

# Clinical Study of Arohana Matra Basti in Kevala Vataja Katigraha Vis-A- Vis Lumbar Spondylosis

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**Abstract**— Low back pain has been roaring complaint in all age groups recently with changing lifestyle and food habits. As this is a booming problem of present era, finding a satisfactory and permanent treatment for this problem has become necessary. One of the forms of low back pain is Lumbar spondylosis. Lumbar spondylosis is a degenerative condition but, this has been seen in smaller age group too in this study. Matra basti is a type of sneha basti which gives very good results in vata vyadhi. Arohana matra basti reference from Sharangadhara samhita is evaluated for its efficacy in Kevalavataja kati graha a vata vyadhi. In this study it was found that kaniyasi dose form of Arohana matra basti which was taken up for the study was very effective and showed significant improvement in all parameters.

**Keywords**— Kevala vataja katigraha, Arohana matra basti, Lumbar spondylosis.

## I. INTRODUCTION

Due to the professional and social life, improper sitting posture in offices, factories, continuous and over exertion, jolting movements during travelling etc. causes an undue pressure over the musculo-skeletal system. These contributes to the manifestation of diseases like low back ache, sciatica etc. Low back pain affects approximately 60.85% of adults during some point of their life time and 10% of this is because of lumbar spondylosis. Approximately 84% of men and 28% of women aged 55-64 yrs have lumbar osteophytes. Lumbar spondylosis can begin in persons as young as 20 yrs or since childhood.<sup>1</sup> Lumbar spondylosis is a degenerative condition affecting the discs, vertebral bodies and/or associated joints of lumbar spine. Lumbar spondylosis has symptoms like pain in low back and stiffness, Inability to twist or turn. Deformity or abnormality of spine curvature in chronicity. Description of similar condition with same etiological factors and pathogenesis is available in Ayurveda classics also.

Though Kati Graha has not been described as a separate disease entity by any text except *Gadani-graha*, it has been categorized under Vataja Nanatmaja Vyadhi in Charaka Samhita as Prishtha Graha. As correctly said by Sushruta Acharya without vitiation of Vata, Shoola (pain) cannot be produced. So prime Importance should be given to Vata-dosha while considering the management of the disease.

Katigraha characterized by pain and restricted movements of the Kati. As mentioned in *Gadani-graha* and *Bhavaprakasha*, Katigraha can be manifested in two ways – Kevala Vataja and Samaja.

Matrabasti is a variety of Sneha Basti, specially indicated in diseases of Kevala vata. Many institutions and private practitioners have been practicing matrabasti in standard dose of 1 ½ pala as per Charaka, with good effect. As per Sharangadhara Samhita, Adhamalla commentary matrabasti is given in increasing dose for 9 days.<sup>2</sup> This reference of Sharangadhara which is not in much practice is evaluated for its effectiveness. And keeping in mind the high prevalence,

rate of disability in productive span of life, intensity of symptoms of disease, lack of current effective treatment, this study is taken up.

## II. METHODS

### Source

1. Patients of either sex who fulfill the inclusion criteria will be randomly selected from OPD and IPD of Muniyal Institute of Ayurveda Medical Sciences and Hospital, Manipal and also from referral sources and special camps conducted for the purpose.
2. Puttur Govt Hospital, Ayush Department.

### Inclusion criteria:

- Patients having the classical lakshanas of Kevala vataja Katigraha will be selected.
- Patients of both genders who are Basti yogya according to Ayurveda classics irrespective of chronicity, occupation and socio-economic status.
- Patients in between 20 years and 60 years of age will be selected.

### Exclusion criteria:

- Sama Katigraha
- Patients who are Basti ayogyaa according to Ayurveda classics.
- All those major systemic diseases which interfere with the clinical study are excluded.
- Patients having spinal tumor, malignant diseases of pelvis, TB of vertebral bodies, RA etc will be excluded.

### Study Design

Single blind randomized clinical study.

### Interventions

30 patients of Kevala vataja Katigraha will be selected randomly and minimum 15 patients will be taken for this study. Patients will be administered with Arohana Matra Basti with Balataila after food

1st day-48ml,  
2nd day-60ml,  
3rd day-72ml,  
4th day-84ml,  
5th day-96ml,  
6th day-108ml,  
7th day-120ml,  
8th day-132ml,  
9th day-144ml.  
Follow Up-16thday and 22nd day

**Assessment Criteria and Scoring:** The assessment will be done on the basis of following Subjective parameters and Objective parameters.

