



A COMPARATIVE STUDY ON EFFECT OF CHINCHALAVANA PINDA SWEDA AND ARKAPATRA PINDA SWEDA IN THE MANAGEMENT OF KATIGRAHA

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ABSTRACT:

Katigraha is one among the Nanatmaja Vatavikara and also found as a symptom in different diseases. Due to Nidanasevana, Vata gets aggravated, Shuddha and Saama Vata enters to Katipradesha producing symptoms like Ruja and Graha. Acharya Charaka has included Swedanakarma under Shadupakrama, where it is described as the principal method of treatment, and it alleviates Vata, Kapha and Vata-Kaphaja disorders. Swedana helps in expelling out sweat from the body by liquifying Dosha which spreads throughout. Among the Swedana procedures, Pinda Sweda which is having Snigdha, Ushna and Guru Guna help in pacifying the Vata Dosha and found to be more effective in this condition. Based on Guna of Dravyas used, Chinchalavana Sweda and Arkapatra Sweda are Snigdha-Rooksha in action, which can be applied in Vata-Kaphaja disorders effectively.

Keywords: Katigraha, Chinchalavana Pinda Sweda, Arkapatra Pinda Sweda

INTRODUCTION

Ayurveda is an eternal science which serves the mankind in curing the disease as well as maintaining health of the healthy being. Panchakarma is not merely a Shodhana therapy as it is understood, but also has a wider range of therapeutic effects such as Brimhana, Lekhana, Stambhana, Rasayana and Vrishya. For establishing the equilibrium of Doshas, one stream of approach concentrates on the

elimination of excited Doshas from the body which is nothing but Shodhana Chikitsa¹. In Panchakarma, Snehana and Swedana are the procedures coming under Poorvakarma as well as Pradhanakarma for the treatment of many diseases. Acharya Charaka has included Swedanakarma under Shadupakrama, where it is described as the principal method of treatment², and it alleviates Vata, Kapha and Vata-Kaphaja disorders^{3,4}. Swedana helps in expelling out sweat from the body by liquifying Dosha which spreads throughout. In the classical texts available, Pinda Sweda or Pottali Sweda is included under Sankara Sweda⁵ or Ushma Sweda⁶. Based on Guna of Dravyas used, Chinchalavana Sweda⁷ and Arkapatra Sweda are Snigdha-Rooksha in action, which can be applied in Vata-Kaphaja disorders effectively.

Katigraha is one among the Nanatmaja Vatavikara and also found as a symptom in different diseases. Due to Nidanasevana Vata gets aggravated, Shuddha and Saama Vata enters to Katipradesha producing symptoms like Ruja and Graha. In modern view, low back ache is the most common chronic pain disorder which is characterized by dull or sharp pain in the lower back along with stiffness which restricts the activity, reduces work capacity, quantity of enjoyment of everyday living and turns daily life into a misery⁸. As per WHO, about 60-80% of the world population experiences low back pain at some point in their lives. The highest prevalence is among people aged 35-60 years⁹.

Katigraha is a disease with wide range of treatment options mentioned in different textbooks which are not yet explored. Chinchalavana Sweda is already seen in folklore practices of different areas, even though no study was done previously for finding out its effect in Katigraha. By considering the factors like availability of the drug, storage facility, preparation of the medicine required for the procedure, effect of the drug and to validate a new modality of standardized treatment, a comparative study on effect of Chinchalavana Sweda and Arkapatra Sweda in the management of Katigraha is preferred.

MATERIALS AND METHODOLOGY

Objectives of the study:

- PRIMARY - To evaluate the effect of Chinchalavana Pinda Sweda in Katigraha.
- SECONDARY - To compare the effect of Chinchalavana Pinda Sweda against Arkapatra Pinda Sweda in the management of Katigraha.

Study design: A comparative clinical study.

Study setting:

Institution- MVRAMC, Parassinikadavu; Study Period- 18 months; Procedure duration- 7 days;

Follow up- 15th day after treatment.

Study population:

Participants will be selected from OPD and IPD of MVRAMC, Parassinikadavu during the year 2021-2023 within the age group 20-70 years satisfying inclusion and exclusion criteria.

Selection criteria:

Diagnostic criteria:

- Classical Lakshana of Katigraha such as Ruja and Graha in the Katipradesha.

Inclusion criteria:

- Participants satisfying diagnostic criteria from both genders.
- Participants who are Sweda Arha.
- Within the age group 20-70 years.

