

**A CLINICAL STUDY TO EVALUATE THE EFFECT OF PALASHATWAKADI  
KASHAYA ALONG WITH NIRGUNDI TAILA VESHTANA CHIKITSA IN THE  
MANAGEMENT OF JANU SANDHIGATA VATA**Sayujya P. S.<sup>1\*</sup> and Waheeda Banu<sup>2</sup><sup>1</sup>PG Scholar, Department of P. G. Studies in Kayachikitsa, Karnataka Ayurveda Medical College and Hospital, Mangalore, D. K. District, Karnataka, India.<sup>2</sup>HOD & Professor, Department of P. G. Studies in Kayachikitsa, Karnataka Ayurveda Medical College and Hospital, Mangalore, D.K District, Karnataka, India.**\*Corresponding Author: Dr. Sayujya P. S.**

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**ABSTRACT**

*Sandhigata Vata* is the commonest disorder which mainly occurs due to *Dhatukshaya* and other *Vata Prakopaka Nidana*, which limits daily life activities such as walking, standing, personal care etc. *Janu Sandhigata Vata* can be correlated with osteoarthritis (OA). The clinical features of *Janu sandhigata Vata* are pain, swelling, restricted movements of the joint the prevalence of osteoarthritis generally increases with age. The prevalence of osteoarthritis generally increases with age. In Ayurvedic classic our *Acharya's* have given thousands of medication for specific disease. *Palashatwagadi Kashaya* from the reference of *Sahasrayoga* and *Nirgundi Taila* from *Charaka Samhita* are selected for the study. Patient was treated with *Palashatwagadi Kashaya* and *Nirgundi Taila* for 30 days. Follow up after 45<sup>th</sup> days of treatment significant result was found in improvement of *Janu sandhigata Vata* both symptomatically and radiologically. The assessment criteria were noted before and after treatment and on follow-up. Among the subjective and objective parameters, in the Overall effect of treatment in *Janusandi gata vata*, out of 40 patients in this study, 1 patient was getting mild improvement (2%), 12 patients (30%) were getting Moderate improvement and 27 patients (68%) were getting Marked Improvement. The overall effect of the treatment was 64.18 %. Hence it can be concluded that treatment with *Palashatwagadi kashaya* and *Nirgunditaila* has a significant role in the management of *Janu Sandhigata Vata*

**KEYWORDS:** *Janu Sandhigata Vata, Palashatwagadi Kashaya, Nirgundi Taila, Osteoarthritis.***INTRODUCTION**

As age advances *vata dosha* increases in an individual. This increasing *vata* triggers and accelerates *dhatu kshaya* (Depletion of tissues) and *bala kshaya* (Reduction of strength).<sup>[1]</sup> *Sandhigata vata* is the commonest disorder, occurring due to *dhatukshaya*. *Vata dosha* plays a main role in the disease. *Shoola* is the cardinal feature of this disease, associated with *sandhi shotha* and *vatapurnadrutisparsha*. *Sandhigata Vata* manifests when the deranged *vata* lodges in joints. If the condition manifests in *Janusandhi*, then it is called *Janu Sandhigata Vata*.<sup>[2]</sup> Osteoarthritis(OA) is one such disease wherein a rise in incidence is being observed owing to faulty diet and lifestyle. The disease usually affects in the fourth decade, and the occurrence increases linearly with age.<sup>[3]</sup> Unilateral OA is more prevalent in male and bilateral OA in female.<sup>[4]</sup> It is a degenerative disease characterized by loss of articular cartilage and synovial inflammation, joint stiffness, swelling, pain, and loss of mobility being its hallmark symptoms.<sup>[5]</sup> The disease has a propensity to affect the weight-bearing

joints such as the knee and hip most commonly and is hence a potent cause of disability.<sup>[6]</sup>

The knee is the most common joint affected in Osteoarthritis. Osteoarthritis mainly targets patello-femoral and medial tibio-femoral compartments of the knee. Most knee Osteoarthritis particularly in women, is bilateral and symmetrical. Trauma is a more important risk factor in men and may result in unilateral Osteoarthritis. Osteoarthritis Knee Pain is usually localised to the anterior or medial aspects of the knee and upper Tibia. Patello-femoral pain is usually worse going up and down stairs or inclines. Posterior knee pain suggests a complicating popliteal cyst.<sup>[7]</sup> Osteoarthritis is an enlightened disorder of cartilage degradation, synovial inflammation, osteophyte formation, thinning of joint space and sub chondral sclerosis. Osteoarthritis leads to pain, disability as well as difficulty in joints. Contemporary medical sciences aim to give symptomatic relief of pain by analgesics including NSAIDs or joint displacement in end stage situations. An effective

management is needed to repair and strengthen the cartilage and prevent further degeneration.<sup>[8]</sup>

