

# Management of Lumbar Spondylosis with Agnikarm (Heat Burn Therapy) and adjuvant Ayurveda Drugs : An integrative case study.

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## ABSTRACT

### Background

Lumbar Spondylosis is seen as a cascaden of anatomical changes of the spine which lead to more degeneration and change in other spine structures. These changes combine to cause spondylosis and its symptoms.[1]

It affects approximately 60–85% of adults during some point in their lives. The impact of this disorder on quality of life and economic implications are considerable. Regarding management , it includes number of conservative modalities like Transcutaneous electrical nerve stimulation (TENS), Lumbar supports, Traction, Spine manipulation then Injection therapy, Intradiscal nonoperative therapies for discogenic pain and if still it persist surgery is last option.[2]

In Ayurveda it is correlated with Katigat vat , where number of treatment modalities have been described..Which mainly divided according to delivery of medicine i.e. internally like oral medicine or locally like panchakarma such like katibasti or agnikarma.The one common factor regarding treating Lumbar spondylosis either in ayurveda or other pathies, it is clearly seen that we have to deal with pain. For that Agnikarm locally along with internal medicine (which gives strength to bones) is definitely playing key role.

**Methodology-**This is a single case study; a male patient aged 50-year diagnosed with a case of lumbar spondylosis (*Katigat-Vata*) was treated with a combination therapy including Local treatment of *Agnikarma* with modified agnikarma device adjuvant with *Panchatikta ghrith guggul* internally. The subjective parameters (sign & symptoms) were assessed to see the efficacy of treatment. The overall efficacy of the therapy was assessed pre-viewing improvement in clinical manifestation such as pain with walking, local tenderness, restricted joint movements.

**Conclusion-**The observation revealed mild relief in stiffness, moderate improvement in pain and mobility of the spine. This combination treatment was found highly significant in treating Lumbar Spondylosis (*Katigat Vat*). Though, the subject was given treatment for short term, the result was encouraging & patient was relieved with symptoms such as Pain with walking, local tenderness, restricted movements of joints, stiffness significantly. Moreover, further study with large sample size is desirable to establish the treatment.

**Keywords-**Lumbar spondylosis, *Agnikarma*, *Panchatikta Ghrith Guggul*.

## INTRODUCTION

Lumbar spondylosis can be described as degenerative conditions affecting the discs, vertebral bodies, and associated joints of the lumbar vertebrae.(2) It (degeneration of the lumbar spine) generally initiates from the intervertebral disc. At this level progressive biochemical and structural changes take place leading to a modification in the physical properties of elasticity and mechanical resistance.(3) Disc lesions cause pathological changes in the vertebral bodies, where osteophytes appear.(4) The prevalence of Lumbar spondylosis is 13% in the third decade, rising to nearly 85% by age of 70 years in both men and women, ranged from 15% in the fourth decade to 80% in those older

than 60 years. The highest incidence age group is 45 to 65 years.(5) In Allopath Transcutaneous electrical nerve stimulation (TENS), Lumbar supports, Traction, Spine manipulation then Injection therapy, Intradiscal nonoperative therapies NSAIDS steroids and surgery are the line of treatment. However, there remains controversy as to the efficacy of these procedures in resolving chronic low back unresponsive and there is no complete cure for this condition and has many untoward effect such as drugs induced gastritis etc. Similarly surgery itself is destructive to the innocent tissue and hence, there by increases the morbidity. Hence, there is need do explore alternative/Ayurvedic treatment for the holistic management of of Lumbar Spondylosis(*Katigat vat*). Further based on resemblance in clinical features of Lumbar Spondylosis can be correlated with *Katigat Vat*.(6)

Ayurvedic intervention in the early stages of the illness can be highly beneficial and further progression of the illness can be prevented.

