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Research Article

THE EFFECT OF *UPANAHA SWEDA* AND *VATARI GUGGULU* IN THE MANAGEMENT OF *JANUSANDHIGATA VATA* (KNEE OSTEOARTHRITIS): A COMPARATIVE STUDY

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ABSTRACT

Every man derives the happiness and benefit of his life through locomotion i.e., using his joints. For the minute if he loses this power of locomotion he not only feels himself a miserable creature but also becomes a burden both of his family and society. The loss or reduction in his locomotive power is due to dysfunction of the joints causing an impediment to his movements. If not treated in time, the disease makes man disable. *Sandhigata Vata* is most common articular disorder. It is a type of *Vata Vyadhi* which mainly occurs in *Vriddhavastha,* due to *Dhatukshaya*. *Sandhigata Vata* can be correlated with osteoarthritis (OA) which is one such chronic, degenerative, inflammatory disease and has a great impact on the quality of the life of an individual. Different modalities of treatment have been explained in the classics to tackle the condition effectively. The present study was aimed to assess clinically the effect of *Upanaha Sweda* and *Vatari Guggulu* in the management of *Janusandhigata Vata*. In this study total 42 patients were divided in 2 groups. In Group A, patients were treated with only *Upanaha Sweda* and other group patients were treated with *Upanaha Sweda* and *Vatari Guggulu*. Results obtained were analyzed for statistical significance which shows group B in which *Vatari Guggulu* and *Upanaha Sweda* were given, was more effective in bringing relief in signs and symptoms of *Janusandhigata Vata.*

KEYWORDS: *Janu Sandhigata vata,* Knee osteoarthritis, *Vatari Guggulu, Upanaha Sweda.*

INTRODUCTION

The disease *Sandhigata Vata* is described under the *Vatavyadhi* in Ayurvedic classics. In *Vriddhavastha, Dhatus* undergoes to *Kshaya* and leading to *Vataprakopa.* The vitiated *Vata* when shelter in *Sandhisthana* causes *Shula*, *Sopha, Stabhdhata, Atopa* etc., in joints which is known as *Sandhigata Vata*. Factors which are responsible for vitiation of *Vata* are *Katu, Tikta* and *Kashaya Rasa Pradhana Dravya* and *Avyayama*, *Dhatukshaya* and *Abhighata.* In modern science this condition closely resembles with knee osteoarthritis. Osteoarthritis is the most common articular disorder. It is characterized by progressive degeneration of articular cartilage of joints. Clinically it is represented as pain in joints during movements, stiffness in joints, tenderness in joints, crepitus, restricted joint movements and radiologically it is characterized by narrowing of joint spaces, osteophytic changes and deformities in contour of joints. The incidence of osteoarthritis in India is as high as 12%. Almost all persons by age 40 have some pathologic change in weight bearing joint 25% females and 16% males have symptomatic osteoarthritis.[4] No treatment is available which can prevent the disease process. In modern science using NSAIDS and surgery are the option for the treatment of osteoarthritis. It can provide either conservative or surgical treatment which gives symptomatic relief and with troublesome side effects, whereas such type of conditions can be better treatable by the management and procedures mentioned in Ayurvedic classics. *Upanaha Sweda* was selected for the present study as it is shown best for *Vata Vyadhis*. In another group *Upanaha Sweda* with *Vatari Guggulu* was given. *Vatari Guggulu* has got *Vatashamak* properties. With this background, it is planned to evaluate the efficacy of *Upanaha Sweda* and *Vatari Guggulu* in the management of *Janusandhigata Vata.*

Aims and Objectives

A Comparative Study of the Effect of *Upanaha Sweda* and *Vatari Guggulu* in the Management of *Janusandhigata Vata* (Knee Osteoarthritis).

Materials and Methods

The patients were selected randomly from Outdoor Patient Department (OPD) and Indoor Patient Department (IPD) of Panchakarma Rishikul

Ayurvedic College and Hospital, Haridwar, irrespective of gender, caste, religion, occupation, etc.

Inclusion criteria

- Patients aged between 40-70 years.
- Patients follow the symptomology of *Janusandhigata Vata* according to Ayurveda classic.
- Patients follow the diagnostic criteria of knee osteoarthritis.
- Cases of primary knee osteoarthritis only.
- Patients without any anatomical deformity.

Exclusion criteria

- Patients age below 40 years and above 70 years.
- Patients with secondary knee osteoarthritis.
- Patients having past traumatic history.
- History of systemic illness like Diabetes mellitus, liver disease, Tuberculosis, Renal disease, Cardiac disease.
- Patients having past history of RA, Gout, Psoriasis etc.

