

A COMPARATIVE CLINICAL STUDY ON THE EFFECT OF ASHTAVARGAM KASHAYA AND GANDHARVAHASTHADI KASHAYA IN THE MANAGEMENT OF KATIGRAHA w.s.r. TO LUMBAR SPONDYLOSIS

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<https://doi.org/10.46607/iamj0208082020>

(Published online: August 2020)

Open Access

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Article Received: 10/07/2020 - Peer Reviewed: 01/08/2020 - Accepted for Publication: 03/08/2020



ABSTRACT

Katigraha is a condition in which the vitiated *Vata* is localizing in the *Katipradesha* and producing stiffness and pain. These symptoms are similar to Lumbar Spondylosis. The degenerative changes due to aging or trauma, changing in lifestyle & work pattern, unhealthy food habits causing nutritional deficit etc., are causing *Dhatukshaya* and *Margavarodha*. Here *Ashtavarga* & *Gandharvahasthadi Kashayas* are taken to evaluate the effect on *Katigraha*. Totally 40 patients of *Katigraha* were selected, divided in to two groups equally. Group A treated with *Ashtavargamkashaya* and Group B treated with *Gandharvahasthadi Kashaya* for 30 days. In group A, 55% patients got moderate improvement and 40% patients with mild improvement in group B, 5% got moderate improvement and 60% got mild improvement. It is concluded that in general statistically significant results were seen in both the groups. *AshtavargamKashaya* showed better efficacy than *Gandharvahasthadikashaya*.

Keywords: *Katigraha*, *Ashtavargamkashaya*, *Gandharvahasthadikashaya*, Lumbar Spondylosis

INTRODUCTION

Vatavyadhi is the most prevailing health issues in our regular clinical practice and *Katigraha* is the most

common disorder among them due to vitiation or aggravation of *Vata* alone or along with *Ama* settles in

Katiparadesha. It is producing symptoms such as pain and stiffness in the low back region¹. An independent disease as *Katigraha* is described in *Gadanigraha*, *Sarangadarasamhitha* and *Bhavaprakasha* “*Vayu: Katyasrita: sudhahasamova janayethrujam Katigraha: Sa Vigneya:*” *Shodala* has explained it under *Vatavyadhi*. The symptoms of *Katigraha* are identical to *Lumbar Spondylosis* (L.S). It is a degenerative condition affecting the discs, vertebral bodies and/or associated joints of lumbar spine². It is the most common musculo-skeletal disorder in the world. Studies have found that 60 -85% of people around the globe are affected with Low back pain (LBP) during their lives³. LS is responsible for about 10% of all the back-pain conditions. The advancement of busy professional and social life, improper sitting postures in working place, continuous and over exertion, jerking movements during travelling etc. are the main causes of the disease. Modern medical science has Analgesics, Anti-inflammatory agents, Corticosteroids, Muscle relaxants, Calcium and Vitamin D supplements, Lumbar Belt, Traction, and Physiotherapy to offer. But these drugs have obvious side effects like nephrotoxicity and hepatotoxicity on chronic usage which limits their use for long period. Further progressive worsening of symptoms may result in Lumbar Canal Stenosis, which needs surgical intervention. This opens an opportunity to try Ayurvedic medicine that has Analgesic, Anti-inflammatory, Muscle relaxant action without any side effects along with ‘*Dhatuposhan*’ capacity; hence an alternative treatment module which is cost effective, safe and affordable is developed by taking certain Ayurvedic medicine in lumbar spondylosis. So, here an attempt has been made to evaluate *AshtavargamKashaya* and *Gandharvahasthadi-kashaya* mentioned in *Sahasrayoga*⁴ on *Katigraha*.

Materials & Methods

Plan of Study: -

The study conducted from November 2019 to December 2019 by enrolling 40 patients who were fulfilling the inclusion criteria, from OPD & IPD of Muniyal institute of Ayurveda Medical Sciences, Manipal, and also from referral sources and special camps conducted for the purpose.