The specific treatment mentioned for vitiated *Vata* in Ayurveda includes Panchkarma modalities like *Snehana*, *Swedana*, *Basti* (Systemic and local), *Sthaniklepa*, *Nasya*. Similarly, *Agnikarma* (intentional heat burn therapy) is also practiced treating *Asthigat-Vata* induced by vitiated *Vata* with instant pain management (7). Though, it has been practiced since thousand years, this ancient method of *Agnikarma* consist of limitations like dependency to poor heat source(flame), intermittent heating of *shalaka* (heat delivering probe) and fluctuation of temperature and due risk of iatrogenic burns. Hence, to overcome these limitations, conventional *Agnikarma* device is modified with temperature controlling unit and *Raupya Shalaka* (specially designed silver probe having micro rods ) is used to do *Agnikarma* treatment locally adjuvant to *Panchatikta ghrit guggul*(8) internally, which proved significant in relieving symptoms of *Katigat Vata* such as Pain with walking, local tenderness, restricted movements of joints, stiffness. However, to establish the treatment, further study with large sample size is desirable.

## METHODOLOGY

This is a single case, conducted at D.Y.Patil Ayurvedic Hospital, Nerul, Navi Mumbai.

The patient having MRD NO (156129, 63007) was treated with specific regimen & prognosis was assessed. After proper counseling, the line of treatment was explained & written informed consent was obtained following International conference of Harmonization- Good clinical Practices Guidelines (ICH-GCP).

## Case History

Study in which a 50-year-old male patient, who had apparently been normal four year back, Gradually he noticed pain in the lower back region with difficulty in walking. After few days, pain got aggravated and found difficulty in the walking with severe stiffness. Patient had visited to orthopedic specialist who diagnosed as having Lumbar Spondylosis. He was managed accordingly for a week with allopathic medicine, but didn't get any relief. After that, he visited *Shlaya tantra* - Out Patient Department, for *Ayurvedic* management. Patient was thoroughly examined and detailed history was taken & admitted in *Shalyatantra* Male Ward for management.

## Chief Complaint

The onset of symptoms developed around four year back. However, the symptoms such as Pain in the lower back region, Severe stiffness in the lower back region and difficulty in lateral movements, Pain in lumbar region with difficulty in walking got aggravated since one & half month.

## H/O past Illness

No History of similar episode, No H/O major illness, No H/O Allergy, No H/O any surgery.

**Family History**

All the family members are said to be healthy & no hereditary link noted.

**Personal History**

Diet: Non- vegetarian, preferred spicy food, Time and Frequency of intake: Regular,  
Appetite: Good, Thirst- Adequate  
Sleep: normal,  
Addiction: no specific addiction, Micturition 3-4 times per day,  
Bowel: Irregular, occasional constipation.

**General Examination**

Pallor–Absent,Icterus–Absent,Clubbing–Absent,Cyanosis– Absent, Edema – Absent, Lymphadenopathy –Absent  
Vitals -Pulse – 84/min, Respiratory Rate – 18/min, B.P. – 120/80 mm of Hg.

**Systemic examination**

Locomotor system

Inspection- Curvature of Spine – NAD,No visible Injury, mass and scar mark. Palpation- LocalTemperature-SlightlyraisedTenderness-Inl- 3 to I-4, Lumbar and SacralRegion.Tingling Sensation-mild lower limb.

**Movements**

Lumbar : Lateral Movements -Restricted Backward bending – Painful, Complete, Forward bending – Painful , Complete

**Test**

SLR Test – 90 dgress

**Radiographic investigations**

Xray Lumbosacral Spine –Degenerative changes at L3 & L4 vertebral body.Degenrative Osteophytes noted at L3 & L4 region.

**Investigations**

The investigations had the following findings. Blood Hb 12.1 g/dl, ESR 10 mm/1hr, TC 9,100. DC: N 70%, L 20%, E 2%, B00%. Fasting blood sugar 102 mg/dl, Post prandial blood sugar 133 mg/dl, .Routine Hematological, Urine and Radiographic investigations were carried out.

**Diagnosis**

Patient was diagnosed as case of *Katgat Vata* (lumbar Spondylosis).

