



Research Article

EFFICACY OF PATRAPINDA SWED IN THE MANAGEMENT OF SANDHIGAT VATA W.S.R. TO OSTEOARTHRITIS

Raut Anushree^{1*}, Chavan Dipali², Sonawane Ravibhushan³

¹P.G. Scholar, ²Associate Professor, Department of Panchakarma, Shree Saptashrunji Ayurved College and Hospital, Nashik.

³Associate Professor, Dept. of Panchakarma, S.S.T. Ayurved College Sangamner, Maharashtra, India.

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ABSTRACT

Sandhigata Vata is a *Vata* vitiated disease, characterized by *Sandhishoola*, *Shopha*, *Sandhigrah*, *Sandhisphutan* & *Sparsha asahayta*. In Ayurveda we can correlate *Sandhigat vata* with Osteoarthritis. Its common symptoms are pain & stiffness. As disease progresses it may cause morbidity and work disability. The single most cause of locomotor disability & major challenge to health care. Joint pain is the global problem for patients with almost 70 to 80% of the world population are suffering from it. In Ayurvedic classics, *Acharyas* have mentioned various *Shaman* procedures like *Snehan*, *Swedan* to provide better relief from the pain & swelling to restore the mobility. *Patrapinda sweda* is a type of *Swedna*. It is commonly performed for the *Sandhigat vata*. The present study is done to evaluate the efficacy of *Patrapind sweda* in the management of *Sandhigata vata* w.s.r to osteoarthritis. The study was conducted at Panchakarma Department of Shree Saptashrunji Ayurved Mahavidyala and Hospital, Panchvati, Nashik, Maharashtra. Total number of 10 patients between age 40-70 years having symptoms of *Sandhigat vata* were selected. It is observed that *Patrapinda sweda* done as per the textual methods is highly effective in *Sandhigata vata*.

INTRODUCTION

Sandhigata Vata is the common form of articular disorder. It is most common degenerative joint disease in India.^[1] *Sandhigat Vata* is a type of *Vata Vyadhi* mainly occurs in *Vridhnavastha* due to *Dhatukshaya*, which limits everyday activities such as walking, dressing, bathing etc. In modern science, Osteoarthritis is the common cause of joint pain. Commonly it is thought to be wear and tear of joint as one ages.^[2] It is a silently progressive joint disease. Degenerative changes in the joints arise generally from age of 30yr by the age of 65yrs. Almost 80% of people may have radiographic changes of Osteoarthritis although only 25% of people may have symptoms. In the pathogenesis of *Sandhigata Vata*, *Vata Dosha* is dominant with symptoms such as *Sandhishool*

(pain during joint movement) and *Shopha* (swelling). The joint stiffness and crepitus (specific sound during joint movement) are symptoms that may be co-related with osteoarthritis. Osteoarthritis is a major cause of rigidity and disability, limiting activity and impaired quality of life, especially among the elderly. Primary complaints of patients with Osteoarthritis are pain and difficulty in joint motility. The disease is managed by NSAIDs, analgesic drugs, physiotherapy, corticosteroids, and finally with the help of surgery. The above medication is costly and cause unwanted effects. Even the surgery does not provide complete relief. *Acharya Charaka* has given principles of *Vata Vyadhi Chikitsa* that is, repeated use of *Snehana* and *Swedana*.^[3] In *Panchakarma*, *Snehana* and *Swedana* are used as *Poorvakarma* as well as *Pradhanakarma* treating different diseases. *Swedana* is one of the *Upakrama*, which can be adopted for the management of *Vata* and *Kapha Pradhana* disorders and can be performed by using various methods. According to *Acharya Sushruta* *Snehana*, *Swedan*, *Agni karma*, *Bandhana* and *Mardana* are the principles for the treatment of *Sandhigata Vata*.^[4] Thus, taking these

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principles into consideration; *Snehana*, and *Swedan* therapy were selected for the present study. *Patrapinda sweda* is a treatment which has definite role in *Sandhigata Vata*. Hence considering these facts, the current study has been planned to evaluate the efficacy of *Patrapinda sweda* in the management of *Sandhigata vata* (Osteoarthritis)

Aim

To study the efficacy of *Patrapinda sweda* in the management of *Sandhigata Vata* w.s.r to Osteoarthritis.

