

Clinical Study on the Role of *Nirgundi Patra Pinda sveda* and *Shallaki* in the Management of *Sandhivata* (Osteoarthritis)

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Abstract

Sandhivata (Osteoarthritis) is a degenerative disease and mainly occurs in old age. Acharya Charka had mentioned that this disease is created by *DhatuKshaya* and *Margavarodha*. The man has paid price for standing on his limbs in the form of osteo-arthritis of weight bearing joint of the body. The animals are not suffering from this disease commonly as man. In modern medicine, it is reported that these degenerative changes in joints arise from the age of 30 years till the age of 65 years. Eighty percent of the people have radiographic evidence of osteo-arthritis and only 25% may have symptoms. In the present study total 20 patients were registered for *Sandhivata* and treated with *Shallaki* and *Nirgundi Patra Pinda Sveda*. Highly significant relief was found in the joint pain, morning stiffness, crepitus, *prasaranapravriti* and *shramaasahyata*. Therefore it is concluded that these both therapies are useful in (O.A) due to its, *vedanasthapana*, *Sothahara*, *deepana*, *Pachana*, *grahi* and *vatahara* effect.

Keywords

Sandhivata, *Osteo-arthritis (O.A.)*, *Shallaki*, *Nirgundi Patrapindasveda*



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INTRODUCTION

Sandhivata is commonly seen in an obese person, which may be due to *Avarana* of kapha and Meda. It is also a degenerative disorder mainly occurring in old age due to *Dhatukshaya*. Acharya Charaka has described the disease first separately with the name of “*SandhigatAnila*” under the chapter of VataVyadhies. Only three cardinal sign and symptoms of this disease have been described by Acharya Charaka.

VATAPURNA DRITISPARSHAH SHOTHAH
SANDHIGATE ANILE.

PRASARANA AKUNCHANAYOHO PRAVRUTISCHA
SAVEDANA.¹ (Cha. Chi. 28/37)

Vata located in the joints was creating swelling of joints which on palpation appeared as sac full of air. Joint pain occurs during extension and flexion.

HANTI SANDHIGATAH SANDHIJASHOOLA SHOPHAU
KAROTI CHA.² (Su. Ni. 1/28)

In modern aspect, O.A means inflammation and pain of the larger joints of extremities with distal interphalangeal joints. Degenerative changes in the articulating bones, together with irregular hypertrophy of the bones and cartilages giving rise to osteophytes³. The prevalence of this disorder in certain elderly group is as high as 85%. In India.⁴ There is no absolute cure in modern

medicine. These days management of O.A. is going on with analgesics and Non-steroid anti-inflammatory drugs. These drugs are very costly and create various side effects leading to peptic ulcer. Furthermore, the complications arising from the arthritis have been entrusted to surgery, which too has got its limitations. All such factors show the gravity of the disease and have compelled to go for a better remedial search from the Ayurveda. Therefore, in this study we have selected Shallaki and Nirgundi patrapindasved in the management of Sandhivata (O.A.). The details of the drug are given in Table 1.

AIMS AND OBJECTIVES

- 1) To assess the efficacy of *Shallaki* with *Nirgundi patra panda sveda* in the management of *Sandhivata* (O.A.).
- 2) To study the role of Age, Sex, Occupation, Climate, Structure and Family history in relation to *Sandhivata*.

MATERIALS AND METHODS

(A) Criteria for Selection of Patients :-

- (1) Twenty patients from the O.P.D. and I.P.D. of K.C. Department, I.P.G.T. and R.A., Jamnagar., were selected, with the classical symptomatology of Sandhivata for

the present study. For the study only uncomplicated patients of Sandhivata were selected.

(2) The selected patients were registered for detailed clinical history and complete systemic examination on the basis of specially prepared preformed.

(3) All the patients were subjected for routine haematological, urine and stool examinations to exclude the possibility of any other disease.

(4) Wherever required, the patients were subjected for the biochemical investigations like blood sugar, serum cholesterol, serum alkaline phosphates, serum acid phosphates, serum uric acids and serum proteins etc.

(5) Radiological examination was carried out of the involved joints, if necessary.

(6) Some clinical tests regarding the movements of the joints were also performed. The details are shared in Table 2-4

(B) Plan of Study :-

Patients of *Sandhivata* were given *Shallaki* in the dose of 1 gm three times a day with warm water for 7 weeks.

- **Shallaki**:-It was obtained from the
- Source - Bombay market.
- Identification -Pharmacognosy Dept. of the IPGT and RA Jamnagar.
- Dose – 2 Capsules /3 times/ day (1 capsule - 500 mg.).
- Anupan - warm water.
- Duration – 7 weeks.
- **NirgundiPatraPindaSveda**:-The fresh leaves of Nirgundi were collected and were fried mild in the BalaTaila and prepared Pottali. The patients were first given MriduAbhyanga on the involved joints with BalaTaila. Then,NirgundiPatraPindaSveda was carried out with tolerable hot pottali dipped in hot BalaTaila. It was carried out once daily in the morning for 10 minutes.

