



Research Article

THE ROLE OF MATRA BASTI AND KATI BASTI IN KATISHOOL WITH SPECIAL REFERENCE TO LUMBAR SPONDYLOSIS

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KEYWORDS: *Matra Basti, Kati Basti, Katishool, Lumbar Spondylosis.*

ABSTRACT

The degenerative change in the disc and lumbar spine is known as Lumbar Spondylosis. *Katishula* is localized *Vata vyadhi* in which *Prakupita vayu* affects *Sandhi*. According to *Anshansha Kalpana* of *Katishula*, the *Vata* vitiated due to *Ruksha* and *Shita guna*, which lead to *Dhatukshaya*. *Katishula*, according to its sign and symptoms can be compared to Lumbar spondylosis in modern medical science and numbers of Ayurvedic authors also recently have combined *Katishula* as lumbar spondylosis. Hence, the disease lumbar spondylosis.

Thus, to treat the *Vyadhi* opposing treatment should be done and it should be *Snehana*, *Svedana* and *Basti*. Out of *Panchakarmas*, *Basti Chikitsa* is most important as it radically pacifies the morbid *Vata*, the sole *Dosha*, responsible for the movements of all *Dosha*, *Dhatu* and *Mala* within the body. It is called as half treatment of *Chikitsa* which is also called as "*Ardha Chikitsa*". The *Matra Basti* is one of the types of *Anuvasana Basti* which can be administered to any individual any time. *Matrabasti* is such a *Chikitsa* that is applicable in all the *Vatavyadhi*. *Kati basti* is one of the dual *Panchakarma* therapies which have the action of both *Snehan* and *Swedan* for *Asthisandhigata vata*. The symptoms like *Katishul*, *Pidanasahtva*, *Katigraha*, *Akunchan Prasaranayoh Shula*, Difficulty in forward bending, *Anidra* were graded from 0 to 4 for assessment. X-ray that determines spondylosis, osteoporosis and spinal degenerative conditions were considered. So for this study *Prasarni Giloy tail* was used for *Kati basti* (35mins) along with *matra basti* (60ml) in Group A and other group B was treated only with *Matra basti* (60ml). In this study, *Basti* is given for 9 days. *Prasarni giloy Matra Basti & Katibasti* i.e., Group A is found to be very much symptomatically effective in patients suffering from *Katishula*. Overall percentage of relief was more in Group A (72.33%) than Group B (64.33%).

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INTRODUCTION

According to Ayurvedic philosophy, the body is formed of three functional units: *Dosha*, *Dhatu* and *Mala*. Disharmony in the *Dosha-Dhatu-Mala* is attributed to be the root cause of disease by Ayurveda. Hence different remedies are aimed at re-achieving a state of equilibrium. The remedies mainly include *Shodhana Chikitsa* and *Shamana Chikitsa*. '*Shodhana*' describes methods to purify the body, which is a prime prerequisite for most other therapies and includes *Panchakarma* Therapy¹.

According to Ayurveda *Katishool* effects *Madhyamrogmarg* as it involves *Marma*, *Asthi* & *Sandhi*. The predominance pathological factor for this disease is *Vata*. In *Charaka Sandhigat vata* is mentioned in *Vatavyadhi chikitsa Adhyaya* but extensively described in *Madhav nidan*. First of all Sushrut had established the therapeutic measures of this disease, as *Sneha*, *Upnah*, *Agnikarma*, *Bandhan* & *Mardan*².

The *Sneha* through *Matra Basti* & *Kati basti* have an important role in their own capacity in the Ayurvedic approach to deal with condition of degenerative problem like backache or osteoarthritis¹¹.

Dhatu are the basic structural units responsible for the proper growth and development of human beings. *Dhatusaithilya* means disintegration of *Dhatu* is mostly caused by its own malfunctioning or due to ageing factor. This process of structural disintegration later on develops into a condition of Osteoarthritis. They need to be properly nourished for maintaining structural and fractional integrity of the joint as well as body also. *Snehan* therapy results in delaying the ageing process and the process of degeneration will be slowed down¹.