Objectives

1. To study the concept of *Patrapinda sweda* from Ayurvedic literature.
2. To study the disease *Sandhigata vata* from Ayurvedic literature.
3. To study the disease Osteoarthritis from modern literature.

Materials and Methods

Patients (n=10) suffering from sign and symptoms of *Sandhigata Vata*, such as *Shool* (pain), *Shoth* (swelling), *Sparsha asahayta* (tenderness), *Sandhigrah* (stiffness) and *Sandhishutana* (crepitus) in knee joint,

Scoring pattern for signs and symptoms

A. Subjective criteria

1. *Shoola* (Pain)

No pain	0
Mild pain	1
Moderate pain, but no difficulty in walking	2
Slight difficulty in walking due to pain	3
Severe difficulty in walking	4

2. *Shotha* (Swelling)

No swelling	0
Slight swelling	1
Moderate swelling	2
Severe swelling	3

3. *Sandhigrah* (Stiffness)

No stiffness	0
Mild stiffness	1
Moderate stiffness	2
Severe difficulty due to Stiffness	3
Severe stiffness for more than 10 minutes.	4

4. *Sandhisphutana* (Crepitus)

No crepitus	0
Palpable crepitus	1
Audible crepitus	2

were registered from OPD and IPD of Panchakarma Department, Shree Saptashrunji Ayurved College and Hospital.

Sample size-10

Treatment duration- 21days

Follow up on- 7th 15th and 21st day

Inclusion criteria

1. Patients suffering from *Sandhigata vata* (Osteoarthritis)
2. Age group of 40–70 years
3. Patients irrespective of gender, cast.

Exclusion criteria

1. Patients below 40 years and above 70 years age
2. Patients had metabolic disorders like Diabetes, Hypertension.
3. Other diseases such as Rheumatoid arthritis (RA), Paralysis, Parkinson's disease, Anemia
4. Patients undergone or needed surgical intervention.
5. Secondary Osteoarthritis due to tuberculosis (TB), syphilis, AIDS, leprosy.
6. Pregnant and lactating mother.

5. Sparsha Asahayta (Tenderness)

No tenderness	0
Patient says tenderness	1
Wincing of face on touch	2
Patient does not allow to touch the joint	3

6. Akunchana Prasaranajanya Vedana (Pain during extension and flexion)

No pain	0
Pain without wincing of face	1
Pain with wincing of face	2
Prevent complete flexion	3
Patient does not allow passive movement	4

Objective criteria

- **Walking time:** The patients were asked to walk a distance of 25 feet, and the time taken was recorded before and after the treatment.
- **Climbing stair test:** The patients were asked to climb a 20 staircase up and down and the time was recorded before and after the treatment.

Patrapinda sweda^[5]

This is a type of *Sweda* where in the fomentation is done by heated bolus bags containing leaves of medicinal plants.

Procedure of Patrapinda swedan-Materials required^[6]

- 500 g fresh leaves of *Nirgundi (Vitex negundo)*
- Grated coconut
- Sliced lemon
- *Saindhav*
- *Rasnadi choorna*
- 18" square cotton cloth two pieces
- Approximately 5' long cotton thread, 2in number
- Vessel having a round bottom, for frying herbal leaves
- Medicated oil

Preparation of the Patrapinda pottali: Fresh *Nirgundi* leaves are washed and cut into small pieces. The leaves, grated coconut and sliced lemon should be mixed thoroughly and fried together in 100 ml of appropriate oil till coconut scrapings attain a brown tinge and divided into four equal parts and made into *Pottalis*.

Procedure of Patrapinda Sweda• **Poorva Karm**

The patient should be seated with leg extended over the *Droni* facing to the East. *Abhyanga* should be done with prescribed medicated oil all over the body for about 10 minutes. *Talam* with suitable oil/ *Choorna* should be applied.

