffness and pain while improving local circulation^[18]. Matra Basti with Ashwagandha Taila pacified aggravated Vata Dosha, Brimhana, and Balya properties, helping to reduce pain and stiffness and improve knee-joint function.^[19] Janu Basti with Mahanarayana Taila provided local oleation and improved knee joint mobility^[20]. Dashanga Lepa reduced pain, swelling, stiffness, and local inflammation.^[21] Yoga and physiotherapy also contributed to improved flexibility and overall functional recovery.

Internal Ayurvedic medicines serve as supportive therapy throughout the treatment period. Rasnadi Guggulu helped reduce pain and inflammation.^[22]

Ashwagandha Churna Vati promoted strength and tissue nourishment²³. Shankhavati, Hingwashtaka Churna, and Arogyavardhini Vati improved digestion and metabolism, thereby helping in the management of Ama, which is considered an important factor in the progression of musculoskeletal disorders according to

Ayurveda [24-26]

Following treatment, the patient showed marked improvement in all assessed clinical parameters. Pain, tenderness, swelling, stiffness, and painful knee movements were completely relieved, while crepitus decreased from moderate to mild. Functional activities such as walking, stair climbing, and squatting also improved considerably. These findings are consistent with previous clinical studies reporting beneficial effects of *Jalaukavacharana* in patients with knee osteoarthritis.

The present case suggests that *Jalaukavacharana*, when combined with Conventional Panchakarma procedures and adjuvant Ayurvedic medications, can provide effective symptomatic relief and improve joint function in patients with *Janusandhigata Vata* (knee osteoarthritis). However, further well-designed clinical studies with larger sample sizes are required to validate these findings.

Conclusion :

The improvement observed in this patient may be attributed to the combined effect of *Jalaukavacharana*, Panchakarma procedures, and adjuvant Ayurvedic drugs. *Jalaukavacharana* contributed to reduced pain and local inflammation through its analgesic and anti-inflammatory effects, thereby facilitating progressive improvement in knee joint movement. Following the first sitting, pain during knee movement decreased from moderate to mild, and after the second sitting, it was completely relieved at follow-up, indicating progressive improvement in functional knee movement. Panchakarma

therapies further helped reduce stiffness and improve joint mobility, while the internal Ayurvedic medicines provided supportive effects for pain relief and overall recovery. The observed clinical improvement suggests that *Jalaukavacharana* with adjuvant Ayurvedic medication may be a promising therapeutic approach in the management of *Janusandhigata Vata* (knee osteoarthritis). However, further well-designed controlled clinical studies are required to establish its efficacy and safety.”

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Declaration :

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