Lumbar spondylosis is defined as degenerative changes occurring in the discs and lumbar spine. Nuki G. et al (1999) adds that disc degeneration is age related and it starts in the third decade¹⁰. The treatment of low

backache due to lumbar spondylosis, according to modern medicine moves around calcium supplementation, anti-inflammatory, analgesic drugs or sometime surgical intervention may also be needed in many patients as per the condition. Amidst this background, the tired eyes are looking towards Ayurveda with great hope of getting relieved from the deadly agonizing pain. The established frame of Ayurveda in reliving chronic diseases make the people expert by complete or moderate relief from the long standing backache.

Taking foresaid facts into mind; study was planned to evaluate role of *Matra Basti* & *Kati Basti* in the management of *Katishool* with special reference to lumbar spondylosis.

AIMS AND OBJECTIVES

This study is particularly pinpointed on following:

1. To study *Katishula* vis-a-vis Lumbar Spondylosis from Ayurveda and modern point of view respectively.
2. To study the efficacy of *Matra Basti* & *Kati Basti* in *Katishula* with special reference to Lumbar Spondylosis.

DRUG REVIEW

*Guduchi(Tinospora cordifolia)*⁸

1. *Ras-Katu, Tikta*
2. *Vipak-Madhur*
3. *Virya-Ushna*
4. *Doshagnata-Tridoshar*
5. *Rog-adhikar-Sangrahani, Balya, Jwarhar, Agni deepan, Vatahar*

*Prasarni*⁸

1. *Ras- Tikta*
2. *Vipak-Madhur*
3. *Guna-Guru, Vrushya*
4. *Doshagnata-Vata, Rakta, Kaphahar*
5. *Karma-Bal Sandhankar*

MATERIALS AND METHODS

Type of study: Open randomized study.

Group Management

i) Group A: - termed as **Trial group**

- a) No. of patients: 20 patients.
- b) Treatment: This group was treated with *Prasarni Giloy Matra Basti* & *Kati basti*

ii) Group B: termed as **Control group**

- a) No of patients : 20 patients.
- b) Treatment: This group was treated with *Prasarni Taila Matra Basti*.

Procedure: Pre-procedure-*Sthanik Abhyanga* & *Sthanik Svedana* Over lower abdomen, groin.

Procedure: *Matra Basti* was administered through the rectum in left lateral Position after food with the help of *Bastiyantara*.

Procedure of *Katibasti*: Black gram powder is turned to dough with the help of water. The patient is advised to lie

down in prone position. A trough is made with this dough on lumbar region and *Prasarni-Giloy tail* is filled in it for 35 minutes followed by *Nadi-sweda* in each patients.¹¹

Prasarni-Giloy Tail: We have adopted the methodology for *Tail pak* laid by Acharya Sharangdhar and process it till *Madhyampak*⁸.

1. *Til Tail*-4 part
2. *Prasarni Giloy Kalka*-1 part
3. *Prasarni Giloy Quath*-16 Part

Matra of Basti¹: 60 ml

Duration of treatment : 9 days

Follow Up: Daily follow up of patient was checked during the course of treatment and after 15 days completion of treatment follow up was considered.

Diet: Patients regular diet, No restriction on diet.

Inclusion Criteria

- a) Age : between 35-60 years
- b) Sex: Both genders were included.
- c) X-ray: determined spondylosis, osteoporosis and spinal degenerative conditions

Exclusion Criteria

- a) Age: below 35 years and above 60 years
- b) Patient having structural deformity likes lordosis or any spinal curvature.
- c) Patient having past history of rheumatoid or rheumatic arthritis, pot's spine etc.
- d) Patient suffering from any systemic diseases likes hypertension, diabetes mellitus, asthma, etc.
- e) Patient having other pathology like pelvic inflammatory diseases, anemia, general debility etc.
- f) Patient where steroids dependent.

