



Research Article

A COMPARATIVE EVALUATION OF JANUPICHU AND JANUDHARA WITH MURCHHITA TILA TAILA IN THE MANAGEMENT OF SANDHIGATA VATA W.S.R. KNEE OSTEOARTHRITIS (OA): A STUDY PROTOCOL

Rizvan Khan^{1*}, Arun Gupta²

¹Post Graduate Scholar, ²Professor and Head, PG Department of Panchakarma, Chaudhary Brahm Prakash Ayurved Charak Sansthan, Delhi, India.

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ABSTRACT

In Ayurveda, *Sandhigata Vata* closely resembles knee osteoarthritis in its clinical presentation, characterized by *Sandhishu Shoola Shotha Stambha Atopa* and restricted joint movements. *Janupichu* and *Janudhara* are localized Ayurvedic therapies that provide *Snehana* and *Swedana* effects and may help alleviate symptoms of *Sandhigata Vata*. **Aim:** To compare the efficacy of *Janupichu* and *Janudhara* with *Murchhita Tila Taila* in the management of *Sandhigata Vata* with special reference to knee osteoarthritis. **Materials and Methods:** A total of 62 patients diagnosed with *Sandhigata Vata*/Knee Osteoarthritis fulfilling the inclusion criteria will be enrolled and randomly allocated into two groups of 31 participants each. Group A will receive *Janupichu* with *Murchhita Tila Taila*, while Group B will receive *Janudhara* with *Murchhita Tila Taila*. The interventions will be administered from day 1–15 and repeated from day 30–45, followed by assessment up to day 60. Outcome measures will include the WOMAC Osteoarthritis Index and grading of Ayurvedic symptoms such as *Sandhishu Shoola*, *Sandhishu Shotha*, *Hanti Sandhigam*, *Prasarana-Akunchana Vedana*, *Vatapurna Druti Sparsha*, and *Atopa*. Assessments will be performed on day 0, day 30, and day 60. **Results:** The collected data will be statistically analyzed to evaluate the effectiveness of both interventions in reducing pain, stiffness, swelling, and functional disability associated with knee osteoarthritis. Comparative analysis will determine whether *Janupichu* provides superior clinical outcomes compared to *Janudhara* when administered with *Murchhita Tila Taila*. **Discussion and Conclusion:** This study is expected to generate evidence regarding the comparative efficacy of *Janupichu* and *Janudhara* in the management of *Sandhigata Vata*. The findings may contribute to the development of standardized, non-invasive, cost-effective Ayurvedic treatment protocols for knee osteoarthritis and support the integration of evidence-based *Panchakarma* therapies into clinical practice.

INTRODUCTION

Osteoarthritis (OA) is the second most common rheumatologic problem in India and has a prevalence rate of 22-39%^[1]. It is characterized primarily by articular cartilage degeneration and a secondary periarticular bone response.^[2,3] Osteoarthritis (OA) is a long-term, progressive condition marked by the

breakdown of joint cartilage, overgrowth of bone at joint edges, hardening of the underlying bone (subchondral sclerosis), and various biochemical and structural changes in the synovial membrane and joint capsule. The primary symptoms leading to a diagnosis include joint pain, stiffness, walking difficulties, swelling, and creaking sounds (crepitus). In Ayurvedic literature, a condition called *Sandhigata Vata* is described, which closely resembles osteoarthritis based on overlapping clinical signs and symptoms. According to Ayurveda, *Sandhigata Vata* arises from factors such as poor dietary habits, unhealthy lifestyle, and aging. These lead to the deterioration of body tissues (*Dhatu kshaya*), an increase in *Vata dosha* (the

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bio-element responsible for movement and physiological activity), and a decline in *Shleshaka kapha*, the lubricating substance in the joints. The elevated *Vata* causes dryness (*Rukshata*), lightness or brittleness (*Laghutva*), and roughness (*Kharatva*) in the joints, ultimately resulting in degeneration. The hallmark symptom of *Sandhivata* is joint pain (*Sandhi shoola*).

The other features are including *Shotha* (swelling), *Stabdghata* (stiffness) and, *Atopa* (crepitus) and *Sandhihanti* (difficulty in performing the functions of involved joint)^[4].

Need of the Study: In Ayurveda, *Sandhigata Vata* closely resembles the clinical features of knee osteoarthritis. Among the various treatment modalities described, *Janupichu* (local oil retention at the knee joint) and *Janudhara* (oil pouring or *Snehadhara* over the knee joint) are gaining attention for their potential to provide localized relief through *Snehana* (oleation) and *Swedana* (sudation) effects^[5].

