

COMPARATIVE STUDY OF NIRGUNDI PINDA SWEDA AND NIRGUNDI NADI SWEDA IN SANDHIGRAHA

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ABSTRACT

Sandhigraha (joint stiffness) is now a days a common symptom we can find in almost all joint disorders. Patients with all forms of arthritis or other diseases, in which joints are involved, have this symptom and want to get rid of it as quickly as possible as it hampers daily routine. *Swedan* (sudation/perspiration) therapy has been advocated by *Ayurveda* Texts for stiffness. *Pinda sweda* (sudation with bolus of herbal drugs) and *Nadi Sweda* (local sudation with vapors) are two of the *Swedan* types which are popular, easier and have good effects. No comparative study has been done yet between these two *Swedan* types to understand whichever is better to relieve *Sandhigraha*. A study was carried out to compare effect of *Pinda Sweda* and *Nadi Sweda* in *Sandhigraha*. In the study 60 patients were randomly divided into two groups. In Group A patients were received *Nirgundi kalka*¹ (paste of *Nirgundi* leaves) *Pinda Sweda* and in Group B patients were treated with *Nirgundi Kwath*² (decoction) *Nadi Sweda*. The study shows *Pinda Sweda* (Group A) provided better relief in *Sandhigraha*.

Keywords: *Sandhigraha*, joint stiffness, *Pindasweda*, *Nadisweda*, *Nirgundi*, *Kalka*, *Kwath*

INTRODUCTION

Why do we fall ill? Ayurveda has very simple answer to it i.e. *Mithya Ahar-Vihar* (improper diet and behavior). Such things repeatedly happen due to *Pradnyaparadh*³ (improper things done inspite knowing their adverse effects). *Pradnyaparadh* is one of the three main causes of *Vyadhinirmiti* (development of disease) Nowadays percentage of *Vatavyadhis* (joint disorders) related to joints in the society is very high. why it is so? Today's lifestyle is its root cause. People are very crazy for fast foods, cold drinks, fermented food, disco pubs, overnight outstays, travelling on a bike etc. are doing *Vatprakopa* (vitiation of *Vata*). This change

in lifestyle is for every class for society. So, every class of society is prone to get them.

Vatavyadhis (*Diseases due to vitiation of Vata*) lead to joint stiffness and hence disturbing daily activities. Most of the diseases pertaining to joints are manifesting *Grahata* (restricted movements) i.e. stiffness of joints in quantity. People are not able to do anything due to *Sandhigraha* e.g. in *Amavata* (rheumatoid arthritis) stiffness is especially in the morning so people must take analgesics to get up and move. So, we must provide an alternate to such analgesics. Allopathy due to its limitations still cannot provide any remedy for complete cure of joint stiffness.

The basic approach of Indian medicine to the problem of health and disease prevention and treatment is entirely different from that of modern system of medicine. Ayurved does advocacy⁴ of *Swedan* therapy as far as *Vedana* shaman (pain relief) is considered. There are lots of *Swedan* therapies mentioned in the texts. But if we consider efficacy as well as “user friendly” type there are mainly two types viz. *Pinda Sweda* and *Nadi Sweda*. Lots of work has been done on *Swedan* therapy before this but comparative study between these two types regarding stiffness has not been done yet. *Nirgundi* is the drug chosen for *Swedan* therapy. It is included in *Surasadi Gana*⁵ recommended for *Swedana*. It is potent *Vatashamak*⁶ (pacifying *Vata Dosha*). It is available in every season. The mode of *Swedana* which is been used over a large percentage is *Nadisweda* and the mode of *Swedana* which becoming popular day by day is *Pinda Sweda*. So, it is decided to take these therapies for the research purpose. Again, *Pindasweda* and *Nadisweda* both are very easy to perform and not cost consuming. *Nirgundi Kalka* is used for *Pindasweda* and *Nirgundi Kwath* is taken for *Nadi Sweda*.

Aim:

Comparative study of *Nirgundi Pinda sweda* and *Nirgundi Nadi Sweda* in *Sandhigraha*

Objective:

- 1) To study causes of *Sandhigraha*
- 2) To study effect of *Pinda Sweda* in *Sandhigraha*
- 3) To study effects of *Nadi Sweda* in *Sandhigraha*
- 4) To compare effects of *Pinda Sweda* and *Nadi Sweda* in *Sandhigraha*.

