



ORIGINAL RESEARCH ARTICLE

**A CLINICAL STUDY ON JATAMAYADI UPANAHA SWEDA IN JANU SANDHIGATAVATA (OSTEOARTHRITIS OF KNEE JOINT)**

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**ABSTRACT**

**Introduction:** *Sandhigatavata* is one among the *vatavyadhi*. It may be correlated to osteoarthritis due to resemblance in signs and symptoms. Though, many treatments are available for osteoarthritis, pain management is essentially preferred. *Snehana* and *swedana* are prescribed as common treatments in *vatavyadhi*. *Upanaha sweda* is one among the modality of *swedana* used widely in the management of *sandhigatavata*, which is found to be beneficial clinically too. So this clinical study is planned to evaluate the efficacy of *jatamayadi upanaha* in the management of *sandhigatavata* (OA of knee) as, it has *vatahara*, *shothahara* (antiinflammatory), *shoolaghna* (analgesic) action. **Materials and methods:** 20 patients fulfilling the diagnostic and inclusion criteria belonging to either sex were selected for this single blind study. *Upanaha* was prepared and applied over affected joints for 7 days. **Result:** Subjective and objective parameters were suitably graded to assess the results based on clinical observations before and after treatment. Statistically results were highly significant ( $P < 0.001$ ) in criteria like pain at rest, ability to climb up and walk down stairs, ability to squat, swelling, tenderness and range of movement. In the present study, 20% of the subjects got marked improvement, 40% got moderate, 35% mild and 5% got poor response. **Conclusion:** *Jatamayadi upanaha* having *kapha-vatashamaka* and *vedanasthapaka* properties is very much beneficial to reduce swelling and tenderness instantly.

**Key words:** *Sandhigatavata*, *jatamayadi upanaha*, *Snehana*, *Swedana*, osteoarthritis.

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## INTRODUCTION

Osteoarthritis is a common degenerative joint disorder observed in elderly. It is second common rheumatologic problem with prevalence of 22%-39% in India<sup>[1]</sup>. Studies reveal that symptomatic knee osteoarthritis is common among the general adult population especially in women of older groups.

*Sandhigatavata* is characterized by symptoms like *sandhishoola* (joint pain), *shotha* (swelling), *prasaaranaakunchanayo pravruttscha vedana* (painful joint movement)<sup>[2,3]</sup>. So it can be correlated to osteoarthritis which is having the clinical symptoms like pain, swelling, stiffness, restricted joint mobility<sup>[4]</sup>.

Contemporary science treats the disease with calcium supplementation and analgesics which might have adverse effects like gastric irritation, hepato-toxicity; on the contrary, *ayurveda* treatments like *snehana* (oleation), *upanaha* (poultice), *lepa* (topical application) and *bandhana* (bandage) yields better relief from pain and swelling thus to restore the mobility without any side effects<sup>[5]</sup>.

Moreover *upanaha sweda* is a simple procedure which can be performed even at OPD level; hence to evaluate the efficacy of *jatamayadi upanaha* the study was undertaken.

## OBJECTIVE OF THE STUDY

To evaluate the efficacy of *jatamayadi upanaha sweda* in the management of *sandhigatavata* (OA of knee).

## MATERIALS AND METHODS

**Study Design:** Single blind clinical trial.

**Sample source:** Patients were selected from the Panchakarma OPD and IPD of Alva's Ayurveda Medical College and Hospital, Moodbidri.

**Study Population:** Patients suffering with *sandhigatavata* (OA of knee) in and around Moodbidri.

**Sample Size:** 20 patients of *sandhigatavata* (OA of knee) of either sex were selected for the present study.

**Trial Drug Details:** *Jatamayadi yoga* contains *Jatamamsi* (*Nardostachys jatamansi*), *Chanadana* (*Santalum album*), *Tagara* (*Valeriana jatamansi*), *Kushta* (*Saussurea lappa*), *Kundurushka* (*Boswellia serrata*), *Sarala* (*Pinu sroxburghii*), *Ashwagandha* (*Withenia somnifera*) and *Rasna* (*Pluchea lanceolata*) -20 grams each.