**Subjective parameters:**

**Kati ruja (Pain)**-Pain scale by Karen Lee Richards, chronic pain connection expert.

Table 1. Kati ruja

|    |  |
|----|--|
| 0  | Pain free  |
| 1  | Mild pain. Pain is barely noticeable, most of the time you don't think about it.   |
| 2  | Minor pain. Annoying and may have occasional strong twigs.   |
| 3  | Pain noticeable and distracting, however you can get used to it and get adapted  |
| 4  | Moderate pain. Pain can be ignored for a period of time, but is still distracting  |
| 5  | Moderately strong pain.Pain can't be ignored for more than a few minutes, but with effort can still manage to work.          |
| 6  | Pain that interferes with normal daily activities. Difficulty concentrating.   |
| 7  | Strong pain that dominates your senses and significantly limits your ability to perform daily activity, interfere with sleep |
| 8  | Intense pain. Physical activity is severely limited conversing requires great effort.  |
| 9  | Excruciating pain. Unable to converse. Crying out and/or moving uncontrollably.  |
| 10 | Unspeakable pain, Bedridden and possibly delirious.  |

**Kati graha (Stiffness)**-Normal ranges are-Flexion-90 degree  
Extention-25degree  
Axial rotation-3-18 degree  
Lateral Flexion(right and left)-25 degree  
Range of movement before and after treatment is noted and grading is done.

Table 2. Katigraha

|   |   |
|---|---|
| 0 | no restriction of normal range of movements |
| 1 | restriction in any one movement of above    |
| 2 | restriction in any 2 movements              |
| 3 | restriction in any 3 movements              |
| 4 | restriction in all 4 movements              |

**Tenderness**

Table 3. Tenderness

|   |   |
|---|---|
| 0 | no tenderness   |
| 1 | mild tenderness without any sudden response on pressure |
| 2 | Wincing of face on pressure due to tenderness           |
| 3 | Wincing of face withdrawal of affected part on pressure |
| 4 | Resists touch due to tenderness                         |

**Objective parameters:**

Schober's test  
Visual analogue scale (for pain assessment)

III. DRUG REVIEW

*Collection of Raw Materials*

All the ingredients are collected from Authentic vendor and Approved by DravyaGuna experts from M.I.A.M.S Manipal.

The useful parts and the ratio of the individual ingredients are as per classical reference.

*Effect of Arohana Matra Basti*

| Sympomatology           | Arohanamatrabasti |
|-------------------------|-------------------|
| Pain                    | 89%               |
| Restriction of movement | 93%               |
| Tenderness              | 100%              |
| VAS for Pain            | 89%               |
| Schober's test          | 25%               |

*Overall Effect of Arohana Matra Basti*

| Total Effect        | Percentage | No. of Patients | Percentage |
|---------------------|------------|-----------------|------------|
| Cured               | 100%       | 0               | 0%         |
| Markedly improved   | 76-99%     | 0               | 0%         |
| Moderately improved | 51-75%     | 13              | 86.66%     |
| Little improved     | 26-50%     | 2               | 13.33%     |
| Unchanged           | <25%       | 0               | 0%         |

Effect of treatment on Pain, Restriction of movement, Tenderness, VAS, Schober's test on 22nd day

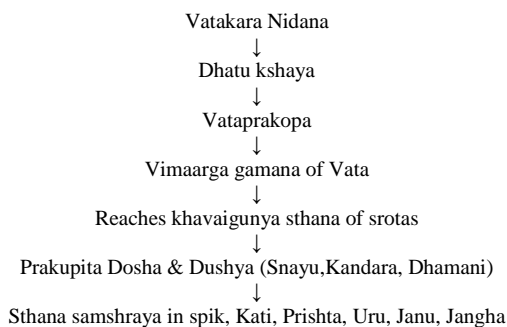
| SYMPTOM                 | MEAN  |                      | SD    |                      | "P" VALUE |
|-------------------------|-------|----------------------|-------|----------------------|-----------|
|                         | BT    | 22 <sup>nd</sup> DAY | BT    | 22 <sup>nd</sup> DAY |           |
| PAIN                    | 4.75  | 0.50                 | 1.612 | 0.52                 | 0.001     |
| RESTRICTION OF MOVEMENT | 1.81  | 0.13                 | 1.17  | 0.35                 | 0.001     |
| TENDERNESS              | 1.13  | 0                    | 0.81  | 0                    | 0.002     |
| VAS FOR PAIN            | 6.81  | 0.69                 | 1.38  | 0.71                 | <0.0001   |
| SHCOBER'S TEST          | 10.69 | 14                   | 0.81  | 0                    | 0.001     |