• **Pradhana Karma**

The prepared *Pottali* should be heated with suitable oil in a hot iron pan and applied after checking the temperature throughout the body with mild pressure in seven prescribed positions by two attendants standing on both sides of the *Droni*. Care should be taken to maintain the temperature throughout the procedure by reheating the *Pottalis*.

• **Paschath Karma**

Remove oil from the body using clean dry towel and is covered with thin blanket for 10-15 minutes. Remove *Talam* and apply *Rasnadi Choorna*. Take hot water bath after half an hour depending on disease.

Duration: 30 to 45 min

Precautions

Every time check the temperature of the *Pottali* by placing it over own dorsum of hand.

Therapist should be cautious during the procedure because this procedure may cause burns in the dermis.

It is better to avoid the procedure in patients suffering from ischemic heart disease.

Result

Before and after results of the 10 patients were noted according to the subjective and objective criteria. Paired T test applied to the data for accessing the result.

Table 1: Symptoms wise distribution in Subjective Assessment

No. of Patients	Sandhi shoola		Sandhi shotha		Sandhigrah		Sandhi sphutana		Sparsha-Asahayta		Akunchana Prasaranajanya Vedana	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	3	1	2	1	2	1	1	0	2	1	2	0
2	2	0	1	0	2	0	1	1	1	0	2	1
3	4	2	3	1	3	1	2	1	3	1	3	2
4	4	1	2	0	1	0	2	1	2	1	2	1
5	3	0	2	0	1	0	1	0	2	0	3	1
6	4	1	3	1	3	1	2	1	3	2	1	0
7	2	0	2	0	1	0	2	1	1	0	1	1
8	3	1	2	2	2	1	1	0	1	0	2	1
9	4	2	3	2	2	1	2	1	2	1	3	2
10	4	2	3	2	2	1	2	1	3	2	4	2
Total	33	10	23	9	19	06	16	07	20	08	23	11
X (BT-AT)	23		14		13		09		12		12	
Parentage of Relief	69.69		60.68		68.42		56.25		60.00		52.17	

Table 2: Symptoms wise distribution in Objective Assessment

No. of Patients	Walking time in seconds		Climbing stair time in seconds	
	BT	AT	BT	AT
1	50	38	58	47
2	45	35	52	43
3	55	46	59	48
4	53	37	56	46
5	50	35	52	41
6	55	40	56	44
7	46	38	48	37
8	50	38	52	42
9	53	45	57	47
10	55	44	59	46
Total	512	396	544	441
X (BT-AT)	116		103	
Percentage of relief	22.65		18.93	

Table 3: Percentage of Relief in Subjective Assessment

Sr.no	Parameters	BT	AT	BT-AT	Percentage of Relief
1	Sandhishoola	3.3	1.0	2.3	69.69
2	Sandhishotha	2.3	0.9	1.4	60.86
3	Sandhigrah	1.9	0.6	1.3	68.42
4	Sandhisphutana	1.6	0.7	0.9	56.25
5	Sparsha Asahayta	2.0	0.8	1.2	60.00
6	Akunchana Prasaranajanya vedana	2.3	1.1	1.2	52.17

Table 4: Percentage of Relief in Objective Assessment

Sr.no	Parameters	BT	AT	BT-AT	Percentage of Relief
1	Walking time	51.2	39.6	11.6	22.65
2	Climbing stair time	54.4	44.1	10.3	18.93

Table 5: Statistical result of Subjective and Objective Assessment

Sr.no	Parameters	SD	"t"	p
1	<i>Sandhishoola</i>	0.4879	15.05	<0.001
2	<i>Sandhishotha</i>	0.6992	6.33	<0.001
3	<i>Sandhigraha</i>	0.483	8.51	<0.001
4	<i>Sandhisphutana</i>	0.3162	9.00	<0.001
5	<i>Sparsha-Asahayta</i>	0.4216	9.00	<0.001
6	<i>Akunchan prasaranjanya vedana</i>	0.6325	6.00	<0.001
7	Walking time	2.955	12.42	<0.001
8	Climbing stair test	1.1359	30.08	<0.001

