



**A COMPARATIVE CLINICAL STUDY OF *TIKTA KSHEER BASTI* ADMINISTRATION
BY CONVENTIONAL METHOD (ENEMA CAN) AND DRIP METHOD IN LUMBAR
SPONDYLOSIS (*KATIASTHIGATA VATA*)**

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ABSTRACT

Objective - This study was planned to compare the two types of methods of *Basti* administration i.e. conventional method and drip method.

Materials and Methods

- **Study type**- Interventional
- **Masking**- Open comparative and clinical study
- **No. of groups**- 2
- **Sample size**: 30 patients in each group

1. **Group A**- *Tikta Ksheer Basti* 400 ml. administered by conventional method for 8 days.

2. **Group B**- *Tikta Ksheer Basti* 100 ml. administered by Drip method within 15-20 minutes for 8 days.

Results: In Enema can group 83% patients achieved marked improvement. Overall effect of therapy of group A is 64.35%. In Drip method group 77% patients showed complete remission. Overall effect of therapy of group B is 68.25%. **Conclusion**: On the basis of observations of the study *Tikta Ksheera Basti (Brihatyadi Yapana Basti)* either by Enema can method or by Drip method may be recommended for the management of Lumbar Spondylosis (*KatiAsthiigata Vata*).

KEYWORDS: *Katiasthiigata Vata, Tikta Ksheera Basti, Lumber spondylosis, drip method, Brihatyadi Yapana Basti.*

INTRODUCTION

Owing to extensive technological development and the resultant changes in lifestyles, today's generation experience a very hectic schedule which leads to substantial alteration in healthy lifestyle of mankind. This change of lifestyle is creating many unseen problems by disturbing equilibrium of *Doshas, Dhatus* and *Malas*. Accordingly, we find genuine increase in daily *Vata Prakopaka Hetus* (causative factors). *Vata Dosha* being the predominant *Dosha* in the body gets primarily vitiated and manifests different diseases, terms like low backache, lumbago, Lumber Spondylosis, sciatica, degenerative disc disease and protruded intervertebral disc are very common in youngsters nowadays.

Amongst them Lumbar Spondylosis is a complicated diagnosis. As the definitions differ widely within the literature it is better to define it broadly as degenerative conditions of the spine.

Lumbar Spondylosis can be correlated as *Asthiigata Vata* because its core pathogenesis is; 1) degeneration of bone tissue and 2) vitiation of *Vata*. Moreover, such degenerative type of condition with clinical manifestation can also be considered under the broad umbrella of *Vata Vyadhi*. Thus, classical aspects of *Asthiigata Vata* especially in *Kati Pradesh* can be implemented in the disease Lumbar Spondylosis.

There is no current concrete, gold-standard treatment approach to the diverse range of patient presentations of *KatiAsthiigata Vata* (Lumbar Spondylosis). Being a degenerative *Vata* disorder Lumbar Spondylosis (*Asthiigata Vata*) demands a pioneer treatment of *Vata* i.e. *Basti*, *Charaka* aptly highlighted the glorified designation of *Basti* - '*Basti Vata haranam Shreshtha*'.^[1]

Almost all the *Acharyas* consider *Basti* as half or whole of the entire therapeutic measures,^[2] and advocated best & quickest way to provide strength and immunity to even children and old peoples.^[3] In the treatment of

Asthyashrita Vikaras Panchakarma and specifically *Tikta Ksheer Basti* is mentioned as a line of treatment which can be considered as *Brimhana* type of *Basti*.

Charaka, indicated *Basti* prepared with substance like milk, *Ghee* and processed in *Tikta Rasa Dravya* especially for *Asthigata Vata*.^[4] Taking this in account it was thought that *PanchaTikta Ksheer Basti* would be more useful in disintegration of *Samprapti* (pathogenesis) of *Asthigata Vata* and *PanchaTikta Ksheer Basti (Brihatyadi Yapana Basti)* in the form of *Yoga Basti* was selected.

Nowadays, conventional method is in trend to give *Basti* through Enema can. Many *Vaidyas* are administrating *Brimhana Basti* by Drip method with help of a saline set and rubber catheter/infant feeding tube. It has been reported that *Basti* administration by this method facilitates more absorption over conventional method and with low doses too, it offers better results. Moreover, it stayed in body for long time too.