IV. DISCUSSION

Katigraha is a Vata vikara. As mentioned earlier it is not separately mentioned in Bruhatrayees and mentioning is as a Vataja nanathmaja vikara. So its Nidana, Poorva roopa, Roopa, Upashaya, Samprapti tally's with Vata vikaras. As in this study Kevala vataja is taken into consideration Kaphakara nidana and its Samprapti are skipped. Sannikrushta hetu are: (cha chi 28) (su chi 4, ni 1) (a hru ni 15, chi 21) (ma ni 22) (bha pra ma 24) (yo ra pu)

1. Ativyayama- Excess physical works, running, jogging, walking etc. These affect the joint stability and lead to katigraha.
2. Bharaharana- Excess load and pressure on low back.
3. Abhighata- This can cause structural deformity of the spine.
4. Atisamkshobha- Violent activity like atyadhva, plavana, langhana, balavat vighraha, pradhavana etc. these will alter structural integrity of joints.
5. Marmabhighata
6. VATA KARA AHARA like kashaya, katu, tikta, rooksa, laghu, sheeta ahara and many more viprakrushta karana

Samprapthi goes like-



Here the vitiated vata dosha resides in the Katipradesha causing pain, stiffness and restricted range of movement of back. Here the Shoola is the main presenting symptom which is indicator of involvement of vata dosha. Acharya Charaka explained that due to the intake of Vatakara ahara vihara, Vata vitiation take place. This vitiated Vata get resides into Rikta srotas i.e. Srotas in where Shunyata of Snehadhi guna is present, while commenting on word 'Riktata' Chakrapani says that 'Riktata' means lack of Snehadiguna. When the Vata get reside into the Rikta srotas causes the disease related to that Srotas.<sup>1</sup>

#### Samprapthi gataka

Dosha Vata-Vyana, Apana (vrudhhi), Kapha- Sleshaka (kshaya)

Dushya Dhatu- Rasa, Mamsa, Asthi, Majja Upadhatu- Snayu Agni- Jataragni, Dhatwagni

Udbhava sthana- Pakwashaya

Sanchara sthana- Sarvashareera

Vyaktha sthana- Kati pradesha

Srotas- Asthivaha, rasavaha, pureeshavaha

Roga marga- Madyama

Lumbar spondylosis can begin in persons as young as 20 years. It increases with, and perhaps is an inevitable concomitant of, old age. That is why it appears to be a nonspecific aging phenomenon, also known as spinal arthritis. Patients with lumbar spondylosis have pain in the axial spine. The location of these degenerate changes is not surprising as nociceptive pain generators that were identified within facet joints, intervertebral discs, sacroiliac joints, nerve root dura and myofascial structures. When we see the interventions available in allopathy.

#### Non surgical management

NSAIDS, Opioid medication, Antidepressants, Muscle relaxants (intra-articular injection of local anesthetics with or without steroids), Lumbar Facet joint injections, Taping, Lumbar support with the help of braces.

#### Surgical management

Lumbar fusion (Two vertebrae are fused together and will subsequently act like one solid vertebra), Artificial Disc Replacement (ADR) others Lumbar back support, Patient education, TENS, Massage, Manual therapy, Traction, Exercise therapy, Physical Therapy Management. <sup>2</sup> All these

are symptomatic treatment and this intervention have its own limitations and adverse effects. Thus, importance of Ayurvedic management, which more nuritioning and promising are being noticed and appreciated by public. All Vataja diseases are Shoola pradhana and its site are Sandhis due to Ashraya ashrayi bhava

#### Relation between Vata and Asthi

There is a relation between the Dosha and Dushya because of their Bhauthika constituents, which has been well narrated in Ashtanga hridaya as Ashraya Ashrayi Bhava. Vata is located in Asthi, Pitta in Sweda, Rakta and Kapha in Rasa, Mamsa, Meda, Majja, and Sukhra. It is because of this relation that the drugs or dietics regimens which augment one particular Dosha also have the effect on its dependent Dhatu. But, on contrary to this augmentation of Vata leads to decrease in Asthi and vice versa. In the similar way it is related with Kapha. Kshaya of Kapha will cause increase in the quantum of Vata and vice versa.<sup>3</sup>

As the qualities of both Dosha and Dushya are same intervention that is Sigdha, Ushna, Guru, like Sneha basti give wonderful result.