Materials and Methods:

Patients were selected in *Arogyashala Rugnalaya Nashik* randomly attending the OPD/IPD of *Kayachikitsa* and *Panchakarma* department. As *Pinda Sweda* or *Nadi Sweda* are very simple procedures and

of very short duration, patients from OPD were more in number. Patients were divided into two groups, viz. group A receiving *Pinda Sweda* and group B receiving *Nadi Sweda*.

Patients were selected by lottery method for *Pinda Sweda* or *Nadi Sweda*. 30 patients in group A received *Pinda Sweda* while 30 patients in group B received *Nadi Sweda*

Duration of Treatment:

Both *Pinda Sweda* and *Nadi Sweda* were performed for successive eight days

Swedana performed up to achievement of *Samyak Swedana*⁷ (symptoms of proper sudation) symptoms

Inclusion Criteria

1. Patients of either sexes
2. Patients of all age groups
3. Patients having *Sandhigraha* of knee, shoulder, elbow, or lumbo-sacral joint (*Katigraha*) one or more at a time
4. Patients with previous history of *Aghat* (trauma) were also selected
5. Patients were selected irrespective of their other diseases such as diabetes, hypertension etc.

Exclusion Criteria

- i) Patient having *Vatarakta* (Gout)
- ii) Patient having locked joints
- iii) Patient having *Pittaj* (vitiation of *Pitta Dosha*) symptoms

Criteria for upashaya (relief)

- 1) *Uttam Upashaya* – A (Good Relief)
- 2) *Madhyam Upashaya* – B (Moderate Relief)
- 3) *Heena Upashaya* – C (Mild Relief)
- 4) *Anupashaya* – D (No Relief)

Criteria for Assessment:

Main criteria for assessment of therapeutic trial was based on the symptomatic relief including some measurement criteria.

1) Sandhigraha: (joint stiffness)

Flexion, extension and other movements freely done	0
Patient must give pressure for complete performance of that movement	+
Complete performance of the movement done by Vaidya only by giving pressure	++
Complete movement not possible by Vaidya too	+++
Only slight movement of joint	++++

2) Sandhishotha: (edema at joint)

Initial <i>Shotha</i> was marked and it was considered as 100%	++++
25% reduction	+++
50% reduction	++
75% reduction	+
100% reduction	0

3) Sandhishoola: (arthralgia/pain in joint)

Absent	0
Sensation of pain	+
Sensation of pain only during daily activities	++
Continuous sensation of pain but routine activities could be done	+++
Pain is severe that daily activities could not be done	++++

4) Sparshasahatva: (tenderness)

Patient does not have pain on palpation	0
Pain only after giving deep pressure	+
Pain only after giving slight pressure	++
Pain action thoroughly generates pain	+++
Patient not allowing palpation due to pain	++++

(In case of multiple joint involvement average assessment was considered)

5) Sashabda kriya: (crepitation)

The intensity of this symptom is not decidable in language at all. It can be appreciated by *Vaidya* (Clinician) only, so the assessment was considered in the form of absent or present.

It was also considered as absent or present

Though all these assessor symptoms before and after treatment were assessed; the inference was drawn after consideration of *Sandhigraha* only.

For deciding *Upashaya – Anupashaya* of *Sandhigraha* following criteria was set up.

6) Sandhigaurav (heaviness in the joint)

Criteria for Upashaya

Percentage of Upashaya	Upashaya Swaroop
75 % to 100 %	Uttam
50 % to 75 %	Madhyam
25 % to 50 %	Heena
Below 25 %	Anupashaya

To decide the relief of percentage, the symptom before and after the treatment was assessed in the range between 0, +, ++, +++, +++++ and following chart was prepared

Same criteria were considered in case of *Sandhishotha* and *Sandhishoola*. Again, in case of multiple joint involvements results were considered by taking average of all the joints.

Selection of Drug and Aushadha Kalpana:

Nirgudi (vitex negundo) was the drug selected for the both *Swedana* procedures. *Nirgudi* is potent *Vata* and *Kapha Shamak* and considered traditionally for *Swedana*. Also, it is considered as best *Swedana Dravya* in *Samhitas*. *Nirgudi* is having *Tikta* (Bitter)- *Katu* (Spicy)- *Kashaya* rasa, *Laghu* (Light) – *Ruksha* (Dry) *Guna*, *Katu Vipak* (Taste after digestion) and *Ushna Virya*.