Criteria of diagnosis:

i) Patients having symptoms

- a) *Katishula*
- b) *Pidanasahatva*
- c) *Katigraha*
- d) *Akunchan Prasaranayoh Shula*
- e) Difficulty in forward bending
- f) *Anidra*

ii) Investigation

- a) Complete Blood Count, Erythrocyte Sedimentation Rate, Lipid Profile, Serum Calcium
- b) Serum Alkaline Phosphatase
- c) X-ray of Lumbar sacral spine - Anteroposterior /Lateral view
- d) MRI-Lumbosacral spine

iii) Test for Diagnosis¹⁰

- a) Straight leg rising test
- b) Femoral nerve stretch test
- c) Lassegue's sign
- d) Pump-handle test
- e) Gaenslen's test

Criteria of Assessment:

a) *Katishula* (Low Back Pain)

- 0- No Pain
- 1- Mild Pain

2- Moderate Pain but no difficulty in walking
 3- Slight difficulty in walking due to pain
 4- Much difficulty in walking
 5- Much pain which prevents walking

b) Akunchan Prasaranayoh Shula (Pain on extension and flexion)

0 - No Pain.
 1 - Pain without wincing of face.
 2 - Pain with wincing of face.
 3 - Shouts or prevents complete flexion/extension.
 4 - Does not allow passive movement.

c) Shulasya Kala (Duration of Pain)

0 - No pain
 1 - Only in morning (4am to10am) or evening (5pm to11pm)
 2 - Pain in morning and evening (4am t10am and 5pm t11pm)
 3 - Pain present whole day

d) Pidanashatva (Tenderness)

0 - No tenderness

Observation and Result

1 - Patient says tenderness
 2 - Wincing of face
 3 - Wincing of face and withdraws the hand
 4 - Not allowing to touch the joint

e) Anidra

0 - *Samyak Nidra*
 1 - Mild *Anidra*
 2 - Moderate *Anidra*
 3 - Severe *Anidra*

f) Angle of flexion of lumbar vertebrae

h) Angle of extension of lumbar vertebrae

i) Distance between ground and middle finger of patient in fully flexed possible position.

Total Effect of Therapy

a) Completely relieved - More than 75% relief
b) Markedly improved - Relief within a range of 50-75%.
c) Improve - Relief within a range of 25-50%.
d) Unchanged - No relief or minimum relief of 25%.

Name of study Centre: OPD and IPD patients from Y.M.T Ayurvedic Hospital, Kharghar.

Table 1: Demographic Data

Age	Range in years 35-60	Trial group	Control group
Sex	Male	6(30%)	8(40%)
	Female	14(70%)	12(60%)
Religion	Hindu	19(95%)	18(90%)
	Muslim	1(5%)	2(10%)
Nature of work	Sedentary	6(30%)	8(40%)
	Standing	3(15%)	3(15%)
	Sitting	4(20%)	2(10%)
	Labour	7(35%)	7(35%)
Diet	Vegetarian	6(30%)	8(40%)
	Mix	14(70%)	12(60%)
Marital status	Married	18(90%)	00
	Unmarried	2(10%)	20(100%)
Economical status	Low income	2(10%)	1(5%)
	Middle income	18(90%)	18(90%)
	Highly income	00	1(5%)
Weight status	Normal weight	7(35%)	8(40%)
	Over weight	10(50%)	9(45%)
	Under weight	3(15%)	3(15%)
Dosha-prakruti	Vata-Pittaja	9(45%)	10(50%)
	Pitta-Kaphaja	3(15%)	4(20%)
	Kapha-Vataja	8(40%)	6(30%)

Table 2: Showing Incidence of main Vyadhi Ghataka involved 40 patients of Katishula

Sr. No.	Vyadhi Ghatak involved	Group A		Group B		Total No. Patients	Percentage
		No. of pts.	%	No. of pts.	%		
A) Dosha-Involved							
1)	Vata-Dominance	20	100	20	100	40	100
2)	Pitta-Dominance	12	60	09	45	21	52.5
3)	Kapha-Dominance	04	20	05	25	09	22.5
B) Dhātu-Involved							
1)	Rasa Dhātu	06	30	05	15	11	27.5
2)	Rakta Dhātu	11	55	13	65	24	60
3)	Mamsa Dhātu	05	25	03	15	08	20