## Treatment plan

### ***Agnikarma Chikitsa***

The specially designed *kurchak* (brush) type of *RaupyaShalaka*. which helps in minimizing the pain (as heat is delivered once at desire site). This device helps in keeping the temperature constant (60° C) throughout the procedure and require single sitting. To deliver the desired heat burn, device is switched on and the probe is kept in contact for 10seconds at affected site.(8) ) So after detailed assessment, subject was diagnosed with lumbar Spondylosis mainly given *Agnikarma* treatment locally( 2times with 15 days of interval) with the help of modified *Agnikarma* device adjuvant to *Panchatikta ghris guggul*(8) internally for 30 days.

### ***Purvakarma*(Pre-procedure):**

Patient was made aware of the procedure by explaining him and written/ inform consent was taken from the patient prior treatment. After taking the consent patient is allowed to take prone position comfortably and the most tender point at lumbar region was marked with the marker. Prior starting treatment the Modified *Agnikarma* device (temperature controlling unit with probe) checked for electric connection and kept ready. Then the desired site where *Agnikarma* is to be done was properly cleaned with distilled water and allowed to dry.

### ***Pradhankarma*(Main procedure):**

After cleaning the site, the temperature is set on 60 degree Celsius, and then with the help of probe(*kurchak* type of *raupyashalaka*)the *Agnikarma* is performed on most tender site as marked and *bindu*(dot) type of grade 2 heat burn is delivered, till it produces *Samyak-Dagdhavrana* *rahit Agnikarma* (adequate heat burns without scar) The *shalaka* is kept in contact of skin for duration of 10 seconds. This is done only once as the *shalaka* consist of multiple micro rods to obtain desired effect of *Agnikarma*.

### ***Paschat karma* (Post procedure):**

After the adequate *Agnikarma* procedure, *Yastimadhughris* (medicated clarified butter) was applied at the site of *Agnikarma* for relieving post burn pain and discomfort. This also promotes healing of post burn wound. As the probe is kept in contact with skin only for 10sec (at 60degree Celsius) post burn scar do not occur. Hence, this procedure can be named as *Daghdavrana* *rahit Agnikarma*

**Agnikarma** treatment was given locally for 2 times with 15 days of interval  
**Shamana chiktisa**



**Palliative treatment was given as below:**

*Pachatikta ghrít Guggulu* - (250 mg) 4 tablets three times a day,

**Assessment Criteria & Observations**

**Table 1: Gradation parameters of the study**

Parameters	Gradation			
	0	1-3	4-7	8-10
<b>Pain</b>	No pain	Mild pain	Moderate pain	Severe pain
<b>Stiffness</b>	No stiffness	Almost 30 min. Occasionally present	After long sitting and walking, Almost 30 min	Whole day and night
<b>Flexion</b>	Rarely	Occasionally -	Frequently	Almost constant
<b>Extension</b>	Rarely	Occasionally -	Frequently	Almost constant
<b>Lateral movement</b>	Rarely	Occasionally -	Frequently	Almost constant
<b>Tingling- numbness</b>	Absent	Occasionally	Up to 1 hr	Up to 2 hr
<b>Pain with walking</b>		Occasionally while walking	Moderate pain while walking	Severe pain while walking

## OBSERVATION

Assessment of Overall Effect of Therapy

Table 2: Effect of Therapy

Symptoms	Follow-up Assessment			
	Day-1	DAY -7	Day -15	Day -30
Stiffness	3	2	2	1
Flexion of spine	3	2	2	1
Extension of spine	3	2	2	1
Lateral movment	3	2	2	1
Tingling Sensation	2	1	1	1
Pain while walking	3	2	1	0

## RESULT

Based on prognosis, Observed Parameters such as Pain with walking which was Grade III at Day 1 (Initial day), was relieved to mild/ Grade (I) at Day 15 & complete relief on Day30. For Tingling sensation , it was grade III at Day 1<sup>st</sup> and relived to grade I at 30 day.