Table 6: Graphical presentation result of Subjective Assessment

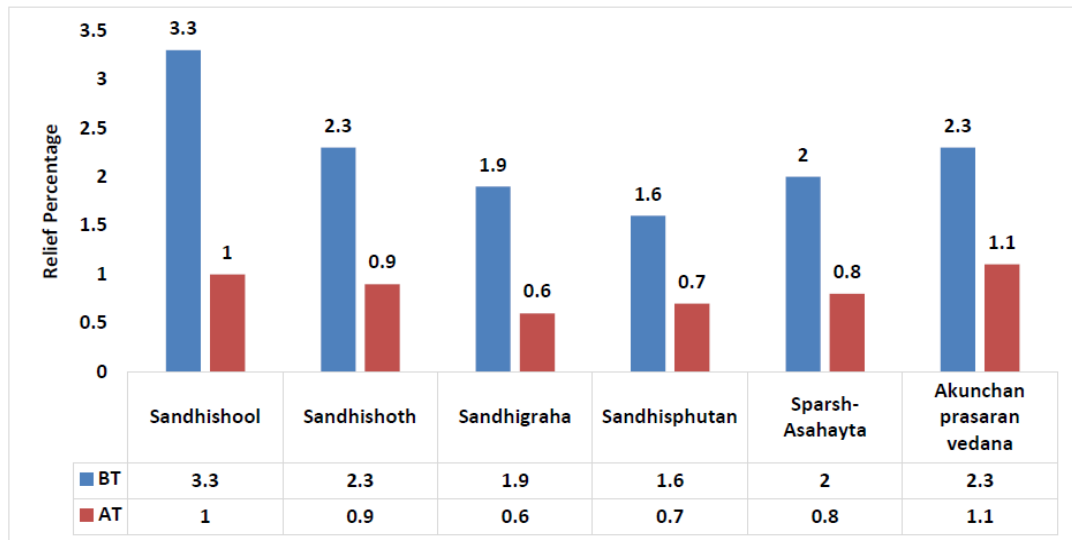
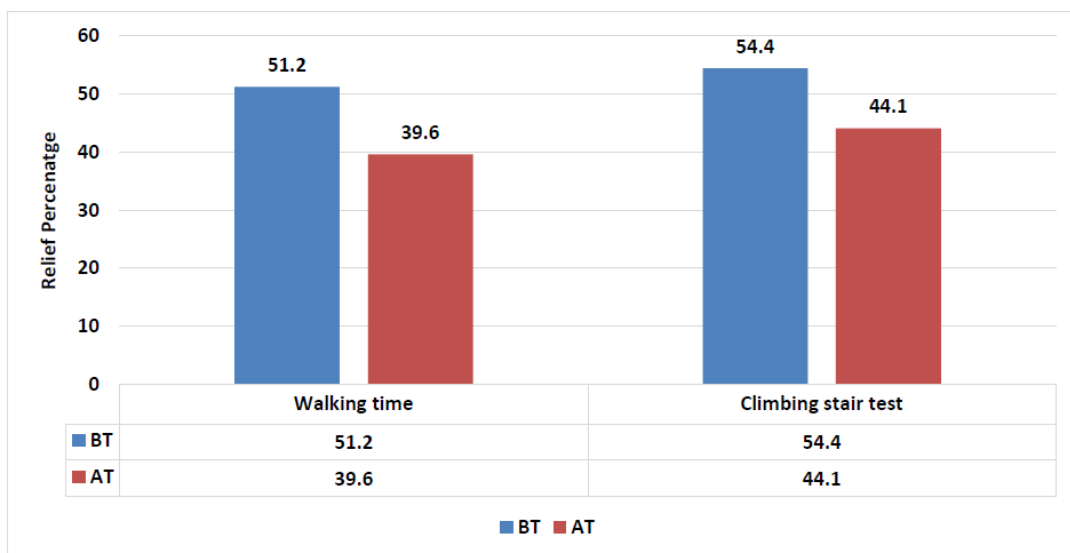