Nirgudi Kalka was decided to use for Pindasweda and Nirgudi Kwatha was decided to use for Nadi Sweda. Kalka and Kwatha were prepared as per the textual methods.

The present study comparative study of Nirgundi Pinda Sweda and Nirgundi Nadi sweda in sandhi Graha was carried out at Arogyashala Rugnalaya, Nashik and following were noted.

Results:

Table 1: Hetu- The main Hetu observed according to Samprapti (pathogenesis) were classified into three groups and their percentage is as mentioned in following table.

No	Name of Hetu	No of Patients	Percentage
1	Avarodhajanya (obstructive pathology)	28	46.66
2	Dhatukshayajanya (Degenerative pathology)	20	33.33
3	Aghataj (Traumatic)	12	20

Table 2: According to sex the distribution of patients was-

No	Sex	No of patients	percentage
1	Male	32	53.33
2	Female	28	46.66

Table 3: According to symptom: Sandhigraha

Type	Uttam	Madhyam	Heena	Anupashaya	Total
Pindasweda	15	10	03	02	30
Nadi sweda	6	08	12	04	30
Total	21	18	15	06	60

Table 4: According to symptom Sansdhishoola

Type	Uttam	Madhyam	Heena	Anupashaya	Total
Pindasweda	14	10	04	00	28
Nadi sweda	06	06	12	03	27
Total	20	16	16	03	55

Table 5: According to symptom Sandhishoth

Type	Uttam	Madhyam	Heena	Anupashaya	Total
Pindasweda	11	07	03	02	23
Nadi sweda	03	05	06	07	21
Total	14	12	09	09	44

Table 6: According to symptom Sparshasahatva

Type	Uttam	Madhyam	Heena	Anupashaya	Total
Pindasweda	06	05	03	00	14
Nadi sweda	02	01	07	02	12
Total	08	06	10	02	26

Table 7: According to *Vatapurnadruti Sparsha*

Type	Upaashaya	Anupashaya	Total
<i>Pindasweda</i>	10	04	14
<i>Nadisweda</i>	03	09	12
Total	13	13	26

Table 8: According to *Sandhigaurav*

Type	Upaashaya	Anupashaya	Total
<i>Pindasweda</i>	11	06	17
<i>Nadisweda</i>	04	11	15
Total	15	17	32

Table 9: According to symptom *Sashabda Kriya*

Type	Upaashaya	Anupashaya	Total
<i>Pindasweda</i>	09	04	13
<i>Nadisweda</i>	05	11	16
Total	14	15	29

DISCUSSION

Hetu: The *Hetu* are sub classified in three subtypes viz. *Avarodhajanya* (Traumatic), *Dhatukshayajanya* (Degenerative), *Aghataj*. In which *Avarodhajanya Hetu* occurs more i.e. 46.66% probably due to *Viruddha Ahara* and *Vataprakopak Nidan*. It is observed that, in case of *Dhatukshayajanya Samprapti*, *katu rasa* plays an important role.

Sex: From the observed values *Sandhigraha* found in both sexes almost equally.

Sandhigraha: *Charak, Vagbhat, Sushrut* have explained so much types of *Swedana*, but it has definite meaning. Each *Swedana* has its own definite indications. Here we are discussing difference between *Pinda Sweda* and *Nadi Sweda* in *Sandhigraha*.

In case of *Pinda Sweda* the bolus including *Nirgundi Kalka* touches the skin with some pressure applied in the procedure.⁸ As motion is hampered at sandhi, it may be remobilized with the help of circular motion applied in *Pinda Sweda* e.g. the patients of constipation are advised to move the hands downwards on the stomach, so that there should be *Anuloman Gati* of *Vayu*, so in *Pindasweda* movement of *Pinda* probably mobilize the *Vayu* thus relieving stiffness. Again, in *Pinda Sweda Kalka* was used and it is *mrudu* in nature. Though *Mardav* is a *Karya* of *Swedana* it is more in case of *Pinda Sweda* as compared to *nadi sweda*.

This smoothness is necessary to relieve stiffness. In case of *Kalka* whole *Dravya* has been used and not its part.