Table 1⁵ Details of Drugs used

Drug Name	Latin Name	Family	Part Used	Rasapanchak	Karma
Shallaki	BoswelliaSerataRoxb.	Burseraceae	Niryasa (gum resin)	Rasa:Madhura,Katu,Tikta Guna:Tikshna Virya: Sheeta Vipaka: Katu Doshagnata:Vatakaphahara	Shothahara Vedanasthapan,Dipana,Pa chana, Raktasthambhak etc.

Table 2 Patient Details

Observation	No.of	%	Observation	No. of	%
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	Patients			Patients	
Age :50-70 yrs	11	55	Sara :- Madhyama	16	80
Sex :-Female	15	75	Samhanan :-Madhyam	15	75
Religion-Hindu	18	90	Pramana :- Madhyam	16	80
Occupation:- House wife	14	70	Weight :-50-60kg	6	30
			60-70kg	8	40
Married	16	80	Satmya:-Madhyam	10	50
Education:-Uneducated	9	45	Satva :- Madhyam	14	70
Soc.eco.Sta.-Lowermiddle	8	40	Ahara Shakti :- Avara	8	40
Habitate:-Urban	18	90	Vyayam Shakti :- Avara	12	60
Addiction-Tea	13	65	Desha :- Sadharan	20	100
Diet:- Vegetarian	17	85	Vaya :- Parihani	16	80
Agni - Mandagni	11	55	Clinical History:-Exertion	11	55
DehaPrakriti :- Vata Pitta	11	55	Chronocity :-less than 1yr	13	65
ManasaPrakriti :- Rajasika	19	95	VedanaVridhiKala:Contine	17	85
Family History Negative	16	80	VedanaVridhiNidana Exertion	14	70
			,Varsharitu		
VyadhiParambhaVidhiShanaih-	19	95	VedanaShamakaUpashaya- Rest	17	85
VyadhiSwabhava :- Sthira	11	55	Bilateral Knee Joint pain	11	55

Table 3 Signs and Symptoms

Observation	No. of Patients	%
Pain in Knee Joint	20	100
Swelling	9	45
Morning Stiffness	17	85
Crepitus	17	85
SavedanaAkunchanaPrasarana	20	100
Tenderness	8	40
ShramaAsahyata	15	75
Sandhigati Hani	7	35

Table 4 Srotodushti and Doshadushti

Observation	No. of Patients	%
Annavaha	12	60
Rasavaha	14	70
Medovaha	19	95
Asthivaha	20	100
Majjavaha	20	100
Purishvaha	11	55
Vata	20	100
Pitta	6	30
Kapha	15	75

RESULTS AND DISCUSSION

Sandhivata (Osteoarthritis) is degenerative

disorder of locomotor system, has been described briefly in the classical texts of Ayurveda. Maximum no. of patients were

found between the age group of 40-60 years. In old age Vata is responsible for this disease in 70% of cases of O.A. Sandhivata appears in maximum females after menopause. Females to males ratio has been reported 20%⁶. Uneducated patients having irregular life style and unhygienic circumstances are prone to this disease than others. Mandagni is causing *Dhatvagnimandhya* and *dhatukshaya* leads to degenerative diseases. Dominance of Vata Dosha in Vata Pitta pradhana prakriti they were more prone to this disease. In obese patient weight bearing joint especially on knee joint to develop Sandhivata. Vata aggravated by *Apatarpana* leading to *dhatukshaya* and *santarpanajanya* due to *margavarodha*. One due to their ruksha, laghu, etc. qualities and lack of proper nourishment of dhatus create *dhatukshaya* and *vataprakopa*. And Second due to Madhur, Sheet Diet, Divaswap were increase Ama and obstructed Srotas and create *Vataprakopa*⁷. Exertion and monsoon season both factors are increase vedana. On set of disease was recorded gradually (Shanaih-shanaih) in maximum patients this assessment support the text reference. The results of study are shown in Table 5-7.

Mode of action of Shallaki: - Sandhivata is a vata-kaphaja vyadhi with symptoms of restricted movements, joint pain, swelling, and stiffness. Tikta rasa and vata-kaphahar property of shallaki pacifies the vata-kaphadosha restricts movement and reduces stiffness. *Deepan* and *Pachana* properties improve *Agni* and *dhatuvrudhi* which helpful to sub site degenerative effect. Tikshanaguna clear the shrotorodha and increase *dhatuvrudhi* and *asthi-sandhi* also get relieved from aggravated vata-kapha, reduced in pain and stiffness.

Detailed pharmacological studies conducted at R.R.L. Jammu had shown that the action of Shallaki is mediated through the vascular phenomenon. It improves blood supply to joint and restores integrity of vessels obliterated by spasm of internal damage⁸. In the pathogenesis of Osteo-arthritis, Leukotrienes are potent mediators of inflammation and they also induce Oedema and erythema. In vitro studies, it has been shown that salaiguggal extract inhibits LTB₄ (LeukotrieneB₄) formation by nearly 90% at a concentration as low as 85 mcg/ml⁹. Thus, it may be very useful drug in the treatment of Sandhivata(O.A.).