Table 7: Graphical presentation result of Objective Assessment





Ingredients of Patrapinda sweda

DISCUSSION

Sandhigata vata is one of the *Vatavyadhi* described in all *Samhita* and *Sangrah Granthas*. It is a disorder dominated by pain affecting the *Sandhi* (joint). It is caused by increased *Vata dosha*. *Kapha dosha* may also be involved in the clinical presentation. The vitiated *Doshas* affect the *Mamsa*, *Asthi* and *Snayu*. as per age-wise distribution, maximum numbers of patients (60%) in this study were in the age group of 51-60 years. this is the age where *Hani* (deterioration) of *Dhatu*s starts.^[7] The 50% patient followed *Viruddhashana* in their routine diet which leads to *Agni vaishamy* and *Vataprakopa* resulting in *Dhatukshaya* which leads to *Sandhigata vata*. this type of dietary habit affects the *Agni* resulting in formation of *Aama*, leading to *Agnimandya* and *Dhatvagnimandya*, which ultimately obstructs the *Strotas*, due to obstruction of *Strotas*, *Vata* gets increases and affects *Sandhi* resulting into *Sandhigat vata*. Significant results were found in all the symptoms- *Sandhishoola* (pain), *Shotha* (swelling), *Sandhigrah* (stiffness) and *Sandhisphutana* (crepitus), there was improvement walking velocity. This proves that *Patrapinda sweda* is effective in *Sandhigata vata*.

Probable mode of action of the Patrapinda sweda

Shodhana therapy helps to eradicate the disease from its root and often gives faster results. *Patrapinda sweda* is a type of *Sankar Sweda* and *Tapa Sweda*. In *Patra pinda sweda*, *Nirgundi patra* and *Tila taila* were used. *Nirgundi* had *Kapha-Vata Shamaka* and anti-inflammatory properties. *Tila Taila* had *Snigdha Snehana Bruhan* and other properties. Before performing *Patrapinda sweda* locally *Abhyang* was done. *Abhyanga karma* was *Snehana*, *Kledakara*, *Jarahara*, and *Kapha-Vata shamak*.^[8] *Sneha* was used for *Abhyang*, which reached *Mamsa*, *Meda*, *Asthi*, *Majja* and so on. *Dhatu* provided nourishment to them. It

stimulates muscles and nerves, which promotes its renovation and also hypno-analgesic effect by diverted stimuli.^[9] Massage gave strength to the muscles; relaxed the stiff muscles, and increased the blood flow and metabolism.

Patrapinda sweda raised the skin temperature and will enhance the transdermal delivery of various drugs by increasing skin permeability, body fluid circulation, blood vessel wall permeability, drug solubility. External heating will dilate and increase the penetration pathways in the skin.

Hot fomentation causes dilation of the vessels and induce hypermia. Experimentally it has been seen that short time fomentation is efficacious in inflammation. Due to fomentation and *Ushna guna* capillary pressure increase, and decreases the congestion of organs, sweating, eliminate the toxins and tissue relaxes, the result is decrease in spasm and pain. Increased peripheral circulation provides transport to help to reduce oedema which can help in inflammation, decreases pain and speedy healing. It also promotes vasodilation and relieves muscular spasm related to tonic muscle contraction and pain. *Patrapinda sweda* has *Sandhichestakara*, *Strotoshuddhikara*, *Agnideepaka*, *Sthambahar* and *Kapha-Vata shamak* properties. It effectively improves blood circulation, relaxed the muscles, activated the local metabolic process, increased local blood flow, and allows great pain-free moving comfort

CONCLUSION

Patrapinda sweda with *Nirgundi patra* is effective in *Sandhigata vata* w.s.r. to Osteoarthritis. Maximum results were achieved in symptoms like *Sandhishoola*, *Sandhishotha* and *Sandhigrah*. Minimum results were achieved in walking time and climbing

stair case test of the patient. This study has limitations as it was done only on a small number of subjects. Further research needs to be done on a larger group of subjects.

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*Address for correspondence

Dr. Anushree Dnyaneshwar Raut

PG Scholar

Department of Panchakarma,
Shree Saptashruni Ayurved
Mahavidyalay and Hospital,
Panchvati, Nashik, Maharashtra.

Email:

anushreeraut2090@gmail.com

Phone: 9545374198

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