Inclusion Criteria

1. Clinically diagnosed cases of *Katigraha* (lumbar spondylosis) were taken for the study.
2. Patient of age group-30 to 60 years (irrespective of sex)
3. Chronicity less than 5years

Exclusion criteria

1. Patients of age less than 30 and above 60 yrs.
2. Chronicity more than 5 years.
3. Pregnancy
4. Patients having complicated diseases like spinal tumor, fracture of vertebrae. Malignancy Tuberculosis of spine etc.
5. Patients with known case of D.M and HTN
6. Patients with history of trauma to the spine and with marked deformities of spinal cord and disc Prolapse.
7. Gouty Arthritis or any other serious illness.

Diagnostic and Assessment criteria

A detailed history and physical examination were done on the basis of the standard proforma which include both Ayurvedic and Modern methods of examination. *Agnibala*, *Dehabala*, *Prakruthi* etc were recorded. For selection of the patients the diagnosis was based on subjective criteria and objective criteria. The data obtained were analyzed statistically

Subjective Parameters

1. *Kati Ruja* (Pain)
2. *Kati Sthambha* (Stiffness)
3. Tenderness
4. Difficulty in walking

Objective Parameters

1. Schober’s test
2. Visual analogue scale (VAS)
3. Functional disability assessment questionnaire⁵

Laboratory Investigations

1. Complete blood count
2. Random blood sugar
3. Plain X-ray of lumbar spine (AP)
4. RA factor (To rule out Rheumatoid arthritis)
5. Serum uric acid (To rule out Gout)
6. Mantoux test (Only if necessary- to rule out TB of spine)
7. HLAB27 (if necessary)

Table 1: Gradings for the subjective criteria

Subjective Criteria	Parameters	score
Pain	No pain	0
	Localized, recurrent, mild pain in back, not radiating to legs, exaggerated by Walking & lifting weight, completely relieved by rest.	1
	Recurrent, Mild but uncomfortable pain in back, radiating to one/ both legs, exaggerated by movements, subsided by rest.	2
	Moderate but dreadful pain in the back, with/ without radiation, exaggerated by bending, not relieved by rest, relieved by fomentation & massage, not Disturbing sleep.	3
	Severe (Horrible) pain in the back with / without radiation to legs, unchanged by rest, disturbing the sleep, relieved by fomentation, lotions or lower analgesics	4
	Severe (Agonizing) continuous pain in the back, radiation to both legs, disturbs sleep, requires higher analgesics or major injections for spinal block	5
	Intense degree of continuous pain not relieved by any measures	6
Stiffness	No restriction of movements	0
	Restriction in any one movement of above	1
	Restriction in any 2 movements	2
	Restriction in any 3 movements	3
Tenderness	No tenderness	0
	Mild tenderness without any sudden response on pressure	1
	Wincing of face on pressure due to tenderness	2
	Wincing of face withdrawal of affected part on pressure	3
Difficulty In Walking	No difficulty in walking	0
	Pain restrict walking more than mile	1
	Pain restrict walking more than ½ mile	2
	Pain restrict walking more than ¼ mile	3
	Unable to walk at all	4

Table 2: Grading for the objective criteria

Objective criteria	Parameters	Score
SCHOBER'S TEST	No restrictions > 5 cm	0
	Mild restriction up to 4cm	1
	Moderate restriction up to 3cm	2
VAS		
Oswestry functional disability assessment questionnaire		

Study design: - Single blind randomized comparative clinical study

Interventions: - 40 patients of *Katigraha* were selected randomly and divided into two groups, minimum 20 patients in each group.

❖ **Group: - A (trial)** Patients of this group was given with *Ashtavargam Kashayam* 50ml twice a day, half an hour before food (morning and evening)

❖ **Group:- B (control)** Patients of this group was given with *Gandharvahasthadi Kashayam* 50ml twice a day, half an hour before food (morning and evening),

Clinical assessment: -were done before the treatment, after the treatment,

Follow up: - after 15 days of treatment.

