



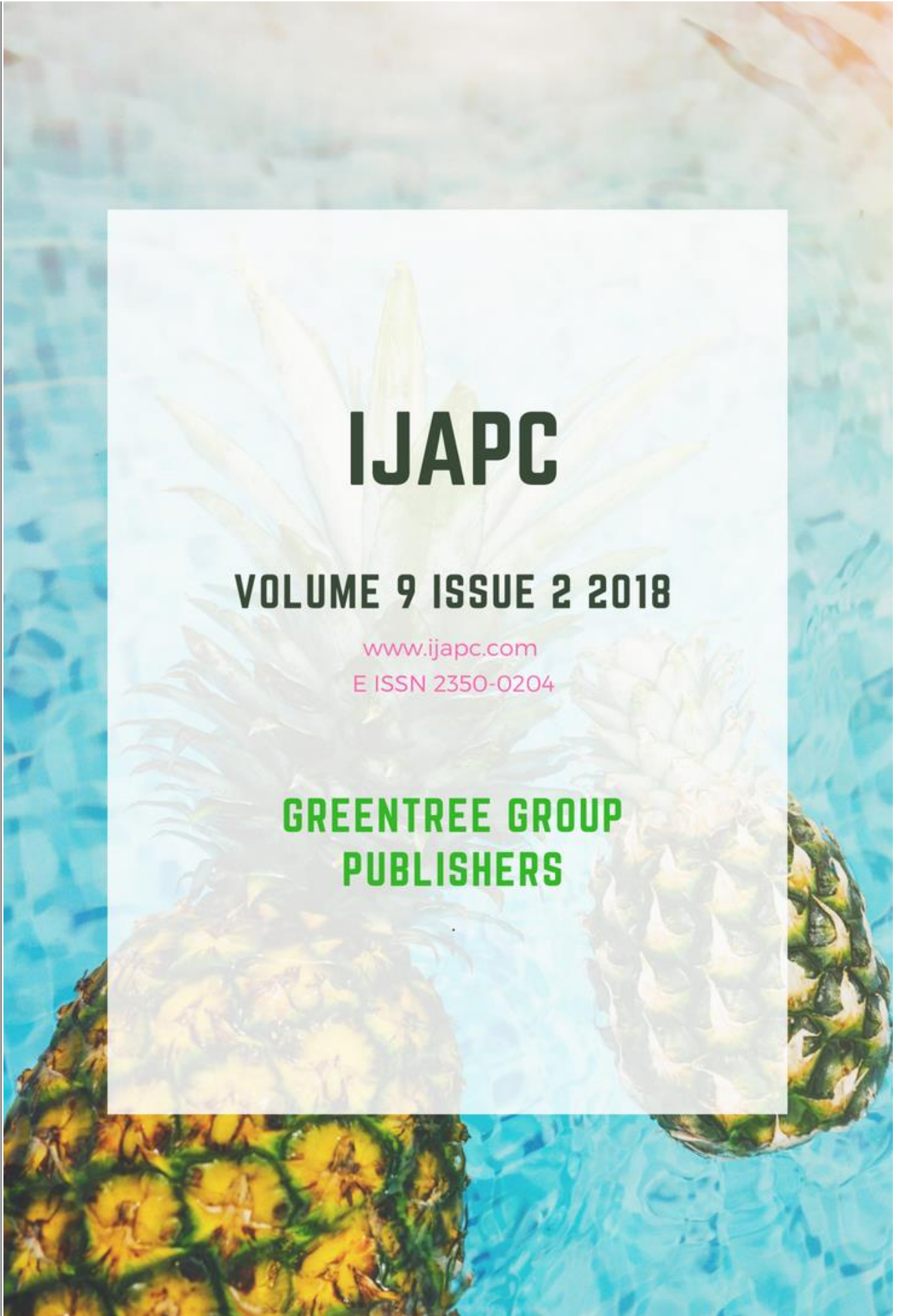
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Application of *Snigdha Sankara Sweda* in the Management of *Janu Sandhigata Vata*: A Clinical Study

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ABSTRACT

Sankara sweda is one amongst the 13 varieties of *sweda* explained by Acharya Charaka and it can be included under *Ushma sweda* amongst the 4 classes of *sweda*. *Sankara sweda* can be administered as both *ruksha* and *snigdha variety* by changing the drugs. It can be indicated both in *ekanga* and *sarvanga vyadhi*.

