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## Research Article

### EFFICACY OF PATRAPINDA SWEDA AND MATRA BASTI (COMBINED THERAPY) IN THE MANAGEMENT OF SANDHIVATA (OSTEO ARTHRITIS)

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#### ABSTRACT

According to WHO *Sandhivata* is the second commonest musculoskeletal problem in the world after backache. The present clinical trial was conducted to evaluate the efficacy of *Patrapinda Sweda and Matra Basti* (combined *Chikitsa*) in the management of *Sandhivata*.

Total 30 patients were selected for clinical trial. All the 30 patients were treated with *Patrapinda Sweda* for first 8 days and *Vatanashak tail Matra basti* for next 8 days. Results were assessed according to a standard grading system for *Shool*, *Graha*, *Sparshasahatva* and *Shotha*. Functional impairment was assessed by observing walking time. There was complete relief of *Shool* in 36.6%, *Sparshasahatva* in 43.3% and *Graha* in 43%. Significant improvement was observed in *Shotha* and in walking time. Marked improvement was observed in *Shool* in 40%, *Sparshasahatva* in 33.3% and *Graha* in 40%.

Hence it is concluded from the study that the combination of *Patrapinda sweda and Matra Basti* is a reliable management of *Sandhivata*, which should be repeated at least 6 monthly to maintain the symptomless state.

#### INTRODUCTION

In the present millennium number of physical disorders is developing because of changing atmosphere and changing lifestyle. This change is responsible for many degenerative and metabolic diseases and *Sandhivata* is the common degenerative disease today.

*Sandhivata* is one of the crippling diseases which make a man handicapped. It is described under '*Vatavyadhi*' with the symptoms *Sandhishool*, *Sandhishotha*, *Vatapurnadrutisparsha*, *Aakunchan-prasaran Kashta* and *Stabdhatta* in all classical texts<sup>[1]</sup>. The main causative factor for *Sandhivata* is '*Vata*' which gets vitiated either by *Dhatukshyaya* or by *Aavarana*. *Vata* is *ruksha* in nature, which absorbs the fluidity from the joints. In *Sandhivata*, reduced quantity of *shleshak kapha* is responsible for *Tarunsthi kshaya*. In Ayurveda, Aacharyas have described repeated use of *Snehana*, *Swedana*, *Basti*, *Mrudu Virechana*, *Upnaha*, *Agnikarma*, *Bandhana*, *Unmardana* as various treatment options for *Sandhivata*<sup>[2]</sup>.

#### Osteoarthritis

It is one of the common forms of joint disorders which totally resembles with *Sandhivata*. This is the condition in which low grade inflammation results in pain in big joints by wearing of the cartilage, which acts as a cushion inside the joint. There is also decrease in synovial fluid inside the space of the joint. It is degenerative type of disease, which affects primarily the weight bearing joints of axial and peripheral skeleton causing pain, limitation of movements, deformity of joints, progressive disability and decreased quality of life<sup>[3]</sup>.

It affects nearly 50% of those over 65 years of age and almost all individuals after 75 years<sup>[4]</sup>. About 80% of Indian population suffers from osteoarthritis. Joint pain, restricted joint movements, swelling over affected joint, crepitus are the symptoms of osteoarthritis which are the same *Vyadhipratyamik Lakshna* of *Sandhivata*.

## Management of Sandhivata

Many treatment modalities are available in other medical sciences but none of them is proved to be effective. Analgesics, NSAIDS, steroids and surgery are the treatment options which have their own

limitations in managing the disease. Here, Ayurveda offers various types of treatment plans. Ayurvedic treatment has the potential to arrest the pathology and stop the progress of degeneration.