Diet and Regimen: - Avoid *Vatavardhaka Aharas* e.g. Potatoes, Fast food, cold beverages, liquor, long standing sitting, driving, and staying in AC etc.

Statistical Analysis: -The assessment was recorded before treatment (BT), After treatment (AT), and After following up (AF). The data was analysed statistically by using Paired and Unpaired T test.

Observations & Results

Among 40 patients of *Katigraha* 57.5% were belonged to 51-60-year age group, 22.5% Belonged to 41-50-year age group. 20% belonged to 30-40 years age group. 60% of patients were female and 40% were male. Among the patients selected for the study 87% were Hindus, and 10% were Christians, 2.5% were Muslims. 95% patients are married. 87.5% patients were from rural area. 57.55% patients were in Middle socio-economic status. 27.5% were in low middle and 15% patients were Upper middle class. 60% of patients

were having strenuous work, 32.5 % of patients were in moderate nature of work and 7.5% were in sedentary type of work. 70% patients had no addiction. 72.5% of patients were Non vegetarians. Majority of patients were of *Vatakaphaprakruthi* 55% and 32.5 % were *Vatapitta*, Majority of patients had *Madhyamasara*, *Satwa*, and *Samhanana* in the present study. 75% having *Samaagni*, 22.5 having *Vishamagni* and 2.5 had *Mandagni* 80% of patients had *Madhyamakoshta*, and 20 having *Krurakoshta*. Maximum patients had *Madhyama Abhyavaranashakti* and *Madhyama Jaranashakti*. 57.5% patients were having *Madhyama Vyayama Shakti*. And 42.5% had *Avara Vyayama Shakti*.

Table 3: Effect of therapy in Group A

Criteria	Mean		% of relief	SD	SE	t value	P value	significance
	BT	AT						
Pain	2.25	1.15	48.88	0.48	0.142	1.72	<0.0001	ES
Stiffness	2.7	1.6	40.74	0.753	0.168	1.729	<0.0001	ES
Tenderness	1.2	0.35	59	0.489	0.109	1.729	<0.0001	ES
Difficulty in walking	2	1.15	42.5	0.489	0.109	1.729	<0.0001	ES
Schober's test	2.25	1.4	44	0.50	0.11	1.729	<0.0001	ES
VAS	5.2	2.25	57	0.786	0.175	1.729	0.009	S
Question air	20.65	10.55	49	3.57	0.79	1.72	<0.0001	ES

Table 4: Effect of therapy in Group B

Criteria	Mean		% of relief	SD	SE	t value	P value	significance
	BT	AT						
Pain	2.45	1.5	38.77	0.88	0.198	1.729	<0.0001	ES
Stiffness	2.7	1.6	32	1.174	0.168	1.729	<0.0001	ES
Tenderness	1.2	0.75	37.5	0.638	0.143	1.729	0.0008	HS
Difficulty in walking	1.8	1.4	22.22	0.68	0.152	1.729	0.002	S
Schober's test	2.15	1.4	34.88	0.88	0.19	1.72	<0.0001	ES
VAS	4.3	2.6	39.53	1.46	0.32	1.72	<0.0001	ES
Question air	18.8	15.1	19.68	5.85	1.3	1.72	<0.0001	ES

Table 5: Comparative effect of *Ashtavargamkashaya* & *Gandharvahasthadikashaya*

Criteria	Mean difference		SD		T	P
	A	B	A	B		
Pain	1.1	0.95	0.489	0.888	-1.543	0.133
Stiffness	1.1	1.1	0.753	1.174	-0.320	0.750
Tenderness	0.85	0.45	0.489	0.638	-2.223	0.0325
Difficulty in walking	0.85	0.4	0.489	0.68	-1.333	0.190
Schober's test	1.1	0.75	0.502	0.882	0	1
VAS	2.95	1.7	0.786	1.465	-0.941	0.354
Question air	10.1	3.7	3.575	5.857	-2.965	0.005