Exclusion criteria:

- Sweda Anarha.
- Uncontrolled Diabetes mellitus and Hypertension.
- Severe systemic illnesses that interfere the line of treatment.
- History of Carcinoma, Tuberculosis and Traumatic condition of spine.

Sample size:

Sample size formulae

$$n = \frac{(Z_{\alpha} + Z_{\beta})^2 2S^2}{d^2}$$

where Z_{α} = The standard normal variate for TYPE 1 error = 1.96

Z_{β} = The standard normal variate for TYPE 2 error = 0.84

S = Pooled variance = 0.45

d = Effect size = 0.5

$$\text{Therefore, } n = \frac{(Z_{\alpha} + Z_{\beta})^2 2S^2}{d^2} = \frac{(1.96 + 0.84)^2 \times 2 \times (0.45)^2}{(0.5)^2} = \frac{3.1752}{0.25} = 12.7$$

So, total 26 participants (13 in each group) are needed for this study.

Sampling method:

Simple random sampling with alternate allocation irrespective of sex.

Intervention:

Materials

1.Group A- Chinchalavana Sweda:

100gm of seedless Chinchala fruit pulp is mixed with 50ml of Erandataila, made into thin round shape and placed on lumbar area. Samudra Lavana (100g × 2 pottali) is wrapped in a cloth (threads should be loose preferably) and is made into small Pottali. It is heated and placed over the fruit pulp, replaced with another heated Pottali when heat is lost till half an hour.

2.Group B- Arkapatra Sweda:

15 to 18 number of fresh Arkapatras are well cleaned and kept side by side without leaving any gap on kora cloth of 25 inches length × 5 inches breadth and then cloth with leaves is rolled together and tied from the base with tag of 16 inches length. It is heated and placed over the Katipradesha with mild pressure and uniform temperature throughout the procedure.

POORVAKARMA:

- Sambhara Sangraha (collection of the materials required).
- Preparation of the Pottali.
- Athura Pariksha (participant's health condition and status of the disease should be evaluated before the treatment).
- Participant should be seated on the Droni, should lie in a comfortable prone position exposing the affected area.

PRADHANAKARMA:

1.Chinchalavana Sweda

Prepared Lavana Pottali is heated with the help of an iron pan and Swedana is done over the affected area by just tapping over the Chinchaphala pasted over Katipradesha. Temperature should be maintained throughout the procedure.

2.Arkapatra Sweda

Prepared Arkapatra bundle are cut from the base and are heated on a hot pan with Ghritha and Saindhava Lavana, then hot leaves are tapped on Katipradesha. Once the temperature of the leaves is lost, again they are cut, heated and tapped. This procedure is to be repeated till Samyak Swinna Lakshanas are seen.

PASCHATHKARMA:

- After the completion of procedure, participant's body should be wiped with clean towel and asked to rest for 20-30 minutes.
- If the participant suffers with any difficulty or is not co-operating during the procedure will be withdrawn from the study.

DOSAGE FORM-

1.Chinchalavana Sweda

- Chinchaphala (*Tamarindus indicus*) used per day- 100gm
- Erandataila (Castor oil)- 50ml
- Samudra Lavana (Sea salt)- 100gm × 2 pottali

2.Arkapatra Sweda

- Arkapatra (*Calotropis procera*) used for a Pottali- 15 to 18 leaves
- Ghritha (Cow ghee)- 25ml
- Saindhava Lavana (Rock salt)-10gm

Mode of administration: Bahya (External)

Treatment period: Done for 7 days, 30 minutes daily or till Samyak Swinna Lakshanas.

Follow up: On 15th day after the treatment.

Assessment criteria:

Assessment of the results will be done on the basis of signs and symptoms. The parameters will be assessed one day prior to the treatment, after the treatment and on the 15th day using different scoring systems assigned.

Subjective criteria:

- Graha (stiffness)
- Triakashoola (pain)

Objective criteria:

- Walking time
- Range of movement- Lumbar Spine (lateral flexion, lumbar flexion, lumbar extension, rotation)

Assessment of Subjective parameters:

1.RUJA (pain): Grading of Ruja will be given on the basis of visual and analogue scale (VAS) of 10cm. The participant is asked to mark against the number corresponding to how he/she feels the pain at the moment.