<b>Avastha</b>	<b>External</b>	<b>Internal</b>	<b>Panchakarma</b>
<i>Santarpanjanya</i> ( <i>Sthool</i> )	- <i>Nadi Swedan</i> - <i>Baspa Swedan</i> - <i>Patripinda Swedan</i>	- <i>Medohar Guggul</i> - <i>Gokshuradi Guggul</i> - <i>Candraprabha Vati</i>	- <i>Yoga Basti</i> - <i>Kala Basti</i> - <i>Lekhan Basti</i>
<i>Apatarpanjanya</i> ( <i>Krush</i> )	- <i>Snehana</i> - <i>Swedana</i> - <i>Janu Basti</i> - <i>Shashtikshali-Pinda Sweda</i>	- <i>Panchtikta Ghrita</i> - <i>Ashwagandha Ghrita</i> - <i>Maha yograj Guggul</i>	- <i>Matra Basti</i> - <i>Anuvasan Basti</i> - <i>Ksheer Basti</i>
<i>Shothajanya</i>	- <i>Valuka pottali Sweda</i> - <i>Shothahar Lepa</i> - <i>Bandhana</i>	- <i>Deepan / Panchan</i> - <i>Yograj Guggul</i> - <i>Triphala Guggul</i>	<i>Raktamokshan</i> (severe inflammation)
<i>Margavarodhjanya</i>	- <i>Shothahara Lepa</i> - <i>Valuka Pottali</i> - <i>Patrapinda Sweda</i>	- <i>Eranda Sneha</i> - <i>ArogyaVardhini</i> - <i>Deepan / Panchan</i>	- <i>Virechan</i> - <i>Yoga Basti</i>

## Various Treatment Modalities of Sandhivata in Ayurveda

Various combinations of external, internal and *Panchakarma Chikitsa* have been proved to be very effective in *Sandhivat*<sup>5,6,7</sup>. So in the present study, the clinical trials were carried out with the combined treatment of *Matra Basti* and *Patrapinda Sweda*.

### Aims and Objectives

1. To assess the efficiency of *Patrapinda Sweda* and *Matra Basti* (combined *Chikitsa*) in management of *Sandhivata*.
2. To provide a future possibility of safer treatment to a large population suffering from *Sandhivata*, helping in reducing the rate of crippling in the society.

### Materials and Methods

#### Selection of patients

Thirty patients with a classical picture of *Sandhivata* were selected irrespective of their sex and chronicity from the OPD and IPD.

#### Inclusion Criteria

- 1) Patients presenting with signs and symptoms of *Sandhivata*, mentioned in classical texts.
- 2) Patients with the age group of 40-70 years.

#### Exclusion Criteria

Patients having serious disease conditions were excluded from the study like-

1. Diabetes Mellitus
2. Cardiac Disorders

### 3. Hypertension

#### Investigations

For the purpose of assessing the general condition of the patient and to exclude other pathologies, the following investigations were performed in all the selected patients.

- 1) Blood Hb%, TLC, DLC, ESR, Blood Sugar.
- 2) Urine Routine and Microscopic.
- 3) X-ray Joint- To confirm the diagnosis of *Sandhivata*.

#### Drugs

Selected patients were subjected to –

- 1) *Bahya Snehan and Patrapinda Sweda* - 1<sup>st</sup> 8 days.
- 2) *Bahya Snehan, Nadi Swedana & Matra Basti* - (*Vatanashak tail*<sup>8</sup>- 60ml) for next 8 days.

Total treatment duration was for 16 days.

#### Drug Review

*Bahya Snehan- Til tail*

*Nadi Swedan -Nirgundi Patra quath*

***Patra Pinda Swedan***<sup>9</sup>

Fresh leaves of *Nirgundi, Dattur, Arka and Eranda* were cut in small pieces. This mixture was crushed and divided into 4 parts. Four *Pottali* were prepared (approx. weight of one *Pottali* – 300 to 500 gm). The *Pottalis* were heated in *Til oil* in hot iron pan upto 40-45° C. Gentle massage was done on joint and surrounding areas with mild pressure. The

temperature was checked every time before application. Two *Pottalis* were used at a time and two *Pottalis* were kept ready for maintaining temperature.