### Criteria for selection of patients:

**Diagnostic criteria:** The patient was diagnosed based on the following clinical features.

- *Sandhishoola* (Pain in knee joints)
- *Sandhishotha* (Knee joint swelling)
- *Sandhiatopa* (Crepitation)
- *Prasaaranaakunchanayo pravruttscha vedana* (Painful joint movement)

**Inclusion Criteria:**

1. Patients fulfilling the Diagnostic criteria of *sandhigatavata* (OA of knee)
2. Patient's age group between 40 to 70 years.
3. Patients fit for *upanaha sweda*.

**Exclusion Criteria:**

1. Patients with secondary arthritis, rheumatoid arthritis, gouty arthritis.
2. Patients having history of joint trauma and other systemic illness.

**INTERVENTION**

**Poorvakarma:** Preparation of the Medicine:

*Jatamamsi* (*Nardostachys jatamansi*),  
*Chanadana* (*Santalum album*), *Tagara*  
(*Valeriana jatamansi*), *Kushta* (*Saussurea lappa*),  
*Kundurushka* (*Boswellia serrata*),  
*Sarala* (*Pinus roxburghii*), *Ashwagandha*  
(*Withenia somnifera*) and *Rasna* (*Pluchea lanceolata*)<sup>[6]</sup>

20 grams each, 40 grams *Godhuma* (*Triticum aestivum*).

*Moorcchita tila taila*- 20ml, *Saindhava lavana*-  
20 grams

**Assessment Criteria**

Above said ingredients were mixed with sufficient quantity of *kanji* and homologous semi-solid paste was prepared. Paste was heated till it attains sticky consistency.

**Preparation of the Patient:** Patient is asked to lie down in supine position or to sit comfortably with affected knee joint exposed. *Moorcchita tila taila* was smeared over affected knee joint.

**Pradhana karma:** Warmed paste was applied over affected joints. Then covered with *eranda patra* (leaves of *Ricinus communis*) and it was firmly bandaged with *khora* cloth.

**Paschat karma:** *Upanaha* was retained for 12 hours and then removed; the part was cleaned with warm Water. Duration of treatment: 7 days

Total 23 patients having the features of *sandhigatavata* (OA of knee) were registered, among them 3 patients dropped out of study and 20 patients have completed the course with follow up.

**Table No: 01 - Scoring pattern of subjective and criteria**

PARAMETER	FINDING	GRADING
Pain during rest	-No pain	0
	-Mild (pain not interfering with activities or sleep)	1
	-Moderate (pain interfering activities or sleep)	
	-Severe (pain reducing activities or sleep)	2

		3
Pain on standing	-No pain -Pain increases for standing 30min.	0 1
Ability to climb up stairs	-Without difficulty -Mild difficulty -Moderate difficulty -Severe difficulty	0 1 2 3
Ability to climb down stairs	-Without difficulty -Mild difficulty -Moderate difficulty -Severe difficulty	0 1 2 3
Ability to squat	-Without difficulty -Mild difficulty -Moderate difficulty -Severe difficulty	0 1 2 3
Duration of morning stiffness	-Absent -< 15 Min -> 15 Min	0 1 2
Swelling	-No swelling -Mild swelling -Moderate swelling -Severe swelling	0 1 2 3
Tenderness	-No tenderness -Pt. Complains of pain -Pt. Complains of pain& winces -Pt. Withdraws the joint	0 1 2 3

Crepitus	-No crepitus	0
	-Palpable crepitus	1
	-Audible crepitus	2
Range of movement of joints	-Full range of the joint movement	0
	->50% &< full range of joint movement	1
	-Up to 50% of the joint movement	2
	-No movement	3

### OBSERVATION

In this clinical study it was observed that majority of the patients suffering with osteoarthritis of knee joint were elderly above 50 years among them 70% were female; which affects the people with increased physical activity and *vatapradhana prakruti*. Majority of the patients were belonging to Hindu community with normal body weight, disease

chronicity of more than one year with gradual onset of the disease in which continuous generalised pain was observed.

### RESULTS

The signs and symptoms were assessed before, after the treatment based on the assessment criteria. The effect of the therapy statistically analysed by paired 't' test.