- Grade 0- No pain (scale reading- 0)
- Grade 1- Trivial pain (scale reading- 1)
- Grade 2- Mild pain (scale reading 2-4)
- Grade 3- Moderate pain (scale reading 5-7)
- Grade 4- Severe pain (scale reading 8-10)

2.GRAHA (stiffness):

- Grade 0- No stiffness
- Grade 1- Sometimes for 5-10 minutes
- Grade 2- Daily for 10-30 minutes
- Grade 3- Daily for 30-60 minutes
- Grade 4- daily more than 1 hour

Assessment of Objective parameters:

1.WALKING TIME:

Time taken to walk 20 meters in a straight way in medium speed

- Grade 0- Up to 20 seconds

- Grade 1- 21 to 30 seconds
- Grade 2- 31 to 40 seconds
- Grade 3- 41 to 50 seconds
- Grade 4- 51 to 60 seconds
- Grade 5- More than 60 seconds

2.RANGE OF MOVEMENTS:

The participant's range of motion will be recorded from forward flexion, extension, lateral flexion and lateral rotation.

LUMBAR FLEXION

- Grade 0- 80 to 89 degrees
- Grade 1- 70 to 79 degrees
- Grade 2- 60 to 69 degrees
- Grade 3- 50 to 59 degrees

LUMBAR EXTENSION

- Grade 0- 20 to 29 degrees
- Grade 1- 10 to 19 degrees
- Grade 2- 0 to 9 degrees

RIGHT LATERAL FLEXION

- Grade 0- 20 to 29 degrees
- Grade 1- 10 to 19 degrees
- Grade 2- 0 to 9 degrees

LEFT LATERAL FLEXION

- Grade 0- 20 to 29 degrees
- Grade 1- 10 to 19 degrees
- Grade 2- 0 to 9 degrees



RIGHT LATERAL ROTATION

- Grade 0- 30 to 39 degrees
- Grade 1- 20 to 29 degrees
- Grade 2- 10 to 19 degrees
- Grade 3- 0 to 9 degrees

LEFT LATERAL ROTATION

- Grade 0- 30 to 39 degrees
- Grade 1- 20 to 29 degrees
- Grade 2- 10 to 19 degrees
- Grade 3- 0 to 9 degrees

Data collection:

Primary data for the study will be collected from the OPD and IPD in MVRAMC, Parassinikadavu by direct observation, orally and using clinical case proforma irrespective of sex.

STATISTICAL ANALYSIS

All the data were tabulated and statistical analysis was done with the following statistical tests using the SPSS 20.0 version software. The test effect of the therapy was analyzed using Wilcoxon signed rank test.

RESULTS

DATA RELATED TO CHANGES IN ASSESSMENT PARAMETERS-AFTER TREATMENT (AT) AND AFTER FOLLOW UP (FU)

Table 1- Changes in assessment parameters-After treatment and follow up-GROUP A

Assessment parameters	Percentage of Relief in GROUP A	
	AT	FU
Ruk	100%	100%
Graha	100%	100%
Walking time	91.77%	95%
Lumbar flexion	86.63%	90%
Lumbar extension	81%	86%
Right lateral flexion	100%	100%

Left lateral flexion	100%	100%
Right lateral rotation	83.85%	90%
Left lateral rotation	83.85%	89%

Fig 1- Distribution of subjects based on the Changes in assessment parameters-After treatment and follow up-GROUP A