Sandhigata vata is a *vatavyadhi* which is explained elaborately in Ayurveda classics. Various *vata prakopaka nidana* are the major causative factors for *vatavyadhi*. In *Parihani kala*, *dhatukshaya* is predominant, also increases the risk of *vata prakopa*. When *vata* increases, it has a negative impact on *asthi dhatu* that leads to quantitative and qualitative *kshaya* of *asthi dhatu*. Clinical manifestations of *Janu sandhigata vata* include *sandhishotha*, *akunchana prasaranayo vedana*, *atopa* and *sandhi gati hanana*. In modern parlance these symptoms mimic Osteoarthritis of knee joint.

Along with the general treatment of *vata vyadhi*, *Snigdha sweda* is a modality of choice in case of *dhatu kshaya janya vata vyadhi*. In this study, *snigdha variety* of *Sankara sweda* was administered to 15 patients diagnosed as *Janu sandhigata vata* for 7 consecutive days. After statistical analysis of the data collected before and after the treatments, the relief brought about by the treatment was found to be significant and the overall effect of treatment on majority of the symptoms of *janu sandhigata vata* was promising.

KEYWORDS

Sankara sweda, Janu Sandhigata Vata, Osteoarthritis



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INTRODUCTION

In *parihani kala* of *vaya*, it is a normal phenomenon that *rasadi dhatu* enter a phase of *kshaya*¹, which leads to *vata vridhhi*. When such vitiated *vata* gets lodged into a *sandhi* with pre-existing *kha-vaigunya*, it leads to *Sandhigatavata*. *Sandhigata vata* is a *yapya vyadhi*² as it involves *marma-asthi-sandhi* that forms the *madhyama roga marga*. Clinically, *Sandhigatavata* is characterized by *Vata purna dhriti sparsha, shopha* and *vedana* during *prasarana-akunchana*³.

In modern parlance the signs and symptoms of *janu sandhigata vata* closely mimic osteoarthritis of knee joint. Pain, swelling, morning stiffness, crepitus and restricted joint movements are the cardinal features of Osteoarthritis. Osteoarthritis is characterized by cartilage loss with an accompanying periarticular bone response. Pathologically, there is an alteration in cartilage structure and clinically some patients complain of pain and disability⁴. There is a steady raise in the prevalence of osteoarthritis with age such that by 65 years 80% of people have radiographic evidence of OA. Knees and Hips are the most common sites of Osteoarthritis⁵.

Acharya Sushruta has mentioned *snehana* and *swedana* as general treatment for *sandhigata vata*⁶. *Sneha yukta swedana* is a

modality of choice in case of *Dhatu Kshaya janya vata vyadhi*⁷. So, in this study *snigdha sankara sweda*, i.e. *snigdha* variety of *Ushma sweda* has been taken up as the treatment modality for *Janu sandhigata vata*. *Laghu vishagarbha taila* is the *sneha* selected for the administration of *snigdha swedana*. It is a formulation explained in *Yogaratanakara*, where it has been indicated in all kinds of *vata vyadhi*⁸. *Pinda* made out of *Vata-kaphahara patra* (*Arka, Eranda, Nirgundi, Dhattura* and *Punarnava*) and powdered *dhanya* (*Yava, Masha, Tila, Kola* and *Kulattha*) prepared with *Laghu vishagarbha taila* was used to carry out *Snigdha sankara sweda*.

Hence, this study is conducted with the goal of evaluation of the efficacy of *Snigdha Sankara Sweda* in the management of *Janu Sandhigata vata/ Osteoarthritis of Knee joint*.

METHODOLOGY

Ethical committee clearance number is SDMCAU/ACA-49/ECH26/15-16.

Materials and Methods

Drug source:

Laghu vishagarbha taila and *Sankara sweda mishrana* raw drugs were purchased from local area after proper authentication and prepared at *SDM Ayurveda Pharmacy, Udupi*. Fresh leaves needed for *snigdha*



sankara sweda were collected from the herbal garden of SDM College of Ayurveda, Udupi.

Sample source

Fifteen patients diagnosed as *Janu sandhigata vata* fulfilling the inclusion criteria, irrespective of their gender, approaching the OPD and IPD of SDM Ayurveda Hospital, Udupi were selected for the study.