Study design

Vatari Guggulu [5]

Drug - *Vatari Guggulu*, *Matra*-1 gm (1masha)

Sevankala - *Pratha Kala*

Anupana - Lukewarm water, Duration - 60 Days

Vatari Guggulu It was prepared according to the description given in *Bhaishajya Ratnavali* 9/154-155 which contains.

Drugs	Part
Eranda tail	1 part
Gandhaka	1 part
Haritaki	1 part
Amalaki	1 part
Bibheetak	1 part
Guggulu	1 part

Upanaha Sweda[6]

Drug –*Upanaha Sweda* **-**It was prepared according to the description given in *Charaka samhita* 14/35-36.

Drugs	Part
Godhoma	1 part
Yava	1 part
Tila taila	20 ml
Saindhav lavana	3 gm
Kanji	

Details of the Group

Groups	No. of Registered Patients	No. of Patients Completed the Treatment	Treatment module	Duration
A	22	15	*Upanaha Sweda*	3 sittings (one sitting of 15 days) with the gap of 7 days, for two months.
B	20	18	*Upanaha Sweda* with *Vatari Guggulu*	3 sittings of *Upanaha Sweda* (one sitting of 15 days) with the gap of 7 days & *Vatari Guggulu* 2 TDS for two months.

Criteria for assessment

Subjective Parameters

Parameter	Finding		Grading
Pain during rest	No pain	:	0
	Mild (pain not interfering with activities or sleep)	:	1
	Moderate (pain interfering activities or sleep)	:	2
	Severe (pain reducing activities or sleep)	:	3
Pain on standing	No pain	:	0
	Pain increases for standing 30min.	:	1
Ability to climb	Without difficulty	:	0
up/ down on stairs	Mild difficulty	:	1
	Moderate difficulty	:	2
	Severe difficulty	:	3
Ability to squat	Without difficulty	:	0
	Mild difficulty	:	1
	Moderate difficulty	:	2
	Severe difficulty	:	3
Duration of	Absent	:	0
morning stiffness	< 15 Min	:	1

	> 15 Min	:	2
Swelling	No swelling	:	0
	Mild swelling	:	1
	Moderate swelling	:	2
	Severe swelling	:	3
Tenderness	No tenderness	:	0
	Pt. Complains of pain	:	1
	Pt. Complains of pain & winces	:	2
	Pt. Withdraws the joint	:	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

Objective Parameter

Parameter	**Finding**		**Grading**
X-ray findings	No radiographic changes	:	0
	Possible joint space narrowing and osteophytes formation	:	1
	Definite osteophytes formation with possible joint space narrowing	:	2
	Multiple osteophytes, definite joint space narrowing, sclerosis and possible bony deformity	:	3
	Large osteophytes, marked joint space narrowing, severe sclerosis, definite bony deformity	:	4

Assessment was done initially before intervention of medicine and thereafter a period of 1 month on the basis of improvement in the subjective (Pain, swelling, stiffness, tenderness, crepitus, and restriction of movements) and objective parameters (x- ray findings) in grading pattern. Results obtained were analyzed for statistical significance by adapting Wilcoxon signed rank test.

Observation and Results

Table 1: Group B – *Upanaha sweda*

Parameters	**Sample size**	**Mean**		**MD**	**% Changes**	**W**	**N**	**P**	**Significance**
		BT	**AT**						
Pain on Rest (*Sandhishula*)	15	1.67	0.13	1.53	92	-105.000	15	<0.0001	ES
Pain on Standing (*Sandhishula*)	14	1.86	0.86	0.93	50.25	-105.000	14	<0.001	HS
Ability to Climb Up/ Downstairs	15	1.60	0.40	1.20	75	-120.000	15	<0.001	HS
Ability to Squat	15	1.47	0.47	1.00	68.18	-91.000	15	<0.005	S
Stiffness (*Stabhdhta*)	15	1.67	0.07	1.60	100	-120.000	15	<0.0001	ES
Swelling (*Sopha*)	10	1.00	0.00	1.00	90	-55.000	10	<0.0001	ES
Tenderness (*Sparsashatwama*)	5	1.00	0.00	1.00	90	-15.000	5	<0.0001	ES
Crepitus (*Sandhisphutana*)	11	1.18	0.91	0.27	23.07	-6.000	11	<0.05	NS
Range of Movement *(Ankunchanyo prsaranjanyo Vedana)*	15	1.47	0.40	1.07	72.72	-105.000	15	<0.005	S
X Ray Finding	13	1.46	1.46	0.00	0	0.000	13	>0.005	NS