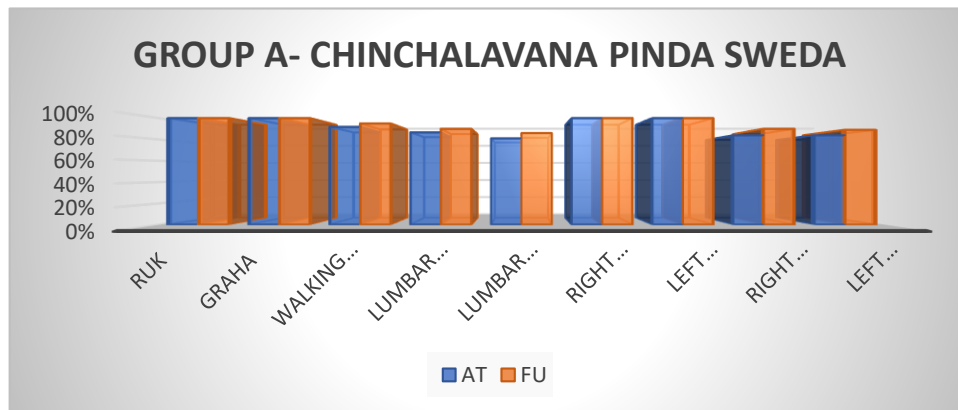
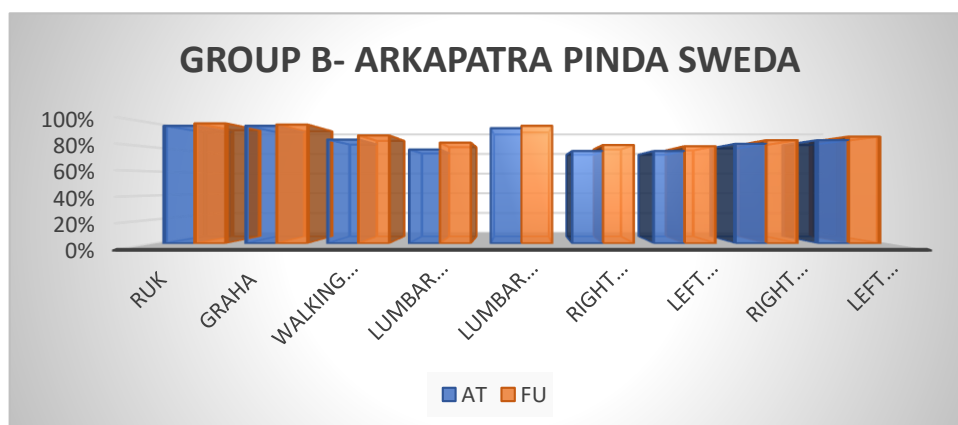


Table 2 - Changes in assessment parameters-After treatment and follow up-GROUP B

Assessment parameters	Percentage of Relief in GROUP B	
	AT	FU
Ruk	97.95%	100%
Graha	97.87%	99%
Walking time	86.5%	90%
Lumbar flexion	78.24%	84%
Lumbar extension	96%	98%
Right lateral flexion	77%	82%
Left lateral flexion	77%	81%
Right lateral rotation	82.99%	86%
Left lateral rotation	85.87%	89%

Fig 2- Distribution of subjects based on the Changes in assessment parameters-After treatment and follow up-GROUP B