4)	<i>Meda Dhatu</i>	03	15	04	20	07	17.5
5)	<i>Asthi Dhatu</i>	20	100	20	100	40	100
6)	<i>Majja Dhatu</i>	12	60	11	55	23	57.5
7)	<i>Shukra Dhatu</i>	00	00	00	00	00	00
C) Strotas Involved							
1)	<i>Rasa-vaha</i>	12	60	10	50	22	55
2)	<i>Rakta-vaha</i>	09	45	09	45	18	45
3)	<i>Mamsa-vaha</i>	05	25	05	25	10	25
4)	<i>Meda-vaha</i>	03	15	03	15	06	15
5)	<i>Asthi-vaha</i>	20	100	20	100	40	100
6)	<i>Majja-vaha</i>	20	100	18	90	38	95

Table 3: Showing Effect of Symptoms Score of 40 Patients of Katishula

S. No.	Symptom	Group A				Group B			
		BT	AT	Difference	Percentage of Relief	BT	AT	Difference	Percentage of Relief
1	<i>Katishula</i>	46	16	30	65.21	48	25	23	47.91
2	<i>Akunchan Prasaranyoh Shula</i>	36	10	26	72.22	37	16	21	56.75
3	<i>Pidanasahatva</i>	38	11	27	71.05	38	16	22	57.89
4	<i>Shulasya Kala</i>	31	11	20	64.51	36	14	22	61.11
5	<i>Anidra</i>	30	5	25	83.33	28	9	19	67.85

Table 4: Showing Effect on Symptoms of 20 Patients of Katishula of Group A group by Wilcoxon-Matched - Pairs-Signed-Ranks Test

S.No	Symptom	Mean	SD	SEd	Sum of All Signed Ranks	No. of Pairs	Z	P
1	<i>Katishula</i> BT AT Diff.	2.3 0.8 1.5	0.4702 0.5231 0.513	0.1052 0.117 0.1148	210	20	3.919	<0.001
2.	<i>Akunchan Prasaranyoh Shula</i> BT AT Diff	1.8 0.5 1.3	0.5231 0.607 0.4702	0.117 0.1358 0.1052	210	20	3.919	<0.001
3.	<i>Pidanasahatva</i> BT AT Diff	1.9 0.55 1.35	0.5525 0.6048 0.4894	0.1236 0.1353 0.1095	210	20	3.919	<0.001
4.	<i>Shulasya Kala</i> BT AT Diff	1.55 0.55 1	0.6048 0.6048 0.7255	0.1353 0.1353 0.1623	120	15	3.407	<0.001
5.	<i>Anidra</i> BT AT Diff.	1.5 0.25 1.25	0.513 0.4443 0.6387	0.1148 0.0994 0.1429	171	18	3.72	<0.001

Table 5: Showing Effect on Symptoms of 20 Patients of Katishula of Group B by Wilcoxon- Matched -Pairs- Signed-Ranks Test

S.No	Symptom	Mean	SD	SEd	Sum of All Signed Ranks	No.of Pairs	Z	P
1	<i>Katishula</i> BT AT Diff.	2.4 1.25 1.15	05026 0.7164 0.4894	0.1124 0.1603 0.1095	190	19	3.82	<0.001
2.	<i>Akunchan Prasaranyoh Shula</i> BT AT	1.85 0.8	0.8127 0.8335	0.1818 0.1865	190	19	3.82	<0.001

	Diff	1.05	0.394	0.0882				
3.	Pidansahatva							
	BT	1.9	0.7182	0.1607	171	18	3.723	<0.001
	AT	0.8	0.9515	0.2129				
	Diff	1.1	0.5525	0.1236				
4.	Shulasya Kala							
	BT	1.8	0.7678	0.1718	171	18	3.723	<0.001
	AT	0.7	0.8013	0.1793				
	Diff	1.1	0.5525	0.1236				
5.	Anidra							
	BT	1.4	0.5026	0.1124	136	16	3.516	<0.001
	AT	0.45	0.6048	0.1353				
	Diff.	0.95	0.6048	0.1353				

Table 6: Showing Comparison between two groups with respect to Symptoms Score by Mann-Whitney test

S.No	Symptom	R ₁	Mean	U	SD	Mean ± 1.96SD	Z	P
1	Katishula	455	190	135	35.59	120.25-259.75	1.53	>0.05
2.	Akunchan Prasaranyoh Shula	437	190	153	35.59	120.25-259.75	1.32	>0.05
3.	Pidansahatva	413	180	157	34.20	112.96-247.032	0.65	>0.05
4.	Shulasya Kala	270	135	120	19.55	96.682-173.31	0.741	>0.05
5.	Anidra	344	144	115	28.98	87.2- 200.80	0.983	>0.05