. Also the parameters such as movements spine like flexion ,extension & lateral movemet, &stiffness which were Grade III at Day 1 (Initial day), were relieved to moderate/ Grade II at day 15 & mild relieve that is Grade I at Day 30. This proves the combination treatment (*Agnikarma & Shamana chikitsa*) is effective in the managementof *Katigata vata* with special reference to Lumbar Spondylosis.

## DISCUSSION

In Present single case study, a patient with chief complaint such as pain in lower back region,severe stiffness in the lower back region & unable to do lateral movements, difficulty in walking who was diagnosed with *Katigata Vata* (Lumbar Spondylosis) was taken for the study. The established treatment includes steroids & analgesics along with Surgery having limited prognosis. In this study, a combination therapy was given to the patient & found efficacious in releiving symptoms.

*Agnikarma* with modified *Agnikarma* Device 2 times with 15 days interval adjuvant to *Panchtikta ghrta Guggul* internally for 30 days was given to this patient. This treatment proved significant in relieving symptoms such as pain with walking, local tenderness, restricted movements of joints & stiffness of Lumbar Spondylosis.

*Agnikaram* is established and practiced since many years. As Ancient conventional method of *Agnikarma* consist of limitation like variable heat source (flame, spirit lamp), intermittent multiple heating *shalaka* which is also time consuming, fluctuation in temperature resulting in inadequate and variable heat delivery and also have due risk of iatrogenic burn which leads in bad prognosis as do not give desire result to patients. Hence, the *Agnikarma* device is modified which consist of temperature controlling unit with specially designed *Raupya shalaka* resembling *trikurchak shastra*.(9)

### Probable mode of action

*Agnikarma* therapy-Mechanism and action of *Agnikarma* can be understood with the help of afferent spinothalamic tract. In this the ascending neurons are the pathway for conduction of Pain (lateral spinothalalmic tract- Aδ& C Fibres), Pressure (ventral spinothalamic tract – Ruffiniendings),

Temperature (lateral spino-thalamic tract). When perception of pressure and temperature factor is increased, pain perception is reduced which helps us to understand the role of *Agnikarma* relief of pain. Moreover, another hypothesis suggests that the released heat could have caused irritation on the superficial sensory nerve endings thereby relieving pain from the concept of „counter irritation“. It has also been suggested that pain may be possibly caused as a result of the accumulation of metabolic waste products in the tissues, and an increased flow of blood (vasodilatation due to heat) in the region is the possible mechanism that is responsible to remove these substances and relieve pain. Another possibility is that the pain releasing mechanism is associated with muscle relaxation(10)(11).

#### .Panchatikta ghrith Guggulu

The ingredients of *Panchatikta –ghrit Guggulu*(12) are of Tikta Rasa which is having predominance of *Vayu & Akasha Mahabhuta*. Hence, it has got resemblance towards body elements like *Asthi* (bone tissue). Further Tikta drugs having adoptogenicity, proves *Vataghna & Rasayana* (Dhatuvaradhaka) & improves *dhatwagni* (metabolic fire). It performs Pachana karma, destroys *srotorodha* (channel obstruction) leading to pacify vata dosha & improve metabolism. *Panchatikta Ghrith Guggulu* is proved one of the best ***Vataghna, Shoolaghna, Rasayan*** combination that acts in both types of *Katigata Vata* viz. *Dhatukshayajanya* and *Margavarodhajanya*

## CONCLUSION

In this combination of *Agnikarma* (with modified *Agnikarma* Device) & *shaman chikitsa, Panchatikta ghrith Guggulu* internally provided significant results in Lumbar Spondylosis. Mild relief found in stiffness, moderate improvement in pain & mobility of spine, marked improvement in lumbar movements were observed. In fact, the symptoms of patient like Stiffness, pain and mobility of the spine movements were relieved with this unique Ayurvedic treatment. Hence, it can be effectively used in management of Lumbar Spondylosis. However, to entrenched this treatment, It is required to study & to evaluate significance of this regimen by further study taking large sample size..

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