DISCUSSION

In *Gadanigraha* written by *Shodhala* we can get a clear reference of *Katigraha* as a disease along with other *Vatavyadhi*. Even though *Katigraha* is not projected as a separate disease in *Bruhatrayees*, from a reference by *Chakrapani* while commenting on *Charaka Nidana 8/40*, it may be diagnosed as a separate disease. He says that “any symptom may manifest as a separate disease also” From the *Adhishtana* and *Lakshana* of *Katigraha* we can make out that the condition is precipitated by *Vatadosha*. So, the *Nidana* factors for *Vatavyaadhi* in general can be considered as the *Nidana* of *Katigraha*. The Lumbar Spondylosis due to its clinical manifestations, pathogenesis and complications can be correlated with *Katigraha*

Charaka and *Vagbhata* have mentioned *Dhatukshaya* and *Margavarodha* to be the root cause of all the *Vatavyadhis*. *Katigraha* is *Shosha* (degeneration), *Stambha* (stiffness) and *Shula* (pain) predominant *Vyadhi*(disease). As correctly said by *Sushruta Acharya* without vitiation of *Vata*, *Shula* cannot be produced. *Gadanigraha* clearly states that pain is produced due to stiffness which is produced by *Sama* (with *Ama*) or *Nirama* (without *Ama*) *Vayu* movement into *Kati* (lumbar region) hence this suggests of presence of *Dhatukshayatmaka* (degenerative) and *Margaavarodhaka* + (obstructive) type of *Samprapti* (pathology). The knowledge of *Samprapti* is very much essential from *Chikitsa* point of view as it has told by our *Acharyas*. “*Samprapti Vighthanameva Chikitsa*”

Table 6: *Sampraptighatakas*

Dosha	Vata	Vyana Apana (Vrudhi)
		Kapha
Dushya	Dhaatu	Asthi
	Upadhaatu	Kandara, Snayu
Udbhavasthaana	Pakwaashaya	
Vyaktasthaana	Kati	
Sancharasthana	Ardhasharira	
Rogamarga	Madhyamarogamarga	
Srotas	Asthivaha, Mamsavaha, Purishavaha	
Srotodushti	Sanga	
Agni	Jataragni, Dhatvagni	
Ama	Jataragni & Dhatvagnimandya JanyaAma	

Discussion on Therapeutic Effect of Medication

Effect of treatment on Pain

Pain was 48.88% in Group A, while 38.775% in Group B. The statistical result shows that Group A (*Ashtavargam Kashaya*) (p value = 9.25E-08) and Group B (*Gandharvahasthadi Kashaya*) (p value = 3.75E-05) both were having extremely significant results.

Comparison between the groups showed, mean score of Group A was 1.15 and mean score of Group B was 1.5 and the value is statistically non-significant (P=0.1539) after treatment in Pain.

Effect of treatment on Stiffness

Stiffness was 40.74% in Group A, while 32 % in Group B. The statistical result shows that Group A (*Ashtavargam Kashaya*) was having extremely significant result (p value = 6.61E-05) in the symptom Group B (*Gandharvahasthadi Kashaya*) (p value = 5.8E-05) which is extremely significant.

Comparison between the groups showed, mean score of Group A was 1.6 and mean score of Group B was 1.7 and the value is statistically non-significant (P= 0.750) after treatment in Stiffness.

Effect on Tenderness

Tenderness was 59 % in Group A, while 37.5% in Group B. The statistical result shows that Group A (p

value=2.59E-07) and Group B (p value <0.0008) both were having extremely significant results.

Comparison between the groups showed, mean score of Group A was 0.35 and mean score of Group B was 0.75 and was statistically significant (P=0.032) after treatment in Tenderness

Effect on Difficulty in Walking

Difficulty in walking was 42.5 % in Group A, while 22.22% in Group B. The statistical result shows that Group A was having extremely significant result (p value =1.11E-09) in the symptom than Group B (p value =0.002) which is significant. Comparison between the groups showed, mean score of Group A was 1.15 and mean score of Group B was 1.4 and was statistically non- significant (P=0.190) after treatment in difficulty in walking.