#### Observations in study

**Nature of work:** This is very important Nidana for the disease manifestation. Here 50% maids or beedi workers both indulge in continuous work and stress is another factor due to daily pay these intend to skip meals for higher pay. Similar Nidana are seen in 40% of population that include coolie and field workers with lot of physical work under sun.

**Social status and education:** About 56.66% had education only till primary school, similarly 56.66% belonged to lower social status maybe due to less education qualification the type of work involve more physical work and stress .

**Dietary habit:** Even though 60% belonged to mixed diet they used to consume meat rarely and usual diet would always be little in quantity dry and spicy with usual diet as ganji.

**Prakruthi:** Maximum belonged to Vata Kapha Prakruthi 46.66% even though by nature they seemed vata Kapha due to Nidana vata dusti had occurred. Prakruthi with Vata pradhanathva make it difficult for disease management.

**Koshta:** 53.33% of patients had krurakoshta some due to prakruthi and many others due to nidanasevana and vatadushti (apana) and 40% had madhyamakoshta due to prakruthi but many had complaint even though it was madhyamakoshta it would be alpa.

**Mode of onset:** More than 50% i.e 53.33% of patients had gradual onset as disease process became chronic the involvement of vatadosha was more leading to more sthambha whereas in those with sudden onset 30% ruk was more sthambha was muscular contraction, pain was purely due to bone degeneration.

**Course of disease:** 50% of sample had progressive increase in disease course than continous. Disease course was intermittent with medication.

**Nidra:** 60% of the sample had disturbed sleep may it be due to prakruthi or due to vata dominance leading to vishamanidra.

**Exercise:** Here exercise is nothing but amount of physical work done. 53.33% of total sample used to do heavy physical work (ativyayama) which is the main nidana for vataprakopa and dhatukshaya.

**Built:** 53.33% of patients had lean built maybe due to prakruthi but mainly due to ativyayama. 43.33% had moderate built as they compensated proper food with work but none were obese.

**Sara:** As most of the patients belong to lower class none had pravarasara. 83.33% had madhyamasara except for some coolie workers who had exhausted themselves with work 16.66% others had mild to moderate decrease in dhatusara.

**Satva:** Most of the patients had madhyamasatva 73.33%. 10% had pravarasatva with determined timely daily activity and dedication to treatment and pathya. 16.66% had avarasatva with fear about their disease crying and intolerance.

**Samhanana:** Maximum of patients had madhyamasamhanana 83.33%

**Sathmya:** Even though many were i.e 66.66% had madhyamasathmya 16.66% each had pravara and avarasathmya

**Abhyavaharana and jaranashakthi:** Due to vishamagni many patient even though felt hungry couldn't digest all or sometimes had no hunger. 60% had proper hunger and 66.66% had proper digestion of ingested food. 30% had pravarashakthi due to good physical work (differentiating hunger and thirst is important)

**Vyayamashakti:** 63.33% had madhyamavyayamashakthi this means they were suffering from mild to moderate dhatukshaya that did not hinder much of their daily work.

**Chronicity:** About 80% of the total sample had complaints since 1-3 years due to chronicity too maximum degeneration may have caused.

**Why matrabasti ?**

*Acharyacharaka* says that *Matrabasti* has no restrictions of *aharavihara*. It can be given in all times and all seasons as it has no *uparada* or complications. The quantity is equivalent to *hrasvamatra of snehapana*. He further adds that such a *basti is balya, sukopacharaya, sukhamshrisht-pureeshakrita, brimhana, vataroganugata*.

*Ashtangasangrahakara* confirming the above statement says that "*sevyasadamadhutailikavatt*" means *Matrabasti* can be used always, just like *madhutailikbasti*.

*Ashtanghridayakara* uses the word '*sukha*' for *matrabasti*, referring to the ease of administration and action. Hemadri commenting on the word '*sukha*' *basti* to be '*vyapadarahita*', that is devoid of complications.

*Arunadatta* commenting on the word "*nishparihara*", explains it as '*aniyantritta*', means there is no restriction of day to day activities while undergoing *matrabasti*.