*Susrutha acharya* has added that along with swelling and pain there is disorganization of joints leading to severe disabilities.<sup>[9]</sup> In *Madhava nidana*, *Shoola* and *Atopa* are the symptoms.<sup>[10]</sup> *Sandigatavata* treatment has to be planned, primarily aiming at the correction of vitiated *vata dosha*, also considering involvement of vitiated *kapha dosha*. *Palashatwakadi kashaya*<sup>[11]</sup> is a *shamana yoga* having a combination of three herbal drugs, *palashatwak*, *punarnavamula* and *Sunti* with *saindavalavana* as *anupana*. It is *vatakaphashamaka*, *shoola hara*, *shothahara*, *stambahara*.<sup>[12]</sup> *Acharya charaka* mentioned *bahyasnehana* as effective treatment<sup>[13]</sup> such as *Nirgundi taila*.<sup>[14]</sup> Here *Nirgundi taila veshtana* which is *kapha vata shamaka* and *shoolahara* is taken for the study. Among the *vatopakrama*, *Veshtana* is been explained.<sup>[15]</sup> *Twak* is being asraya for treating the disease<sup>[16]</sup> *Brajaka pitta* does the *pachana* and *grahana* of *aushada* applied on *twak*, through procedures like *abhyanga*, *sweda*, *parisheka*.<sup>[17]</sup>

### AIM AND OBJECTIVES

To evaluate the effect of *Palashatwakadi kashaya* with *Saindava lavana* as *Anupana* along with *Nirgundi taila Veshtana* in the management of *Janusandhigata vata* (Knee osteoarthritis).

### METHODOLOGY

#### Method of collection of data

A minimum of 40 patients fulfilling the diagnostic and inclusion criteria of either gender was selected for the clinical study.

#### Diagnostic criteria

- *Janu sandhivedana* with or without other feature like *stabdata*, *shotha*, *atopa*, *sparshaasahishnutha*, *Gatikruchratha*, Restricted joint movements and joint deformity
- Evidence of Radiological changes of Osteoarthritis of knee joint

#### Inclusion criteria

- Patients of either gender of 70 years or below
- Patients fulfilling the diagnostic criteria
- Both fresh and already treated cases.

#### Exclusion criteria

- *Janu sandhigata vata* secondary to other diseases
- Consequences of trauma and fracture.
- Patient with severe disabling Arthritis.
- Patients having other systemic illness which might interfere the present study.
- Pregnant women and lactating women

#### Intervention

40 patients are selected fulfilling the criteria and are administered with *Palashatwakadi kashaya* (48ml,

empty stomach) with *saindava lavana* along with *Nirgundi taila veshtana* as an external application for 30 days.

Total duration of the study-45 days

FOLLOW UP: 15 days after treatment

#### Assessment criteria

- Signs and symptoms of *Janusandhigata vata* are evaluated before and after treatment.
- Evaluate the clinical and Radiological severity of Osteoarthritis before the commencement.
- Analysis of subjective and objective parameters will be done.
- *Janu vakratha* (Knee deformity in degree)
- Radiological assessment<sup>[18]</sup>
- A) Primary outcome: (Modified -Pune CRD version)<sup>[19]</sup>
  - 1) *Janu sandhivedana*
  - 2) *Womac index for Knee Osteoarthritis*<sup>[20]</sup>
    - a) *Womac pain score*
    - b) *Womac stiffness score*
    - c) *Womac functional disability*
    - d) *Womac total score*
- B) Secondary outcome
  - a) *Stabdata*
  - b) *Shotha*
  - c) *Atopa*
  - d) *Gatikrichratha*
  - e) *Sparsaasahishnutha*
  - f) *Janusandhi akunchana samarthy* (Goniometer)

#### Assessment of results

- Statistical analysis was done using SPSS package, version 22
- All the qualitative variables were summarized using frequency and percentages
- The quantitative variables were summarized using mean and standard deviation, median and interquartile range (Q3, Q1)
- Data were analyzed using normal distribution then performing parametric and non-parametric tests
- Since all subjective variables were qualitative data, the assessment was done by paired t-test.
- The corresponding p-value was noted and obtained results were interpreted as follows:
  - For p value > 0.05 – Interpreted as no significant.
  - For p value < 0.05 – Interpreted as significant.