Table 2: Group B – *Upanaha sweda* with *Vatari Guggulu*

Parameters	Sample size	Mean		MD	% Changes	W	N	P	Significance
		BT	AT						
Sandhishula on rest (*Sandhishula*)	18	2.22	0.22	2.00	90	-171.000	18	<0.001	ES
On Standing (*Sandhishula*)	18	2.06	0.06	2.00	88	-171.000	18	<0.001	ES
Ability to Climb Up/Downstairs	18	2.00	0.44	1.56	77.77	-148.000	18	<0.01	HS
Ability to Squat	18	2.00	0.50	1.50	75	-171.000	18	<0.01	HS
Stabhdtha (stiffness)	18	1.67	0.22	1.44	86.66	-171.000	18	<0.001	ES
Sandhisopha (swelling)	16	1.13	0.00	1.13	90	-136.000	16	<0.001	ES
Tenderness (*Sparsashatwama*)	10	1.30	0.00	1.30	90	-55.000	10	<0.01	HS
Sandhisphutna (Crepitus)	17	1.29	0.47	0.82	63.63	-105.000	17	<0.005	S
Ankunchan prsaranjanyo vedana (range of movement)	18	1.44	0.28	1.17	80.76	-153.000	18	<0.01	HS
X -Ray Finding	17	1.29	0.76	0.53	40.90	-45.000	17	<0.05	S

RESULTS

The response of the patients to the treatment done was observed according to the subjective and objective parameters before and after the treatment.

Table 3: Effect on *Sandhishool* (on Rest)

Group	Mean		N	MD	% Relief	W	P	Sig
	BT	AT						
A	1.67	0.13	15	1.53	92	-105.000	<0.001	HS
B	2.22	0.22	18	0.22	97	-171.000	<0.001	HS

Effect on *Sandhishula* (pain in joints): In group A out of 15 patients, observed % relief was 92.9% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group B, out of 18 patients observed relief was 97% and p- value was < 0.001.It shows that the relief was highly significant statistically.

Table 4: Effect on *Sandhishool* (on Standing, Walking)

Group	Mean		N	MD	% Relief	W	P	Sig
	BT	AT						
A	1.86	0.86	**14**	0.93	50.25	-105.00	<0.001	HS
B	2.06	0.06	18	2.00	97.29	-171.00	<0.001	HS

In group A out of 15 patients, observed % relief was 50.25% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group – B out of 18 patients, observed relief was 97.29% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 5: Effect on Ability to Climb Up/ Down on Stairs

Group	Mean		N	MD	% Relief	W	P	Sig
	BT	AT						
A	1.60	0.40	15	1.20	75.75	-120.000	<0.01	HS
B	2.00	0.44	18	1.56	77.77	-148.000	<0.01	HS

In group A out of 15 patients, observed % relief was 75.75% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group – B out of 18 patients, observed relief was 77.77% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 6: Effect on Ability to Squat

Group	Mean		N	MD	% Relief	W	P	Sig
	BT	AT						
A	1.47	0.47	15	1.00	68.18	-91.000	<0.05	S
B	2.00	0.50	18	1.50	75	-171.000	<0.01	HS

In group A out of 15 patients, observed % relief was 68.18% and p- value was < 0.005. It shows that the relief was significant statistically. In group – B out of 18 patients, observed relief was 75% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 7: Effect on *Sandhisopha* (Swelling)

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.00	0.00	10	1.00	90	-55.000	<0.001	HS
B	1.13	0.00	16	1.13	100	-136.00	<0.001	HS

In group A out of 15 patients, observed % relief was 90% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group – B out of 18 patients, observed relief was 100% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 8: Effect on *Sparsaashtvam* (Tenderness)

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.00	0.00	5	1.00	90	-15.000	<0.001	HS
B	1.30	0.00	10	1.30	100	-55.000	<0.001	HS

In group A out of 15 patients, observed % relief was 90% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group – B out of 18 patients, observed relief was 100% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 9: Effect on *Stabdhata* (Stiffness)

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.67	0.07	15	1.60	100	-120.00	<0.001	HS
B	1.67	0.22	18	1.44	86.66	-171.00	<0.001	HS

In group A out of 15 patients, observed % relief was 100% and p- value was < 0.001. It shows that the relief was highly significant statistically. In group – B out of 18 patients, observed relief was 86.66% and p- value was < 0.001. It shows that the relief was highly significant statistically.