**Effects of Matra Basti**

1. *Balya*-increase strength of body
2. *Sukhamshrisht-pureeshakrita*-helps in easy evacuation of bowel
3. *Brimhana*-nourishes the *dhatus*
4. *vataroganugata*-cures *vatavyadhi* vagbhata adds

5. *Doshagna*-pacifies the *dosha*

6. *Varnaya*-gives good complexion

Based on absorption of drugs administered via anus and its action on ENS and lipid profile and other tissue and cellular level has been explained thus all these properties along with other stimulatory and local benefits have mesmerizing effect on disease and overall health of patients.

Other aspect to remember is action of drugs in *basti* based on *prabhava*. *Prabhava* cannot be explained and known only with effect seen in patients. *Basti* drugs crossing BBB and showing its effect at CNS with action at ENS is a effect that can be told as one aspect of *prabhava*. Subtle form of drugs used in *taila* and as these are lipid soluble its easy absorption into cellular membrane and its action there in is another aspect. This way many theories have been discovered till today and many yet to be discovered regarding the action *Prabhava*.

*Pakwashaya* being the *udbhavastana* of the disease and also the treatment site led to quick and permanent result.

*Abhyangasweda* was done which led to *mardhava* and *kleda* to increase thus benefiting the *shleshakakapha* and *sleshmadharakala*, *sneha* and *ushnaguna* being opposite to *vataguna* goes *vata shaman* too.

*Sweda* is "*sthambagauravasheethagna*" thus *vatahara*. Both these procedure together help to *kaphadivilayana* and *pranudyante*, this also facilitate easy movement of joints.

*Basti* here as *matrabasti* is *Balya, sukopacharaya, sukhamshrisht-pureeshakrita, brimhana, vataroganugata*. *Basti* action is defined based on drugs used in oil and its quantity.

*Balamoola*

*Rasa*- madhura

*Guna*- guru, snigdha.

*Virya*- sheeta

*Vipaka*- madhura

**Actions:** *Vatapittashamaka, balya, snehana, hridya, raktapittashamaka, shukrala, prajasthapana, mutrala, jwaraghna, ojovardhaka, vatahara*.

Thus best drug of choice in *kevalavata, kroorakoshta, dhatukshaya (ativyayama, laghuruksahbojana, chinta), vriddha, in apanavayudushti* that lead to *sukra, mutra, puresha, vyadhi* this gives best benefits. Its effect till *ojas* will show effect on *manas* and on overall improvement of health of patients.

*Goksheera:*

*Rasa* – Madhura

*Guna* – guru, sheeta, mrudu, snigdha, bahala, prasanna.

*Virya* – shita

*Vipaka* – Madhura

*Prabhava* – Manaskara

*Karma* – *jeevaniya, beneficial in kshathaksnina, rasayana, relieves trishna and shrama, sthanyakara, balya, beneficial in chronic fever, dysuria, bleeding disorders*.

One of the effect is *manaskara*, its other properties are very well known. Even in modern science it's a major source of calcium.

*Tilataila:*

*Rasa:* Madhura

*Anurasa:* Tikta, Kashaya

Guna: Snigdha, Guru, Suksma, Vyavayi, Visada, Sara, Vikasi  
Virya: Ushna  
Vipaka: Madhura  
Karma: Balya, Cakshushya, Dipana, GarbhasayaSodhana,  
Kesya, Medhya, Sandhaniya, Snehana, Stanyajanana,  
Tvakprasada, Vatahara, Vranaropana, Vranasodhana,  
Vrusya.

#### V. CONCLUSION

- This study was designed with a small sample size 15 patients, treatment of katigraha was assessed on 5 parameters.
- Age group ranging from 40-60 had suffered from this disease as pathology was degenerative, surprisingly patients ranging from 20-30 were also seen which is alarming and thus is important to look through the lifestyle and food habits.
- Basti is already given great importance in samhita quoting it as Ardhachikitsa. Kevalavataja Kati graha being one of indications for snehabasti which was implemented with brumhana and vatashamana drugs thus lead to extremely significant results.
- Practically arohana matra basti patients started showing improvement from 5<sup>th</sup> day and during 9<sup>th</sup> day complained of pureeshavruthavata like symptoms(milder form).

- In general statistically significant results were seen, which confirms effect of matrabasti in kevalavatajakatigraha to be very effective.
- Arohana matrabasti can be practiced effectively and other forms of arohanamatrabasti can be evaluated for its significance

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