### OBSERVATION AND RESULT

In the present study, total 40 patients were enrolled, Majority of the patients with 42.5% were belonging to the age group of 36-45 years. 22.5% of patients belong to age group of 25-25 years, while 20% of patients were from age group of 46-55 years and 15% of patients were from age group of 56-65 years. Majority 68% were females and males were 32% only. Maximum patients were middle class with 60%, patients and 60% were of middle class and only 15% with lower class., Majority 20 patients (50%) were housewives, 5 patients (13%) were doing business and 4 patients in office work(10%), 3 were Teacher(8%), 2 were farmer(5%), and also 1

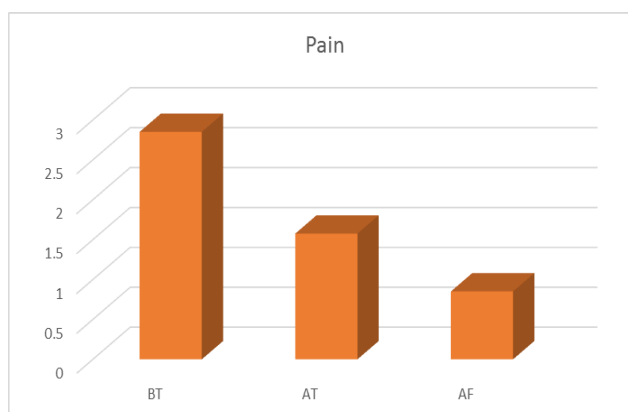
student(3%),1 Bank employee(3%),1 Engineer(3%), 1 Navy officer(3%),1 Cleaning staff(3%), and 1 NRI (3%).88% of the patients were taking mixed diet and 15% of the patients were vegetarians. Minimum number of patients had addiction of Alcohol 10% Smoking 3% and together 5% whereas 33% and 30 % are addicted to Tea and coffee, and 20 % had no addiction. 22 patients (55%) were having family history and 18 patients (45%)

were not having family history. 17 patients (42.5%) were having Dull aching type of pain, 10 patients (25%) were having Generalized type of pain, 10 patients (25%) were having Deep ache type of pain and 3 patients (13.3%) were having Excruciate type of pain. left knee involvement is 27.5% and right knee involvement is 35%. And bilateral involvement is 37.5%.25% are chronic, 10% are sub-acute and 65% are acute in nature.

**RESULTS**

**Table no. 1: Effect on pain.**

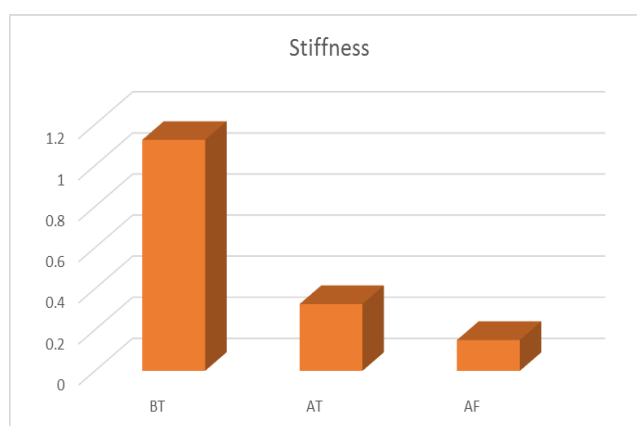
Symptom	Measures				%	S.D (+.)	S.E (+.)	t value	p value
	BT								
Pain	2.85	AT	1.58	1.28	44.74	0.452	0.072	5.01	<0.05
		AF	0.85	2.00	70.18	0.679	0.109	8.41	<0.05



t value =8.41, p <0.05, hence the result is statistically significant. it implies that the effect of the treatment on sandhishula after 45 days, ie after treatment is highly significant.

**Table no. 2: Effect of stiffness.**

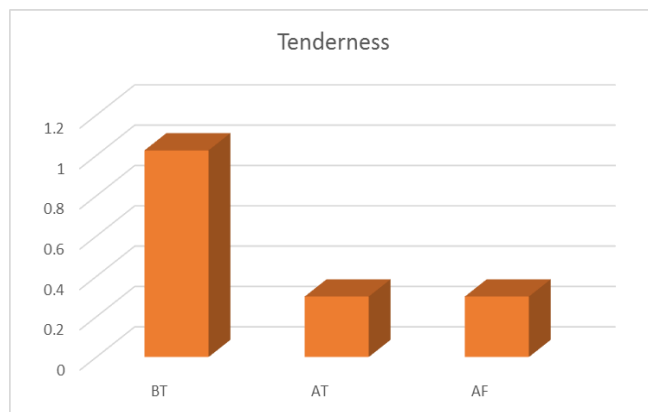
Symptom	Measures				%	S.D (+.)	S.E (+.)	t value	p value
	BT								
Stiffness	1.13	AT	0.33	0.80	71.11	0.464	0.074	5.66	<0.05
		AF	0.15	0.98	86.67	0.660	0.106	7.34	<0.05



t value =7.34, p <0.05, hence the result is statistically significant. it implies that the effect of the treatment on Stiffness after 45 days, ie after treatment is highly significant.