Table 10: Effect on *Sandhisphutan* (Crepitus)

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.18	0.91	11	0.27	23.07	-6.000	<0.05	S
B	1.29	0.47	17	0.82	63.63	-105.000	<0.05	S

In group A out of 15 patients, observed % relief was 23.07% and p- value was < 0.05. It shows that the relief was significant statistically. In Group- B out of 18 patients, observed relief was 63.63% and p- value was < 0.001. It shows that the relief was significant statistically.

Table 11: Effect on X- Ray Finding

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.46	1.46	13	0.00	0	0.000	>0.005	NS
B	1.29	0.76	17	0.53	40.90	-45.000	<0.05	S

In group A out of 15 patients, observed % relief was 0% and p- value was > 0.005. It shows that the relief was not significant statistically. In group – B out of 18 patients, observed relief was 40.90% and p- value was < 0.005.It shows that the relief was significant statistically.

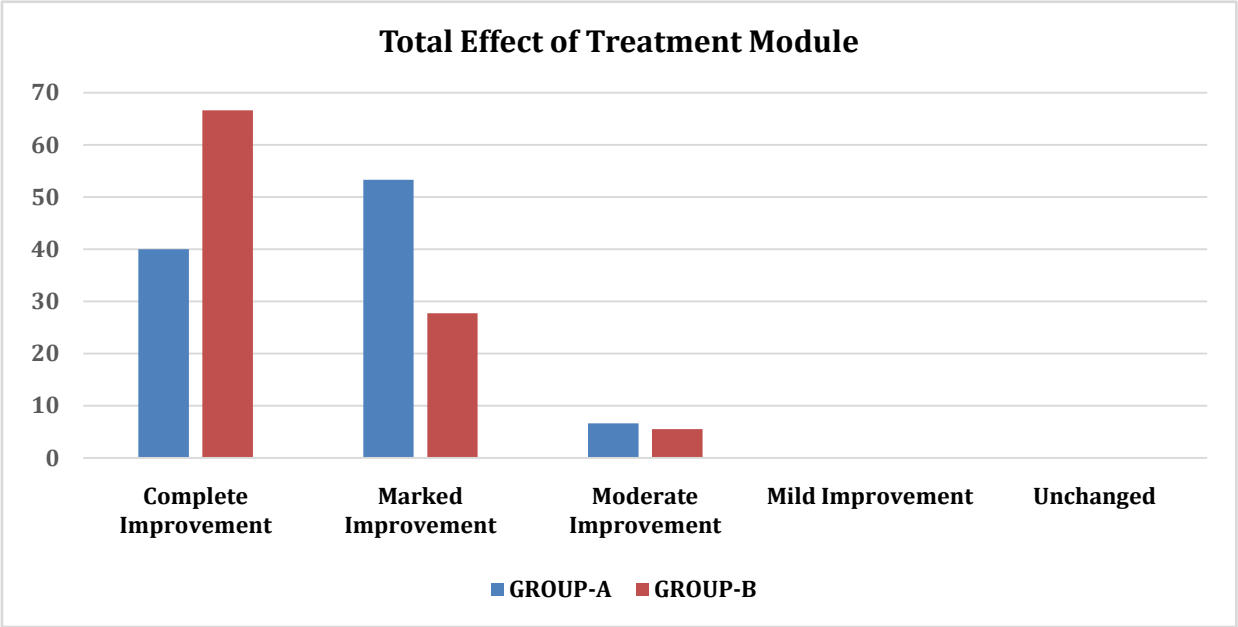
Table 12: Effect on *Ankunchanprsaranjanya Vedana*

Group	Mean		N	MD	% Relief	W	P	SIG
	BT	AT						
A	1.47	0.40	15	1.07	72.72	-105.00	<0.005	S
B	1.44	0.28	18	1.17	80.76	-153.00	<0.001	HS

In group A out of 15 patients, observed % relief was 72.72 and p- value was < 0.005. It shows that the relief was significant statistically. In group – B out of 18 patients, observed relief was 80.76% and p- value was < 0.001.It shows that the relief was highly significant statistically.