**Table No:2- Effect of jatamayadi upanaha sweda on 20 patients of OA of knee**

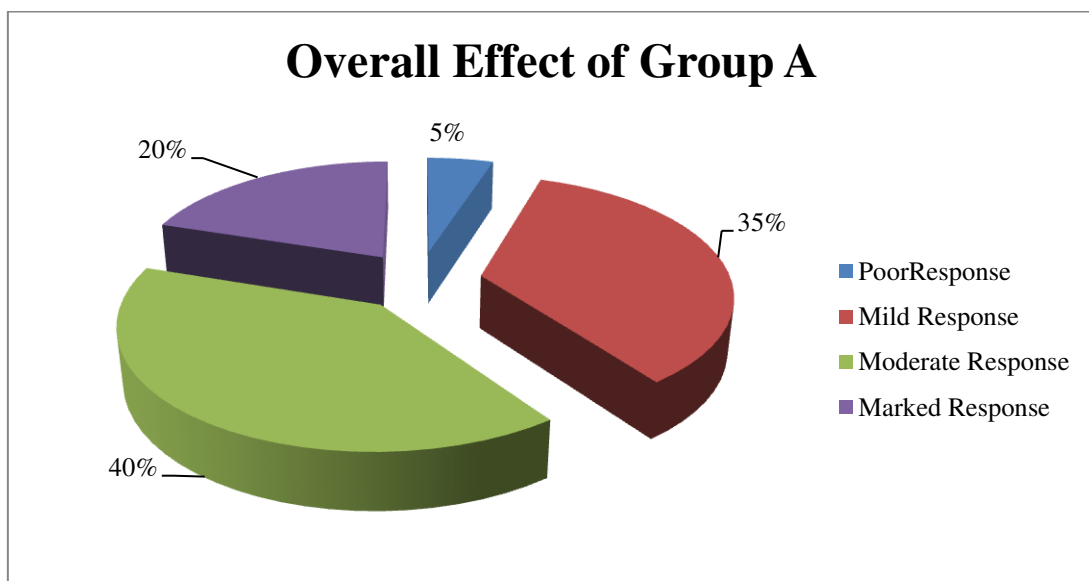
Subjective & objective criteria	BT Mean	AT Mean	FU Mean	% Of relief	SD(±)	SE(±)	't' Value	'p' Value
Pain at rest	2.10	0.75	0.85	64	0.489	0.109	6.07	<0.001
Pain on standing	0.85	0.65	0.65	24	0.41	0.092	1.46	>0.05
Ability to climb up stairs	1.80	0.75	0.80	58	0.394	0.088	4.53	<0.001
Ability to down stairs	1.80	0.70	0.80	61	0.447	0.100	4.86	<0.001
Ability to squat	2.40	1.40	1.25	42	0.459	0.103	5.38	<0.001
Duration of morning stiffness	0.80	0.45		44	0.489	0.109	1.69	<0.05

			0.50					
Swelling	1.85	0.55	0.60	70	0.657	0.147	6.05	<0.001
Tenderness	2.10	0.80	0.90	62	0.470	0.105	5.81	<0.001
Crepitus	0.80	0.45	0.50	44	0.489	0.109	1.60	>0.05
Range of movement	1.55	0.69	0.80	61	0.394	0.088	3.97	<0.001

**Table No: 3- Overall assessment of the therapy**

Class	Grading	Number of patients
<24%	Poor response	1
25 - 49%	Mild response	7
50 - 74%	Moderate response	8
>75%	Marked response	4

**Graph No:1- Graphical representation of overall effect of the therapy**



**DISCUSSION**

The incidence of the disease is most common in the age group 51-60 years. During old age, due to the predominance of *vata dosha* and degenerative process symptomatic presentation of osteoarthritis is more common. Among 20 patients of *sandhigatavata* (OA of knee), about 70% of the patients were females. Disease prevalence studies revealed that the osteoarthritic changes and its manifestation exist in a female to male ratio of 3:1. This is supported with the present evidence from this sample.

All the patients in this study belonged to *dwandwaja prakruti*. *Sandhigatavata* (OA of knee) was found to be common in persons having *vata* as predominant *deha prakruti*. Though, this observation was made from the present study, it is not possible to justify or deny this principle as the sample size was too small.

The religion wise distribution of the patients was a projection of geographical preponderance of Hindu community in the selected area of study. In the present clinical study 47.8% of the patients were having normal weight, 34.7% patients reported were having over weight followed by only 17.3% of the patients were obese. This data shows body weight has no much influence on osteoarthritis. By this it can be concluded that *dhatukshaya* is having more role in the *samprapti* of *sandhigatavata* (OA of knee).