There is a growing demand for non-invasive, cost-effective, and holistic approaches to manage chronic conditions like OA. However, scientific evidence validating the efficacy of *Janupichu* and *Janudhara* is still limited. Evaluating these therapies using objective clinical parameters is essential to establish their role in pain relief, improving joint function, and enhancing quality of life in OA patients.

Osteoarthritis (OA) of the knee joint is a leading cause of disability worldwide, particularly among the elderly population. It is characterized by degeneration of articular cartilage, joint space narrowing, osteophyte formation, pain, stiffness, and functional limitation. Despite advancements in modern pharmacological and surgical interventions, long-term management of OA often remains unsatisfactory due to side effects, limited accessibility, and cost-related concern.

Review of Literature

The detailed study of *Sandhigata vata* and its modern correlation will be done by taking detailed review from *Brihatrayi*, *Laghutrayi*, other relevant Ayurvedic texts and modern books, journals and database.

Study Drug

Murchhita Tila Taila

Source of Data

Patients visiting *Panchakarma* OPD and IPD of Chaudhary Brahm Prakash Ayurved Charak Sansthan, Delhi and full filling the inclusion criteria shall be enrolled for the study after obtaining informed consent.

AIM AND OBJECTIVES

Aim

To compare the efficacy of *Janupichu* and *Janudhara* with *Murchhita Tila Taila* in the management of *Sandhigata Vata* w.s.r. knee osteoarthritis (OA).

Objectives

1. To evaluate the efficacy of *Janupichu* with *Murchhita Tila Taila* in management of *Sandhigata Vata* w.s.r. knee osteoarthritis (OA).
2. To assess the efficacy of *Janudhara* with *Murchhita Tila Taila* in management of *Sandhigata Vata* w.s.r. knee osteoarthritis (OA).
3. To compare the clinical outcomes (pain relief, range of motion, swelling) between the two treatment groups.

Research Question

"Which treatment protocol is more effective in managing *Sandhigata Vata* w.s.r. knee osteoarthritis (OA)- *Janupichu* or *Janudhara* with *Murchhita Tila Taila* ?"

Hypothesis

Null Hypothesis (H0) *Janupichu* and *Janudhara* with *Murchhita Tila Taila* are equally effective in management of *Sandhigata Vata* w.s.r. knee osteoarthritis (OA).

Alternate Hypothesis (H1) *Janupichu* is more efficacious than *Janudhara* with *Murchhita Tila Taila* in management of *Sandhigata vata* w.s.r. knee osteoarthritis (OA).

Study Design

Type of trial: Interventional

Purpose: Treatment

Masking: Open label

Method of randomization: Computer Generated randomization

Timing: Prospective

End point: Efficacy

No. of groups: 2 group

Subjects: 62 (31 in each group)

Allocation: Selection of patient according to criteria

Phase of trial: Phase 3

Duration of trial: 12 months

Statistical tool: Appropriate tool will be applied

Methodology

The study will be conducted in Chaudhary Brahm Prakash Ayurved Charak Sansthan, Delhi, India.

Inclusion criteria

1. Patients willing to participate in study with written informed consent.

2. Classical sign and symptoms of *Sandhigata vata* such as, *Shoola shotha stambha*, *Sphutana*, *Prasarana- Akunchana Pravritti Svedana* at the *Janusandhi*.
3. Patients with age group 40-60 years.
4. Patients with radiological findings of knee osteoarthritis upto grade 2nd.
5. Patients fit for *Janupichu* and *Janudhara*.

Exclusion criteria

1. Patients below 40 and above 60 years of age.
2. Patients suffering from uncontrolled hypertension, uncontrolled diabetes etc.

Plan of Study

3. Patients suffering from OA grade 3 and 4, carcinoma, psoriatic arthritis, gout, S.L.E, Polymyalgia rheumatica and tuberculosis etc.
4. Patients unfit for *Janupichu* and *Janudhara*.
5. Trauma induce knee osteoarthritis.

Withdrawal Criteria

Patients reporting with any of the following:

1. Those who doesn't follow the treatment protocol.
2. If any acute illness or complications develop, patient will be treated accordingly and will be excluded from the study.
3. Leave Against Medical Advice (LAMA).

Table 1: Groups

Group	Group A	Group B
Name of procedure	<i>Janupichu</i> with <i>Murchhita Tila Taila</i>	<i>Janudhara</i> with <i>Murchhita Tila Taila</i>
Number of patients	31	31
Dose	200 ml for each knee joint	1000 ml for each knee joint
Duration	1 th -15 th day, 30 th -45 th day.	1 th -15 th day, 30 th -45 th day.
Route of administration	Local	local

Statistical Analysis

The observations and result will be analyzed and presented on the basis of respective and applicable statistical method.