Effect on Schober's test

Schober's test was 44% in Group A, and in Group B 34.88%. The statistical result shows that both having extremely Significant result (p value =3.92E07) in the symptom

Comparison between the groups showed, mean score of both Groups were 1.4 and were statistically non-significant (P=1) after treatment in Schober's test.

Effect on VAS

Visual analogue scale was 57% in Group A, while 29.06% in Group B. The statistical result shows that Group A ((p value<0.009) was extremely significant and Group B (p value <0.2.59E-07) having significant results. Comparison between the groups showed, mean score of Group A was 2.25 and mean score of Group B was 2.6 and was statistically non- significant (P=0.35) after treatment in VAS.

Effect on Oswestry low back disability assessment questionnaire

Oswestry low back disability assessment questionnaire was 49% in Group A, while 12.23 % in Group B. The statistical result shows that Group A (AK) (p value <0.1.49E-06) and Group B (GK) (p value =0.001) both were having extremely significant results. Comparison between the groups showed, mean score of Group A was 10.55 and mean score of Group B value increased to 15.1 and was statistically significant (P=0.005) after treatment

Over all effects of treatments

In Group A 55% of patients showed moderate improvement, and 40% Mild improvement 5% recorded no improvements. In Group B only 5% observed moderate improvement 60% having mild improvement.

Probable Mode of Action of Drugs: *Ashtavargam Kashaya* is mentioned in *Sahasrayoga*. Its ingredients are *Bala, Sahachara, Eranda, Shunti, Rasna, Devadaru, Nirgundi, Lasuna* have the properties of *Vatashamaka* (pacify the vitiated *Vatadosha*), *Vedana Sthapana* (sedative), and *Shoola Prashamana* (analgesic), *Tarpana* (enhance the nutrition), *Balya* (promote strength), *Rasayana* (rejuvenation), and *Srotha Shodana* (purifying channels). As the drugs used in the present study have the above properties, they are beneficial for diseases originating by vitiation of *Vata Dosha* and help in improving the qualities of *Asthi Dhātu* (bones) and reformation of wasting tissues. Anti-inflammatory and analgesic properties of these drugs are scientifically proved. Here all the drugs are *Vatakaphahara* action, which pacifies the signs and symptoms. *Gandharvahasthadi Kashaya* also mentioned in *Sahasrayoga* ingredients are *Eranda, Chirabilva, Chitraka, Viswa, Pathya, Punarnava, Duspar-saka, Bhumyاملaki* all drugs having *Ushnaveerya Deepana*, and *Vatanulomana* properties, so which pacifies the *Katigraha*. The improvement in the symptoms of *Katigraha* can be attributed to two major factors i.e. reduction of pain in spine that may be due to analgesic and anti-inflammatory effect of drugs or/and due to increased nourishment to the spine which helps in improving disc size. Pain is inherent quality of *Vata*. Most of the drugs were *Vata Kapha Shamaka* having hot potency

Pain and stiffness are the main clinical features of L.S. The reduction of pain is due to the specific *Vatahara* property of the drugs used. Stiffness is neutralised by the *Ushna Guna* of the Drugs.

CONCLUSION

From the Clinical Trials, observations and discussions it can be concluded that *Ashtavargam Kashaya* Showed better efficacy than *Gandharvahasthadi*

Kashaya in all clinical parameters. During treatment no adverse reactions were observed. Same study can be taken along with external modalities like *Katibasti*, *Swedana* etc.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Abeena Raj D P & Shripathi Acharya: A Comparative Clinical Study On The Effect Of Ashtavargam Kashaya And Gandharvahasthadi Kashaya In The Management Of Katigraha w.s.r. To Lumbar Spondylosis. International Ayurvedic Medical Journal {online} 2020 {cited August, 2020} Available from: http://www.iamj.in/posts/images/upload/4036_4042.pdf