Table 13: Overall Effect of Treatment Module

Results	Group -A	%	Group-B	%
Complete improvement	6	40	12	66.6
Marked improvement	8	53.3	5	27.7
Moderate improvement	1	6.6	1	5.5
Mild improvement	0	0	0	0
Unchanged	0	0	0	0



DISUCSSION

Acharya Charaka very clearly stated that *Swedana* is the procedure which relieves Stiffness, heaviness, cold, and which induces sweating. According to *Acharya Sushruta, Upanaha Sweda* is used in *Vata* predominant disorders. The drugs selected for the *Upanaha yoga* are having the properties that are mentioned in *Swedopaga* group. *Upanaha Sweda* is *Vatashamaka* properties due to its *Ushana* and *Snigdha Guna*. In *Upanaha Sweda* due to local rise of temperature, metabolic wastes are removed through increased blood circulation. The secretion of sweat is under nervous control especially autonomous. Thus the *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 the joint promotes local circulation and metabolic activities and opens the pores of the skin to permit the medicines towards the affected site. So it is clearly said that *Upanaha Sweda* may be reduce the symptoms of *Sandhigata Vata.* Composition of *Vatari Guggulu* is collectively having *Vata-shamaka*, *Kaphashamaka*, *Aamapachana*, *Deepana, Vedna-sthapana* and *Rasayana* properties. Due to *Ushana veerya* and *Vatanuloman* properties, it normalizes the movement of *Apana Vayu* and *Vyana Vayu* which in turn helps in relieve pain. Furthermore the *Kaphasamaka* properties of *Eranda* and *Guggulu* by its *Laghu*, *Ushana, Sukshma*, *Srotoshudhika* properties, it checks the blockage of path occurred due to *Kapha Dosha* and so helps to relieve *Stambha* and *Sotha*.

CONCLUSION

The clinical study reveals that there is significant relief in symptoms of *Janusandhigata vata* after use of *Vatari Guggulu* with *Upanaha sweda.*

Improvement was observed in all signs and symptoms. Effect of *Upanaha Sweda* in Group-A (*Upanah*a) has significant results except on crepitus and X-ray finding. While in Group-B (*Upanaha Sweda* with *Vatariguggulu*) was found highly effective in all symptoms of *Janusandhigata vata* along with radiographic changes. In Overall assessment it was found that the combination (Group-B) treatment modules highly effective than individual group. Clinical trials of the drug conclude that it possesses properties like *Shoolhara* (analgesic), *Vatahara and Kaphahara* without any toxic effects. Preventive aspect and patient's education such as proper information about causes, *Pathya-apathya* (Do's and Don'ts) play an important role in the management of *Janusandhigata vata.*

REFERENCES

1. Charaka Samhita, Savimarsh Vidyotani Hindi Commentary by Kashinath Shastri evam Gorakhnath Chaturvedi, Chikitsa Sthana Chapter 28/37, Verse 3, Reprinted, Varanasi; Chaukhamba Bharati Academy, 2011; 783.
2. Parveen kumar. Ayurvedic Management of Sandhivata (Janu Sandhi): A Case Report. International journal of Ayurveda and herbal medicine. 7:5 (2017) 2866–28705.
3. Harrision Principles of Internal Medicine Vol-2, Mc Graw Hill Education, 2015 page no-2226.
4. Daksha Rathod, Kalpesh Dattani. Effect of Yoga Basti in Sandhivata w.s.r. to Osteoarthritis of Knee joint. International Journal of Ayurvedic Medicine, 2017, 8(2), 73-79.
5. Bhaishajyaratnavali, Sidhiprada-Hindi Commentary by Prof. Siddhi Nandan Mishra, Chapter 29/154-155 Chaukhamba Surbharati Prakashan, Varanasi, 2015.
6. Charak Samihta, Vidhyotani Hindi Commentary by Pandit Kashinath Shastri, evam Gorakhnath Chaturvedi Sutrasthana, 14/35-36, Chaukhamba Surbharati Prakashan, Varanasi, 2011, page no. 289.
7. Prof P.V.Sharma, Dravyaguna Vijnana, Vol. 2, Chaukhambha Bharati Academy, Varanasi Reprint: 2006; p58.
8. Ibid
9. Prof P.V.Sharma, Dravyaguna Vijnana, Vol. 2, Chaukhambha Bharati Academy, Varanasi Reprint: 2006; p54.
10. Prof P.V.Sharma, Dravyaguna Vijnana, Vol. 2, Chaukhambha Bharati Academy, Varanasi Reprint: 2006; p758.
11. Prof P.V.Sharma, Dravyaguna Vijnana, Vol. 2, Chaukhambha Bharati Academy, Varanasi Reprint: 2006; p239.
12. The Ayurvedic Pharmacopoeia of India. Monogrpahs1. Department of ISM, MoHFW, Goverment of India. (2001 (Reprint)). The Ayurvedic Pharmacopoeia of India. New Delhi.

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