**Matra Basti** [10]

For this, *Vatanashak tail* was used. *Dashmool, Rasna, Shunthi and Nirgundi* was taken in equal parts in powdered form and *Quath* was prepared. The *Quath* was mixed with *Til* tail and cooked until only oil remains. This *Siddha Vatanashak tail* was used for *Matra basti* in 60ml dose for 8 days.

**Assessment Criteria**

Scoring for different parameters was done as follow:

• **Pain (Shool)**

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

• **Tenderness (Sparshsahatva)**

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

• **Stiffness (Graha)**

- 0 No stiffness
- 1 Mild stiffness

- 2 Moderate stiffness
- 3 Severe difficulty due to walking

• **Oedema (Shotha)**

Oedema was measured by measuring tape before and after the treatment.

• **Walking time**

Patient was asked to walk 27 meters before and after the treatment and the time required was noted.

**Criteria for Assessment of Overall Effect of the Therapy**

**Completely cured:** 100% relief in signs and symptoms.

**Marked improvement:** 75-99% relief in signs and symptoms.

**Moderate improvement:** 74-50% relief in signs and symptoms.

**Mild improvement:** 25-49% relief in signs and symptoms.

**No improvement:** Below 25% relief in signs and symptoms.

A special proforma was prepared for data collection, incorporating all the relevant points. Written consent was taken from each patient for participation in the study. Follow up of patient was taken after every 8 days and the assessment of signs and symptoms was done according to the gradation. The information gathered on the basis of observations was subjected to statistical analysis.

**Observations**

**Table 1 : Distribution of patients according to age**

Age group	Number of Patients	Percentage
40 – 50 yrs	6	20 %
51 – 60 yrs	13	43.3 %
61 – 70 yrs	11	36.6 %

**Table 2 : Distribution of patients according to gender**

Sex	Number of Patients	Percentage
Females	19	63.3 %
Males	11	36.6 %

**Table 3 : Distribution of patients according to BMI**

BMI	Number of Patients	Percentage
18- 20	5	16.6 %
20.1 – 23	5	16.6 %
23.1 – 25	10	33.3 %
25.1 – 28	10	33.3 %

**Table 4 : Distribution of patients according to profession**

Profession	Number of Patients	Percentage
Service	13	43.3 %
Housewife	10	33.3 %
Labourers	7	23.3 %

Total 30 patients were selected for study. 20%(n=6) patients were in the age group of 40 – 50 years. 43.3% (n=13) patients were in the age group of 51 – 60 years while 36.6% (n=11) were in 61 – 70 years. 63.3% (n=19) patients were females and 36.6% (n=11) patients were males. 16.6% (n=5) had 20.1-23 BMI. 33.3% (n=10) patients were included in 23.1-25 BMI while 33.3% (n=10) patients had 25.1-28 BMI. 43.3% (n=13) patients were engaged in service, 33.3% (n=10) patients were housewives and 23.3% (n=7) were laborers.

**Table 5: Effect of combined therapy on cardinal signs of Sandhivata**

S. No.	Symptoms	Average mean	S.D.	S.E.	't' value
1	<i>Shool</i>	2.166667	0.698932	0.127542	16.98783
2	<i>Shotha</i>	1.006667	0.727269	0.132713	7.585277
3	<i>Graha</i>	1.466667	0.6814445	0.124351	11.79454
4	<i>Sparshasahatva</i>	1.366667	0.718395	0.131094	10.42509
5	Walking time	10.3	5.814073	1.060962	9.708168

**Table 6: Assessment of symptoms gradation before and after therapy**

Severity	<i>Shool</i>		<i>Sparshasahastva</i>		<i>Graha</i>	
	BT(n)	AT (n)	BT(n)	AT (n)	BT(n)	AT (n)
Grade 0	0	11	0	13	0	13
Grade 1	0	12	6	10	5	12
Grade 2	7	5	13	7	14	5
Grade 3	13	2	11	0	11	0
Grade 4	10	0	0	0	0	0