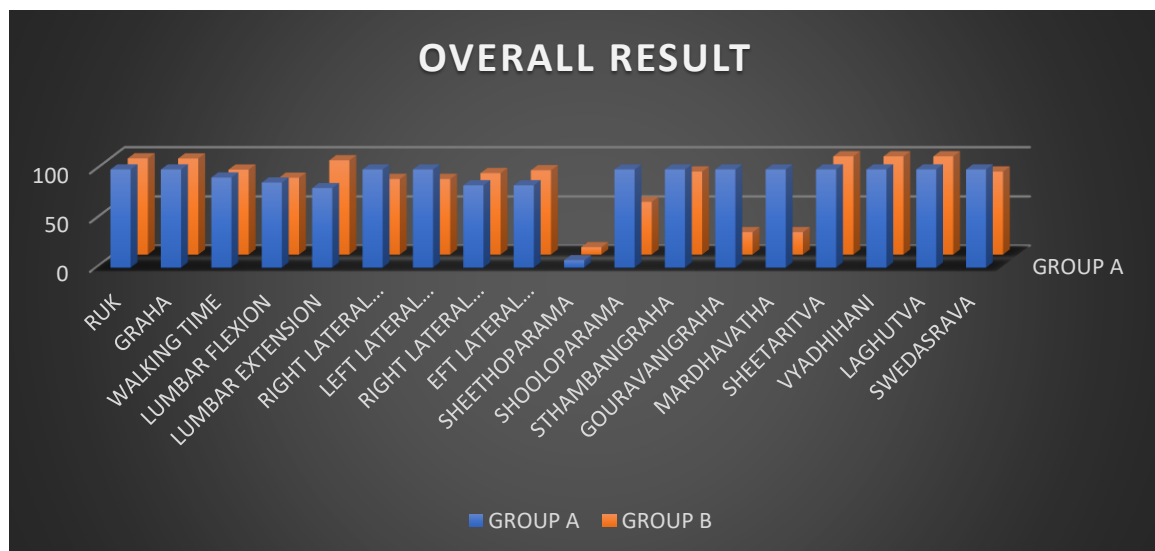


DATA RELATED TO OVERALL ASSESSMENT OF TREATMENT

Table 3- Overall result of the treatment in percentage

S. No	SYMPTOMS	GROUP A	GROUP B
1.	RUK	100%	97.95%
2.	GRAHA	100%	97.87%
3.	WALKING TIME	91.77%	86.5%
4.	LUMBAR FLEXION	86.63%	78.24%
5.	LUMBAR EXTENSION	81%	96%
6.	RIGHT LATERAL FLEXION	100%	77%
7.	LEFT LATERAL FLEXION	100%	77%
8.	RIGHT LATERAL ROTATION	83.85%	82.99%
9.	LEFT LATERAL ROTATION	83.85%	85.87%
10.	SHEETHOPARAMA	7.7%	7.7%
11.	SHOOLOPARAMA	100%	53.8%
12.	STHAMBANIGRAHA	100%	84.6%
13.	GOURAVANIGRAHA	100%	23%
14.	MARDHAVATHA	100%	23%
15.	SHEETARITVA	100%	100%
16.	VYADHIHANI	100%	100%
17.	LAGHUTVA	100%	100%
18.	SWEDASRAVA	100%	84.6%

Fig 3- Distribution of subjects based on the Overall result of treatment in percentage



DISCUSSION

The result of Wilcoxon signed rank test indicates that both the groups are statistically significant with p Value < 0.025 (Bonferroni Correction) during the treatments, but while comparing the mean difference Group A having higher mean difference than Group B during, AT and FU, indicates that Group A have better effect than Group B. Subjects of Katigraha treated with Chinchalavana Pinda Sweda got 100% relief in pain which was statistically highly significant. After stopping the treatment and after the follow up of 14 days, this relief continued.

Chinchalavana Pinda Sweda showed fast relief in pain and stiffness than Arkapatra Pinda Sweda. Subjects experienced relief from symptoms on the 2nd day of Chinchalavana Pinda Sweda. Arkapatra Pinda Sweda provided relief from pain only after 4-5 days of treatment and symptoms recurred for few subjects after follow up period.

PROBABLE MODE OF ACTION

Sour taste of *Tamarindus indicus* L. and salt taste are basically Vatahara (alleviating Vata). According to Bhavaprakasha, Chinch (Tamarindus indicus L.) is having Madhura Rasa, Guru Guna, Ushna Virya, Amla Vipaka, Kapha-Vatahara and Deepana properties, possibly the cause for reducing the ache, pain and numbness¹⁰. Anti-inflammatory activity of *Tamarindus indicus* is also scientifically proved. According to Vagbhata, Lavana (salt) is used externally due to its Sookshma, Ushna and Vyavayi Guna, and is Kapha-Vatahara and Srothoshodhana in nature. Srothoshodhana and Kapha-Vatahara property of Lavana helps in removing the obstruction and clearing the channels of our body.

Ruja is the cardinal symptom of Vata. In Katigraha, Vata is found to get vitiated with Kapha or Ama. Sweda by its Ushna Guna acts against the Sheeta Guna of both Vata and Kapha. Chinch, Moorchita Eranda Taila and Samudra Lavana are used in Group A and Arkapatra, Ghritha and Saindhava is used in Group B, both combinations have Vata-Kaphahara property.

Graha is the resultant of Kapha or Ama dosha and Rooksha Sweda is aimed at the same. More over in this study the drugs used are having Ushna, Sookshma and Teekshna Gunas which helps to reduce the Kapha hence produced better relief in Graha.

Swedana may help in relieving muscle spasm and contribute in easing the lumbar movements along with the Swedanakarma which is having Vata-Kaphahara property. Swedanakarma relieves cold, pain, stiffness and heaviness of the body, brings softness and smoothness to the body, produce adequate sweating and remission of disease occurs by virtue of which improve the quality of life.

CONCLUSION

Wilcoxon signed rank test shows that both the groups are statistically significant with p Value < 0.025 (Bonferroni Correction) during the treatments, but while comparing the mean difference Group A having higher mean difference than Group B during, AT and FU, indicates that Group A have better effect than Group B. Statistically no significant difference was there between the two groups in the subjective and objective parameters. Majority of the patients showed good response to the treatment. Clinically both the treatments had effect on relieving signs and symptoms of Katigraha. Chinchalavana Pinda Sweda showed quick relief in pain and stiffness than Arkapatra Pinda Sweda. The recurrence of symptoms was more in Arkapatra Pinda Sweda after follow up period. So, it can be concluded that even both the pinda sweda can be adopted in Katigraha, Chinchalavana pinda sweda showed better effect than Arkapatra pinda sweda.

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