In the present clinical study 50% of the subjects had disease chronicity of more than 1 year. The above observation reveals that disease chronicity has influence in severity of the disease. Majority of the patients (65 %) had gradual onset of pain followed by sudden onset in 35%. It proves that osteoarthritis is a slow progressive degenerative disorder.

The ingredients of *jatamayadi upanaha* are having *kapha-vata shamaka* and *vedanasthapka* properties<sup>[7]</sup>. The homologous paste was made by heating with the combination of *tila taila* and *kanji*, which are *vatahara*. *Upanaha sweda* reduces pain, swelling and joint stiffness significantly because of the application of medicaments and heat over affected site. Also it was noticed that some patients of *pitta* predominant *deha prakruti* were getting rashes after removal of *upanaha*. In such patients *upanaha* was prepared by adding Aloe vera pulp or advised to apply *sneha* after the removal. This may be due to the fact that *swedana* is contraindicated in *pitta prakruti* persons.

Present clinical study revealed statistically highly significant ( $P < 0.001$ ) effect in the criteria like –pain, swelling, tenderness, range of movement of joint, ability to squat, ability to climb up stairs and walk down stairs. Also result was statistically significant ( $P < 0.05$ ) in duration of morning stiffness where as it

was insignificant ( $P>0.05$ ) in pain on standing and crepitus.

The drugs selected for the *upanaha yoga* are having all most all the properties that are mentioned for *swedadravya's*. *Upanaha sweda* is *vatashamaka* by virtue of its *ushna*, *snigdha guna*. It combats with the properties of *vata* like *sheeta*, *ruksha* and *laghu guna*. Due to local rise of temperature, metabolic wastes are removed through increased blood circulation and sweat. The secretion of sweat is under nervous control, especially autonomous. Thus, sudation (*swedana*) can bring about changes indirectly on the autonomic nervous system and the heat may reduce pain by acting over nerve stimuli. The application of heat over joint promotes local circulation and metabolic activities and opens the pores of the skin to permit the transfer of medicaments and nutrients towards the affected site.

A previous research work over *devadarvadi upanaha*, a folklore formulation showed significant result in *janusandhivata*<sup>[8]</sup>. *Jatamayadi yoga* also being a folklore practice contains more *vatahara* drugs, claimed to be effective in the same condition. Hence to evaluate the efficacy of *jatamayadi upanaha* the present study was undertaken.

## CONCLUSION

*Sandhigatavata* (OA of knee) is a type of *vatavyadhi* in which *upanaha sweda* is one

among the best treatment. *Jatamayadi upanaha* is much beneficial in patients with less chronicity of the disease by relieving the signs and symptoms instantly. But in chronic stages short duration of treatment might help to provide only symptomatic relief as recurrence of symptoms were observed during follow up. So other modalities or treatments may be combined to yield better relief in the present condition. Thus it can be concluded that *jatamayadi upanaha* is ideal in treating *sandhigatavata* (OA of knee) with less chronicity. Symptomatic relief is only possible through *upanaha sweda*. Complications may be anticipated in patients with *pitta prakruti*. Thus *upanaha sweda* with *jatamayadi churna* may be selected either as a choice of treatment or adjuvant therapy to manage the pain in osteoarthritis of knee.

## REFERENCES

1. [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov).
2. Agnivesha, Chakrapani. Charaka Samhita. : Chaukambasanskritsansthan; 1994. p. 618
3. Vagbhata, Arunadatta & Hemadri. Ashtanga Hridaya: Chaukhambha orientalia; 2005. p. 531.
4. Davidson. Davidson's principles and practice. (20ed.). : ; 2006. p. 1099.
5. Sushruta. Sushruta Samhita. : Chaukamba krishnadas academy; 2004.p. 420.



6. Dr.Ramanivassharma. Sahasrayogam. : Chauka  
mbasanskritpratishtan; 2007.  
p. 80.
7. Sharma PV. Dravya Guna  
Vignana. : Chaukamba bharati academy; 19
8. Swapna, K.V. Effect of Devadarvadi Upanaha in  
Janusandhivata; 2007.

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