Table 7: Showing Effect on Physical Parameters of 40 Patients of Katishula

S. No.	Physical Parameters	Mean ± SD		Mean of Diff. ± SD	SEd	t	P
		BT	AT				
1	Angle of Flexion (in deg.) Group A Group B	94.75 ± 10.696	104.25 ± 11.728	9.5 ± 3.203	0.716	13.255	<0.001
		90.25 ± 11.751	97.5 ± 11.865	7.25 ± 3.795	0.849	8.537	<0.001
2	Angle of Extension (in deg.) Group A Group B	19.25 ± 4.375	25 ± 4.588	6.5 ± 2.350	0.525	12.359	<0.001
		18.75 ± 4.8327	25 ± 3.973	6.25 ± 2.75	0.615	10.156	<0.001
3	Distance Between Ground And Middle Finger of Patient (in cm) Group A Group B	19.45 ± 4.8175	15.3 ± 5.212	4.15 ± 1.496	0.334	12.396	<0.001
		21.1 ± 5.702	17.15 ± 4.837	3.95 ± 2.235	0.5001	7.8983	<0.001

Table 8: Showing Effect on Haematological Parameters of 40 Patients of Katishula by Paired t Test

S. No	Haematological Parameters	Mean ± SD		Mean of Diff. ± SD	SEd	t	P
		BT	AT				
1	Haemoglobin Group A Group B	11.685 ± 1.2209	11.895 ± 1.1264	0.21 ± 0.5004	0.1119	1.875	>0.05
		11.755 ± 1.1865	11.99 ± 1.2809	0.235 ± 0.68	0.1521	1.5447	>0.05
2	ESR Group A Group B	28.5 ± 7.8639	26.75 ± 6.9953	1.75 ± 4.0246	0.9003	1.9436	>0.05
		30.25 ± 7.3044	28.8 ± 6.8333	1.45 ± 4.3222	0.9669	1.4995	>0.05
3	Serum. Calcium Group A Group B	8.685 ± 0.825	9.0425 ± 0.6904	0.357 ± 0.8459	0.1892	1.8890	>0.05
		8.23 ± 0.6449	8.36 ± 0.6159	0.13 ± 0.3326	0.0744	1.7470	>0.05
5	Serum. Alkaline Phosphatage Group A Group B	63.69 ± 17.322	62.1 ± 13.095	1.591 ± 5.800	1.297	1.225	>0.05
		58.58 ± 3.876	58.54 ± 4.153	0.039 ± 2.32	0.520	0.07	>0.05

Table 9: Showing Effect on Lipid profile Parameters of 40 Patients of Katishula by Paired t Test

S. No.	Lipid Profile Parameters	Mean ± SD		Mean of Diff. ± SD	SEd	t	P
		BT	AT				
1	Cholesterol Group A Group B	178.69 ± 35.8741	173.465 ± 36.29	5.225 ± 8.2879	1.8541	2.8180	<0.05
		180.43 ± 36.927	172.5 ± 31.375	7.90 ± 12.720	2.845	2.77	<0.05

2	Triglyceride						
	Group A	137.595 ± 80.222	127.38 ± 73.32	10.215 ± 23.1718	5.1838	1.9705	>0.05
	Group B	136.64 ± 66.7708	126.975 ± 72.6947	9.67 ± 22.49	5.0331	1.9212	>0.05
3	HDL						
	Group A	32.267 ± 5.7796	35.46 ± 6.9766	3.193 ± 6.3364	1.4175	2.2525	<0.05
	Group B	33.084 ± 6.2411	30.18 ± 4.90	2.89 ± 5.15	1.154	2.50	<0.05
4	LDL						
	Group A	148.06 ± 36.58	153.03 ± 38.1890	4.969 ± 13.487	3.0172	1.6468	>0.05
	Group B	147.483 ± 28.8153	144.0065 ± 29.277	3.4765 ± 11.8874	2.6593	1.3072	>0.05
5	VLDL						
	Group A	27.095 ± 15.5057	25.222 ± 16.2808	1.8725 ± 6.0494	1.3533	1.3836	>0.05
	Group B	25.5455 ± 15.0714	23.9355 ± 11.7790	1.61 ± 5.2828	1.1825	1.3615	>0.05