In case of *Nadi Sweda*, only vapors of *Nirgundi Kwath* are applied and perspiration generates. *Nadi Sweda* generates less *Mardava* as compared to *Pinda Sweda*. The most important point is that in case of *Avarodhjanya Vikruti*, *Nadi Sweda* having more temperature compared to *pinda sweda*, can cause liquefaction of accumulated inflammatory material resulting in more obstruction, so results are discouraging; however further research is necessary in this regard.

In *pinda sweda snehan* and *swedan* is done at the same time. So excessive *snehan* or excessive *swedan* is prohibited. Again, *Nirgundi* is *Ruksha – Ushna* and *Teel Tail* is *Snigdha – Ushna* so both *Vata* and *Kapha* are controlled. So *Pinda Sweda* is effective in *Avarodhjanya* as well as in *Dhatukshayajanya Sandhigraha*.

According to modern science, stiffness is due to either pain or swelling or edema as explained in Rheumatoid Arthritis and osteoarthritis⁹. All the diseases pertaining to joint either have inflammatory process like in RA i.e. excessive accumulation of inflammatory exudate putting pressure on the adjacent parts providing limitations for the movements. While in case of osteoarthritis or degenerative joint diseases (non-

inflammatory condition), limitation of movement is due to pain i.e. pain causes stiffness.

One thing which is to be mentioned here is, all types of joint disorders can be classified into two categories i.e. inflammatory or non-inflammatory¹⁰ which are analogous to *Avarodhjanya* or *Dhatukshayjanya* respectively. Again, there are two types of movements while considering stiffness i.e. active movements performed by patient himself and passive movements performed by the examiner. Stiffness of active movements is due to muscles, tendons and ligaments while that of passive movements is due to joint itself. Now if we see the difference between *Pinda Sweda* and *Nadi Sweda*, it is clear that if inflammation is there it may increase due to application of *nadi Sweda* as it resembles with *ama Sanchiti* and as *Nadi Sweda* is a type of *Drava Sweda* it will augment the inflammatory condition while *Pindasweda* being less *Ushna* and more *ruksha* compared to *nadi sweda* becomes more useful to relieve inflammatory condition. *Pindasweda* provides *Bruhana* (smoothness) to muscles, tendons and ligaments along with sudation so it is more potent in relieving active movement stiffness as compared to *Nadi Sweda*.

The heat given by *Pinda Sweda* is mild but less fluctuating while heat given by *Nadi Sweda* is moderate but fluctuating.

One more thing is important to be mentioned here about cold and heat pain. That means one can feel pain due to both cold and warm receptors. In very cold region the respective pain fibers are stimulated so cold pain is felt. (If the skin becomes even colder so that it nearly freezes or actually does freeze even these fibers cannot be stimulated). As the temperature rises to 10⁰ to 15⁰ C pain impulses cease but cold receptors began to be stimulated. Then above 30⁰ C warmth receptors become stimulated and the cold receptors fade out at about 43⁰ C finally at around 45⁰ C pain fibers began to be stimulated by heat. Thus, when the temperature of skin is actively falling a person feels much colder than when the temperature remains at the same level. Conversely, if the temperature is actively rising the person feels much warmer than he or she would at the same temperature if it were constant.

Now fluctuations of temperature are more in case of *Nadi Sweda* than in *Pinda Sweda* so the main function of *Vatashaman* is carried out well by means of *Pinda Sweda*

Other Symptoms:

The basic aim of the research was to do comparison between *Pinda Sweda* and *Nadi Sweda* in *Sandhigraha*; but while doing study it was observed that *Sandhigraha* never occurs alone. Infact, some symptoms are accompanied with it, so the symptoms are taken for the study. Again, the examination of joints wouldn't be complete without their examination.

Pinda Sweda has statistically significant results in relieving these symptoms as compared to *Nadi Sweda*.

CONCLUSION

From this study it can be concluded that – *Sandhigraha* occurs more in *Avarodhjanya Sandhivikruti* as compared to *Dhatukshayjanya Sandhivikruti*. *Sandhigraha* is always accompanying with symptoms *Sandhishoola*, *Sandhishoth*.

In case of *Sandhigraha* it can be stated that *Pinda Sweda* is more effective than *Nadi Sweda* because, it gives nourishment along with *Swedana*. It gives smoothness to the joint and adjacent structures. It has special action (*Gati*) so hampered *Gati* at joint is activated. It gives strength to the muscles, tendons and ligaments. Fluctuations of temperature in case of *Pinda Sweda* are less as compared to *Nadi Sweda*

However, the topic is open for further research.

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