Table 5 Effect of drug on Cardinal Sign and Symptoms and Dosha Dushti in 20 Patients of Sandhivata (O.A)

Sign and	No. of	Mean	Mean	% Relief	S.D.	S.E.	t	p
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Symptoms	Patients	B.T.	A.T					
Pain	20	2.75	0.5	81.81	0.55	0.123	18.29	<0.001
Swelling	9	0.55	0.15	72.72	0.502	0.112	3.55	<0.01
Morning Stiffness	17	1.3	0.3	76.92	0.648	0.145	6.892	<0.001
Crepitus	17	0.85	0.2	76.47	0.489	0.109	5.94	<0.001
SavedanaAkuncha na- PrasaranaPravriti	20	1.55	0.20	87.09	0.670	0.15	9.0	<0.001
Tenderness	8	0.85	0.35	58.82	0.688	0.153	3.248	<0.01
ShramaAsahyata	15	1.05	0.4	61.90	0.89	0.109	5.94	<0.001
SandhiGati Hani	7	0.85	0.25	70.58	0.882	0.197	3.04	<0.01
Walking time/min	20	2.75	0.5	81.81	0.55	0.123	18.29	<0.001
Weight Kg	20	71.70	71.0	0.97	0.046	0.01	3.39	<0.01
Pulse (p/m)	20	77.5	76.5	1.29	0.153	0.034	1.45	>0.05
Vata	20	3.75	0.5	86.66	0.182	0.04	3.97	<0.001
Pitta	6	0.9	0.75	16.66	0.018	0.004	1.83	>0.05
Kapha	15	1.75	0.60	65.71	0.049	0.011	5.20	<0.001

Table 6 The effect of therapy on associated symptoms of 20 patients of *Sandhivata*

Associated Symptoms	No. of Patients	Mean B.T	Mean A.T	% Relief	S.D.	S.E	t	p
Jvara	3	0.15	0.0	100	0.366	0.081	1.831	>0.05
Aruchi	4	0.3	0.01	66.67	0.41	0.091	2.179	<0.05
Lalasarava	0	0.0	0.0	0.0	0.0	0.0	0.0	-
Bhaktadvesh	7	0.45	0.15	66.67	0.47	0.105	2.853	<0.02
Vibandha	11	0.8	0.15	81.25	0.67	0.15	4.333	<0.001
Kshudha Hani	9	0.45	0.2	55.56	0.444	0.099	2.516	<0.05
Gatrashoola	12	0.85	0.25	10.59	0.598	0.133	4.485	<0.001
Guruta	11	0.60	0.25	58.33	0.489	0.109	3.198	<0.01
Klama	5	0.25	0.05	80	0.41	0.091	2.179	<0.05
Alasya	10	0.50	0.15	70	0.489	0.109	3.198	<0.01
Angamarda	12	0.60	0.0	100	0.502	0.112	5.338	<0.001
Bhrama	9	0.55	0.25	54.55	0.47	0.105	2.853	<0.02
Tandra	5	0.25	0.05	80.0	0.41	0.091	2.179	<0.05
Bahumutrata	4	0.2	0.1	50.0	0.307	0.068	1.452	<0.05
Kukshishoola	6	0.3	0.05	83.33	0.444	0.099	2.516	<0.05
Adhamana	6	0.3	0.05	83.33	0.444	0.099	2.16	<0.05

Table 7 Total Effect of therapy on 20 Patients of *Sandhivata* (O.A)

Result	No. of Patients	Percentage %
Complete remission	6	30
Marked Improved	9	45
Improvement	5	25

Mode of action of NirgundiPatraPindaSwed:-

This therapy is having *Vata Kapha* hara and *UshnaVirya* properties. In this process three phenomenons takes place which are valuable from the scientific point of view in addition to Ayurvedic concept of *Svedana*. (1) Massage with *VatasamakaTaila* like *BalaTaila* on the affected parts. It increase blood circulation in this area and also destroys the *Vatadosha* by its *Ushnaguna*. (2) Advocation of heat in the form of warm potalli of *NirgundiPatra* repeated on the affected surface. It is also alleviates the locally aggravated *Doshas* especially *Vata* and *Kapha* and it reduced to *Shotha* and *Shoola*. (3) Lastly the light massage on the fomented part. It relives pain.

CONCLUSION

During clinical study of *Sandhivata Kaphajanya* Symptoms were observed. This indicates that the *Sandhivata* may be *Kaphanubandhajanya* *Vatavyadhi*. Externaly *Nirgundi Patra Pinda swed* is helpful to alleviate the *Vata-Kaphadoshas*. Therefore it is concluded that *Shallaki* with *Nirgundi Patra Pinda Sved* both are effective in *Shula*, *Shotha*, stiffness,

crepitus and tenderness by their *vedanasthapana* and *shothghna* effect.

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