Method of collection of data

~~15 patients of either gender was included in the clinical study.~~ Patients were selected on the basis of clinical examination; detailed proforma was prepared by incorporating the signs and symptoms of *janu sandhigata vata* and osteoarthritis of knee joint.

Study design

- Study type: Interventional
- Allocation: Randomized
- Endpoint classification:

Comparative efficacy study

- Intervention model: Double group assignment
- Primary purpose: Treatment
- Masking: Open label

Intervention:

Preparation of pinda

Quantity sufficient leaves of arka, eranda, nirgundi, dhatura and punarnava were collected, cleaned with hot water, wiped off with a cotton cloth and chopped. Heating

pan was kept over the flame and about 100 ml of *laghu vishagarbha taila* was added to it. Once the oil got hot, cleaned and chopped fresh leaves were added to it. About 10 gm of *saindhava* was added and the leaves were stirred constantly. After the leaves lost some moisture and became soft, 2 lemons were cut into pieces and added to the iron pan. When the leaves lost most of the water, *sankara sweda mishrana* was added and the mixture was heated over a low flame and stirred to create a homogenous mixture. Once the homogenous mixture was attained, the heated mixture was taken in a piece of cloth and tied in the form of a bolus with a tuft of cloth above it to hold.

Heating the prepared pinda:

15-20ml. of *Laghu vishagarbha taila* was put on the pan and heated. Once the oil got heated, the pinda was immersed in the pan. When the pinda was sufficiently hot, it was taken out of the pan, any extra oil from the pinda was removed and used to do *abhyanga* to the knee joints initially followed by giving sudation to the affected joint.

Snigdha sankara sweda was performed for 30 minutes after *sthanika abhyanga* with *Laghu vishagarbha taila* for 7 consecutive days.

Patients were explained and instructed to follow the *parihara vishaya* of *swedana*.



Follow up study: 7 days after completion of course of treatments.

Inclusion criteria: Patients of either gender aged between 40 to 70 years presenting with the signs and symptoms of *Janu sandhigata vata*/osteoarthritis of knee who were fit for *snigdha sankara sweda*.

Exclusion criteria: Osteoarthritis secondary to diseases such as rheumatoid arthritis or psoriasis, infective, traumatic and post-surgical conditions of joints and patients with major systemic disorders that may interfere with the course of treatment were excluded from this study.

Assessment criteria:

1. Signs and symptoms of *janu sandhigata vata*/osteoarthritis of knee joint.

i. Subjective parameters: Knee joint Pain using Visual analogue scale and Knee joint Stiffness

ii. Objective parameters: Knee joint Swelling, Restriction in Range of Knee Joint movements and Tenderness in Knee joint

2. Functional ability index including:

- i. Time taken to walk 30 m.
- ii. Time taken to climb 10 steps of a stair.
- iii. Time taken to do 10 sit-ups.

3. WOMAC Knee Osteoarthritis index.

Statistical Analysis

The outcome of the treatments was statistically analyzed using IBM-SPSS. As

the data collected was in ordinal scale and the normality of the data was not assumed, **Wilcoxon signed Rank Test** (non-parametric test) was used to compare the values before and after treatments.

OBSERVATIONS

Number of patients registered for the study: 15

Drop outs: None

Number of patients completed the study: 15

Observations of the study have been summarized in Table 1.

Table 1 "Summary of observations"

Parameters	Observations
Age	47% of the patients were between 60 to 70 years
Gender	57% of the patients were Female
Socio-economic status	57% of the patients belonged to middle socio-economic class
Nature of work	60% of the patients had standing nature of work
Prakriti	Vata-Pitta prakriti was seen in 50% of patients
Vyayama shakti	Poorva kalini - madhyama in 73% Aadhyakalina - avara in 60% of patients
Body weight	47% of the patients had body weight between 60-70 kgs
Duration of illness	73% of the patients had the symptoms for >2 years.

RESULTS

The results obtained from this study have been summarized in Table 2.

OVERALL EFFECT OF TREATMENT

Among the 15 patients that underwent the treatments, 5 patients i.e. 33% showed



marked improvement, whereas 10 patients i.e. 67% showed moderate improvement from the signs and symptoms of Janu

sandhigata vata/ Osteoarthritis of knee joint. Overall effect of treatment has been summarized in Table 3 and Figure 1.