**Table 7: Improvement of symptoms after therapy**

Symptoms	Complete Improve	Marked Improve	Moderate Improve	Mild Improve	No change
<i>Shool</i>	36.6%	40%	16.6%	6.6%	0%
<i>Sparshasahatva</i>	43.3%	33.3%	23.3%	-	-
<i>Graha</i>	43.3%	40%	16.6%	-	-

According to table 5, the combined therapy provided significant results in *Shool*, where 't' value is highly significant i.e. 16.68783. In *Shotha*, the 't' value is 7.585277, while in *Graha*, it is 11.79454, which is highly significant. There are excellent results of combined therapy on *Sparshasahatva* and walking time, 't' value of which is 10.42509 and 9.708168 respectively, which is highly significant.

As per table 7, there was complete improvement in *Shool* (36.6%), *Sparshasahatva* (43.3%) and *Graha* (43.3%). Marked improvement was observed in *Shool* (40%), *Sparshasahatva* (33.3%) and *Graha* (40%). Moderate improvement was seen in *Shool* (16.6%). Mild improvement was observed in *Shool*

(6.6%). Not a single patient was observed unchanged after the therapy.

## DISCUSSION

*Sandhivata* is very common form of arthritis. It shows a strong association with aging and is a major cause of pain and disability in an elderly. As the degenerative phase of human body starts after 40 yrs, more patients in the age group of 51-70 yrs are seen in the study. When sex is considered, more females are affected from *Sandhivata* as in the menopausal phase rate of *Asthi dhatukshaya* is increased. *Shoulya* is main etiological factor for *Sandhivata* which is reconfirmed from the study as 66% patients are having BMI from 23.1-28. Life

style plays an important role in *Sandhivata*. Patients having sedentary life style are more prone to *Sandhivata*. Prolonged sitting, standing, excessive strain on joints worsen the status of *Sandhivata*. In our study, 43.3% patients are in service, where excessive strain may be a causative factor and 33.3% are housewives, where constant squatting or bending may causes *Sandhivata*.

Probable mode of action of combined therapy:

#### **Patrapinda Sweda**

It has excellent local effect on *Sandhivata*. The leaves of *Eranda*, *Arka*, *Nirgudi*, *Dhatura* are *Vatahar* in nature. When the fresh leaves are crushed, the active principles from the leaves are released and are mixed with *Til tail*. This mixture when rubbed on affected joints, at a temperature of 40-45° C, *Snehan* and *Swedan* occur at the same time. The peripheral vessels are dilated, local circulation is increased and the stiffness is relieved. In *Patra pinda swedan* the pressure which is exerted by the *Pottalis* plays a major role. Due to pressure, *Til tail* with the *Swarasa* of leaves get absorbed into the joints. So after 8 days of *Patra pinda sweda*, there is significant relief in *Shotha*, pain and stiffness.

#### **Matra Basti**

*Basti* therapy is considered as prime among all the therapeutic measures especially for management of *Vatavyadhis*. Vagbhatta says, the *Veerya* of *Basti* is conveyed to *Apana* and then to *Samana Vayu*, which regulates the function of *Agni*. It then goes to *Udana*, *Vyana* and *Prana*, thus providing its efficiency all over the body. The *Vatanashak tail Matra basti* pacifies *Vata*, arresting the catabolic activity of *vata*. Thus the combined therapy of *Patra pinda Sweda* and *Matra Basti* is effective locally as well as systemically. Further deterioration in the joints is prevented, as well as the pathology is arrested by *Rasayana* effect of *Matra Basti*.

#### **CONCLUSION**

1. *Sandhivata* can be correlated with osteoarthritis.
2. *Patra pinda sweda* is very effective locally in reducing pain, tenderness and *Shotha* in *Sandhivata*.

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3. *Vatanashak tail Matra Basti* is effective in arresting the pathology and acts as a *Rasayana*.
4. Combined effect of *Patrapinda Sweda* and *Matra Basti* is an excellent option in the management of *Sandhivata* which is to be repeated at least after every 6 months.

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