**Table no. 3: Effect of tenderness.**

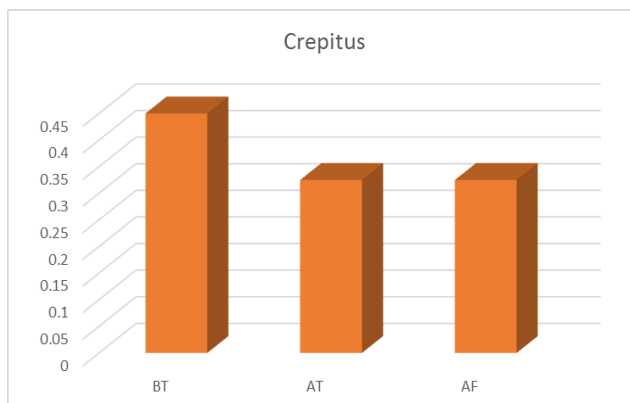
Symptom	Measures				%	S.D (+.)	S.E (+.)	t value	p value
	BT								
Tenderness	1.03	AT	0.30	0.73	70.73	0.452	0.072	5.47	<0.05
		AF	0.30	0.73	70.73	0.452	0.072	5.47	<0.05



t value =5.47, p <0.05, hence the result is statistically significant .it implies that the effect of the treatment on Stiffness after 45 days, ie after treatment is highly significant.

**Table no. 4: Effect of crepitus.**

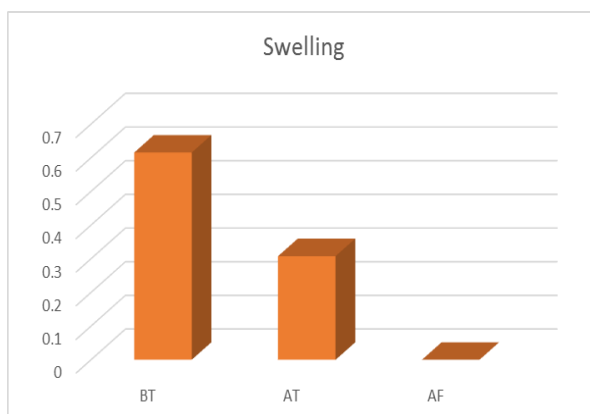
Symptom	Measures				%	S.D (+.)	S.E (+.)	t value	p value
	BT								
Crepitus	0.46	AT	0.33	0.13	44.74	0.335	0.054	0.92	>0.05
		AF	0.33	0.13	70.18	0.335	0.054	0.92	>0.05



t value =0.92, p >0.05, hence the result is statistically significant .it implies that the effect of the treatment on Stiffness after 45 days, ie after treatment is not significant.

**Table no. 5: Effect on swelling.**

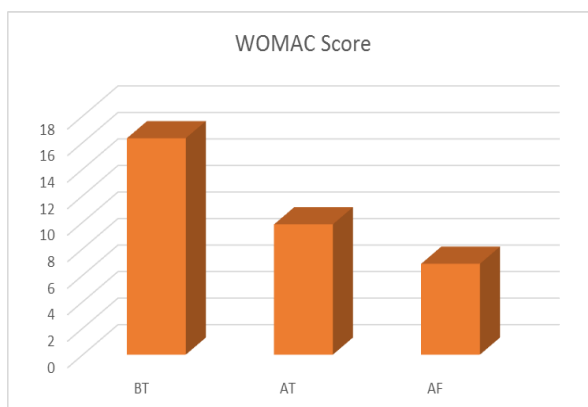
Symptom	Measures				%	S.D (+.)	S.E (+.)	t value	p value
	BT								
Swelling	0.62	AT	0.31	0.31	50.00	0.464	0.074	1.84	<0.05
		AF	0.00	0.62	100.00	0.928	0.149	4.11	<0.05



t value =4.11, p <0.05, hence the result is statistically significant .it implies that the effect of the treatment on Stiffness after 45 days, ie after treatment is highly significant.

Table no. 6: Effect of womac score.