Table 10: Showing Comparison between Two Groups by Unpaired t Test

S. No.	Parameters	Mean of Diff. ± SD		Sed.	t	P
		Group A	Group B			
1.	Cholesterol	5.225 ± 8.287	7.90 ± 12.720	3.39	0.78	>0.05
2.	HDL	3.193±6.336	2.89 ± 5.15	1.825	0.16	>0.05
3.	Angle of Flexion	9.5 ± 3.203	7.25 ± 3.795	1.01	2.227	<0.05
4.	Angle of Extention	6.5 ± 2.350	6.25 ± 2.75	0.80	0.937	>0.05
5.	Distance Between Ground and Middle Finger of Patient	4.15 ± 1.496	3.95 ± 2.235	0.60	0.33	>0.05

Table 11: Showing Total Effect of Therapy in 40 Patients of Katishula

Sr.No.	Total Effect of Therapy	Group A		Group B		Total	
		No. of Pts.	%	No. of Pts.	%	No. of Pts.	%
1	Cured	0	0%	0	0%	0	0%
2	Markedly Improved	11	55%	10	50%	21	52.5%
3	Improved	09	45%	10	50%	09	47.5%
4	Unchanged	0	0%	0	0%	0	0%

Table 12: Showing Comparison between Two Groups by Chi-Square Test

Sr.No.	Group	Improved	Markedly improved	Total	Chi-square value
1	Group A	(O)=09	(O)=11	20	0.08 >0.05
		(E)=9.5	(E)=10.5		
2	Group B	(O)=10	(O)=10	20	
		(E)=9.5	(E)=10.5		

DISCUSSION

The significance of the result obtained in this study is being discussed in brief.

1. *Katishula* is chronic disorder due to excessive sedentary and standing type of work.
2. Mostly *Katishula* is found between age group 30 to 60 years.
3. There were more prevalent in female patients than males.
4. Most of the patients had habit of taking *Katu rasa* and *Shita, Laghu Guna ahara*.
5. *Katishula* occurs mostly because of *Asthi, Majja Dhatu* and *Strotas dushti*.
6. It is observed that there was significant improvement in symptoms like *Katishula, Akunchan Prasaranyoh Shula, Pidanasahtva, Shulasya Kala,* and *Anidra* in both groups. Overall percentage of relief was more in Group A (72.33%) than Group B (64.33%).
7. Angle of Flexion, Angle of Extension, Distance between Ground and Middle Finger of Patient were significantly improved in both Group A and Group B. There was no significant difference found between two groups in parameters such as Angle of

Extension, Distance between Ground and Middle Finger of Patient. Angle of Flexion was significantly increased in Group A.

8. In the present study none patient showed total relief in symptoms. In case of Group A 11 patients (55%) were markedly improved and 09 patients (45%) were improved.

In case of Group B 10 patients (50%) were markedly improved and 10 patients (50%) were improved. Follow up study of 40 patients was done. It was observed that no deterioration seen after completion of *Basti*.

CONCLUSION

Hence it can be said that due to *Basti* there is *Shodhan* of *Pakvashayastha mala & Sthanik dosha* which leads to *Shaman* of *Vata dosha*.

However it can be concluded that *Prasarni giloy Matra Basti & Katibasti* is found to be very much symptomatically effective in patients suffering from *Katishula*.

In this study, *Basti* is given only for 9 days. As *Katishula* is a *Yapya Vyadhi*, if this *Basti* is given over a

Kalpna gholap, U.S.Nigam. The Role of Matra Basti and Kati Basti in Katishool with Special Reference to Lumbar Spondylosis long period of time along with other medication results would be more significant.

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Cite this article as:

Kalpna Gholap, U.S.Nigam. The Role of Matra Basti and Kati Basti in Katishool with Special Reference to Lumbar Spondylosis. AYUSHDHARA, 2016;3(4):770-776.

Source of support: Nil. Conflict of interest: None Declared