Table 2 “Summary of Results”

Parameters	W.S.R Test* (Z)	p Value	Level of significance
Pain in right knee joint	-3.542	<0.001	Highly significant
Pain in left knee joint	-3.508	<0.001	Highly significant
Stiffness in right knee	-3.606	<0.001	Highly significant
Stiffness in left knee joint	-3.494	<0.001	Highly significant
Swelling in right knee joint	-2.972	0.003	Statistically significant
Swelling in left knee joint	-3.051	0.002	Statistically significant
Tenderness in Left knee joint	-3.520	<0.001	Highly significant
Range of movement in right knee joint	-3.690	<0.001	Highly significant
Range of movement in left knee joint	-3.358	0.001	Highly significant
WOMAC Scores	-3.626	<0.001	Highly significant
Time taken to walk 30 meters	-3.508	<0.001	Highly significant
Time taken to do 10 Sit-ups	-3.542	<0.001	Highly Significant
Time taken to climb 10 steps	-3.578	<0.001	Highly Significant

*Wilcoxon Signed Rank Test

DISCUSSION

Swedana has *stambhaghna*, *gouravaghna* and *sheetaghna* properties. Amongst 13 varieties of sagni sweda, *sankara sweda* was selected which is *snigdha* in nature which is a representative modality for *ushma sweda* for local administration in *Janu Sandhigata vata*. The *ushma sweda* in present context is evolved from *patra bhangena* and *dhanyena* of Vagbhata⁹. In this *vatahara* and *vata kaphahara dravya* are selected for the purpose of *sankara sweda* in the form of *patra* and *dhanya*. The majority of the drugs possess the properties such as *katu* and *tikta* rasa, *ushna virya* along with *laghu guna* and *ruksha guna* has got *vata-kaphashamaka* properties. *Katu* and *tikta* rasa possess an antagonistic property to that of *vata & kapha* which are

the chief causative factors that lead to this disease. Because of *ushna virya*, it also alleviates vitiated *vata*. Hence pain, swelling, tenderness and stiffness in the joints were reduced.

Table 3 “Overall effect of treatment”

Overall effect	No of patients	Percentage (%)
Unchanged	0	0
Mild improvement	0	0
Moderate improvement	10	66.67
Marked improvement	5	33.33
Total	15	100

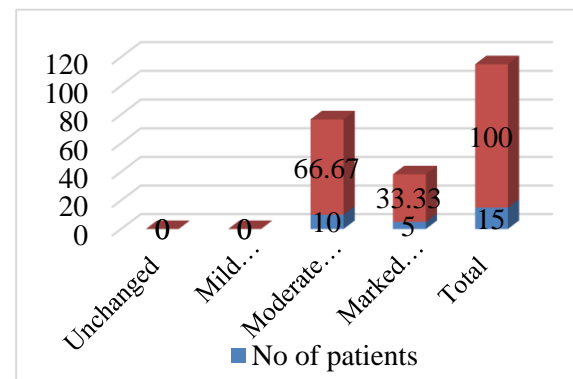


Fig 1 "Overall Outcome"



To explain it further, *tiryakgata dhamani* plays an important role in the mechanism of action of *bahirparimarjana chikitsa*. Sushruta in *shareerasthana* while explaining *tiryakgata dhamani* narrates that these *dhamani* are attached to *romakupa* and the medicament which is administered in the form of the *pinda sweda* undergoes skin metabolism with the help of *bhrajakagni*, where in *virya* of the medicaments enters into the systemic circulation thereby achieving the desired actions.

Samyak swinna lakshana:

Sankara sweda being *ekanga sweda* variety could not elicit entire *samyak swinna lakshana* in whole body. The lakshanas like *sheeta vyuparama*, *shoola vyuparama*, *stambha-gaurava nigraha*, *mardavata* and *sweda pradurbhava* were observed locally i.e. over the knee joints. *Swedanat virati* was not observed as it is a *mridu* variety of *sweda*.

CONCLUSION

Hence, *Snigdha sankara sweda* was found to have significant efficacy in *Janu sandhigata vata*. The modality showed promising results in all the assessment criteria of this study. The relief in pain and tenderness can be associated to *vataghna* and *shoolahara* properties, reduction in

stiffness and increased range of movement of knee joint can be attributed to the *stambhaghna* property and the reduction in swellings can be associated with the *shothahara* properties of the drugs. All these positive changes resulted in increased functional ability.



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