Symptom	Measures			%	S.D (+.)	S.E (+.)	t value	p value	
	BT								
Womac score	16.33	AT	9.83	6.50	39.82	3.211	0.514	4.54	<0.05
		AF	6.85	9.48	58.04	4.032	0.646	6.92	<0.05



t value =6.92, p <0.05, hence the result is statistically significant. It implies that the effect of the treatment on Stiffness after 45 days, ie after treatment is highly significant.

#### Overall effect of treatment

Overall effect of treatment		
Grading	Relief in percentage	Relief in patients
No improvement	0%	0
Mild improvement	1-30 %	1
Moderate improvement	31 – 60%	12
Marked improvement	61 – 99 %	27
Complete remission	100%	0

In Overall effect of treatment in *Janusandhugata vata* out of 40 patients in this study, 1 patient was getting mild improvement (2%), 12 patients (30%) were getting Moderate improvement and 27 patients (68%) were getting Marked Improvement.

- Overall effect of the treatment is 64.18%

#### DISCUSSION

Osteoarthritis is types of chronic degenerative joint disorder which is characterized by break down of joint cartilage and underlying bone. The most commonly affected is the weight barring and largest joints of the body like hip joint, knee joints, shoulder joint, etc. the most common symptoms are joint pain and stiffness usually the symptoms progress slowly over years. This patient present case study, patient initially has severe joint pain and palpable crepitus. These clinical symptoms are closely related to *janu sandhi gatavata*.

*Sandhigatavata* is a described as a *Vatavyadhi* in all *Samhitas & Sangrahantha*. Various *Aharaja*, *Viharaja*, *Mansika Sharirika Nidana's* are mentioned in *Vatavyadiprakra*. *Sandhi gatavata* specially occurs in *Vridhaavastha* in which *Dhatukshaya* take place which leads to *Vataprakopa*. In between *Vata* and *Asthi Ashraya Ashrayi Sambandha*. That means *Vata* is situated in *Asthi*. Vitiated *Vata* destroy *Sneha karam*

because *Vataguna* is just apposite to *Snehana gunas*. Due to diminished *Sneha kha vaigunya* occurs in *asthi* which is responsible for the cause of *sandhigatavata* in weight barring joints especially in knee joints.

In Ayurveda, *Samprapti Vighatanameva Chikitsa* (breaking of pathogenesis is treatment). For breaking the *Samprapti* (pathogenesis) of *Janu SandhigataVata*, *Ushna* (hot), *Kapha Vatahara*, *Deepana* (appetizer), *Pachana* (carminative), *Sothahara*, *Vedanasthapana*, *Balya* and *Rasayana Dravyas* are essential. Hence *Palashatwagadi Kashaya* and *Nirgundi taila* are selected here. *Palashatwagadi Kashaya* consists of *Palashatwak*, *Punarnava*, *Shunti* taken with *Saindava Lavana* as *Anupana*. it act as *Vatakaphashamaka*, *sholahara*, *shothahara*, *stambahara*. *Taila* is considered to be best in *Vata Vyadhi*. *Twak* is being *asraya* for treating the disease *Brajaka pitta* does the *pachana* and *grahana* of *aushada* applied on *twak*, through procedures like *abhyanga*, *sweda*, *parisheka* etc. *Nirgundi taila* is taken for *Veshtana* which act as *Kapha vata shamana* and *shoolahara*. Application of *Taila* externally to affected knee helped in reducing inflammation. *Veshtana* helps in increased absorption of *Taila* and reducing the symptoms. Systemic absorption of drugs after topical application depends primarily on the lipid solubility of drugs. Local application of a drug at the desired site

increases the concentration of the drug reaching the particular site.

In the Overall effect of treatment in *Janu sandhigata vata*, out of 40 patients in this study 1 patient was getting mild improvement (2%), 12 patients (30%) were getting Moderate improvement and 27 patients (68%) were getting Marked Improvement. Overall effect of the treatment is 64.18%.

### CONCLUSION

At the end of the study, the following conclusions were drawn based on observations made, results achieved and after thorough discussions in the present context, *Palashatwakadi kashaya* and *Nirgundi taila* shows the long-lasting result. In the Overall effect of treatment in *Janusandhigata vata*, out of 40 patients in this study, 1 patient was getting mild improvement (2%), 12 patients (30%) were getting Moderate improvement and 27 patients (68%) were getting Marked Improvement. Overall effect of the treatment is 64.18%

Thus, the alternate hypothesis H1 is accepted i.e. There was a significant effect of *Palashatwagadikashaya* and *Nirgundi taila* in the management of *Janu Sandhigata Vata*. The treatment was cost effective, comfortable for the patient and with nil or minimal side effect. The present study sets an example in management of *Janu sandhugata Vata*. It can improve quality of life of the patient.

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