Time Duration till Follow up

In both the groups initially 15 days treatment and 15 days gap again 15 days treatment of and follow up period 60th day.

Criteria For Assessment**Subjective criteria**

Classical symptoms of *Sandhigata vata*^[6,7]

- *Sandhishu Shoola* (joint pain)
- *Sandhishu Shotha* (joint swelling)
- *Hanti Sandhigam* (restricted joint movement)
- *Prasarana-Akunchana Pravritti Svedana* (pain during flexion and extension)
- *Vatapurna Druti Sparsha* (air-filled balloon-like feel in joint)
- *Atopa* (cracking or snapping noise)

Objective criteria

1. WOMAC OA Index
2. Grading of Ayurvedic *Sandhigata Vata* symptoms

WOMAC OA Index^[8]**Table 2: Pain**

How much pain do you have?	None	Mild	Moderate	Severe	Extreme
Walking on flat surface	0	1	2	3	4
Going up/downstairs	0	1	2	3	4
At night while on bed	0	1	2	3	4
Sitting or lying	0	1	2	3	4
Standing upright	0	1	2	3	4

Table 3: Joint Stiffness

Joint stiffness	None	Mild	Moderate	Severe	Extreme
How severe is your stiffness after first wakening in the morning?	0	1	2	3	4
How severe is your stiffness after sitting, lying, or resting later in the day?	0	1	2	3	4

Table 4: Physical Function

what degree of difficulty do you have with?	None	Mild	Moderate	Severe	Extreme
Descending stairs	0	1	2	3	4
Ascending stairs	0	1	2	3	4
Rising from sitting	0	1	2	3	4
Standing	0	1	2	3	4
Bending to floor	0	1	2	3	4
Walking on flat surface, Continue...	0	1	2	3	4
Getting in/out of car	0	1	2	3	4
Going shopping	0	1	2	3	4
Putting on socks/stocking	0	1	2	3	4
Rising from bed	0	1	2	3	4
Taking of socks/stocking	0	1	2	3	4
Lying in bed	0	1	2	3	4
Getting in/out of bath	0	1	2	3	4
Sitting	0	1	2	3	4
Getting on/off toilet	0	1	2	3	4
Heavy domestic duties	0	1	2	3	4
Light domestic duties	0	1	2	3	4

WOMAC OA Scoring

Pain: 0-20

Joint stiffness: 0-8

Physical function: 0-68

Total scoring: 0-96

Table 5: Grading of Ayurvedic Sandhigata Vata symptoms^[9]

Symptom	Grade 0 None	Grade 1 Mild	Grade 2 Moderate	Grade 3 Severe
<i>Sandhishu shola</i> (joint pain)	No pain	Mild pain	Slight difficulty in moving	Severe difficulty in walking/ unable to walk
<i>Sandhishu Shotha</i> (joint swelling)	No swelling	Mild swelling	Moderate swelling	Severe swelling
<i>Hanti Sandhigam</i> (restricted movement)	No restriction	Mild restriction	Moderate restriction	Severe restriction
<i>Prasarana-Akunchana Vedana</i> (pain on flexion/ extension)	No movement	Pain without winching of face	Prevent complete flexion	Does not allow passive movement
<i>Vatapurna Druti Sparsha</i> (balloon-like feel)	Not present	Present		
<i>Atopa</i> (cracking/snapping noise)	No crepitus	Palpable crepitus	Audible crepitus	

Primary Outcomes: Improvement in Assessment Scale of *Sandhigata Vata*.

Data Management: Data coding will be done by principle investigators.

Statistical Methods: Unpaired and paired t-test.

Consent: Subjects will be given detail information regarding their treatment in Hindi and English. Then written consent will be taken from patients before starting the study.

Approval: Approved by IEC, IRC of the concerned University. Trial is registered under Clinical Trials Registry – India^[10]

Dissemination Policy: Will be in the form of paper publication and presentation.

Strengths: If proposed study will result in the positive outcome, then it will be established new mode of management for *Sandhigata Vata*.

RESULTS

Results of the treatment will be tabulated and analyzed statistically with relevant tests and level of significance will be reported.

DISCUSSION AND CONCLUSION

Conclusion will be mentioned after the analyzing data.

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*Address for correspondence

Dr. Rizvan Khan

Post Graduate Scholar,
PG Department of Panchakarma,
Chaudhary Brahm Prakash Ayurved
Charak Sansthan, Delhi.

Email: rizvankhan1239@gmail.com

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