This study was planned to compare the two types of methods of *Basti* administration. To compare the results clinically patients with Lumbar Spondylosis (*KatiAsthigata Vata*) were selected as is it a most common degenerative vertebral column disease found in society.

AIMS AND OBJECTIVES

- To evaluate the efficacy of *Tiktakshira Basti* administered by conventional method (Enema can) in the management of Lumbar Spondylosis (*Katiasthigata Vata*).
- To evaluate the efficacy of *Tiktakshira Basti* administered by Drip method in the management of Lumbar Spondylosis (*Katiasthigata Vata*).
- To compare results of both methods.

RESEARCH METHODOLOGY

- Study type-** Interventional
- Masking-** Open comparative and clinical study
- No. of groups-** 2
- Sample size:** 30 patients in each group
- Study site:** OPD/IPD wing of P.G.department of *Panchakarma*, Shubdeep Ayurved Medical College and Hospital (P.G Institute,) Indore (M.P.).

Clinical Contribute

A proforma as per disease had been prepared and after complete examination and investigations of all the patients were carried out and then divided randomly into two groups, each group of 30 patients. Before starting clinical trial a Pilot study had done to fix the dose and method of administration of *Basti* by Drip method. Both groups were given specific instructions on diet and life style modifications.

MATERIALS AND METHOD

Inclusion criteria

- Age – 20 to 70 years.
- Patients with Symptoms of *Katiasthigata Vata*
- Patients with degenerative joint changes in X ray lumbar spine.
- Patient willing to give written consent

Exclusion criteria

- Patients below 20 and above 70 years.
- Patients who are having any structural deformities and need surgical care.
- Conditions related to spine other than spondylosis will be excluded.
- Patients having major illness for a longer period and systemic pathogenesis e.g. cardiac disorders, chronic renal failure, diabetes, psoriatic arthritis, systemic lupus erythromatus (SLE), polymyalgia, rheumatoid arthritis, gout, tuberculosis will be excluded.

Drug Details

*Brihatyadi Yapana Basti*⁵ is selected for the study, which can be considered as a *Tikta Ksheer Basti* with *Yapana*, *Brimhana* and *Vata shamak* properties. Its ingredients are *Ksheer*, *Guduchi*, *Shatavari*, *Brihati* and *Kantkari*. However, *Kalka* was first added at the time of *Ksheerpaka* preparation to facilitate the Drip method of administration but after Pilot study it was added directly as a *Kalka*. *Basti Dravya* composition and proportion was based on *Panch Prasaratik Ksheer Basti*.^[6]

- Dose of *Basti* given by Enema can method was 400ml
- For Drip method (100ml), (dose fixation by the Pilot study)

The composition of *Tikta Ksheer Basti* adopted for the study is as following.^[7]

Table 1: The composition of *Tikta Ksheer Basti* adopted for the study.

Ingredients	Enema can	Drip method
1. <i>Ksheer</i>	160ml	40ml
2. <i>Madhu</i>	80ml	20ml
3. <i>Murchit Til Taila</i>	80ml	20ml
4. <i>PanchTikta Ghrita</i>	80ml	20ml
5. <i>Kalka</i>	10gm	2.5gm
6. <i>Saindhav</i>	5gm	1.25gm

Ingredients of *Kalka*: *Guduchi*, *Shatavari*, *Brihati* and *Kantkari* in equal parts.

Preparation of *Basti Dravya*: *Tikta Ksheer* was prepared by adding *Ksheer* and water in equal parts. *Kalka Dravya* was added to this and it was allowed to boil till the water evaporated. After pilot study, when it was decided to add *Kalka* as per classical method, water had not been added to *Ksheer*. The *Basti Dravya* was mixing will be as per classical method.

Procedure

Purvakarma: All patients were given *Haritaki Churna* 5gm at night with warm water for *Koshtha Shuddhi*. After proper *Purvakarma Basti* was administrated.

Pradhankarma

Group A- *Tikta Ksheer Basti* 400 ml. administered by conventional method for 8 days.

Group B- *Tikta Ksheer Basti* 100 ml. administered by Drip method within 15-20 minutes for 8 days.

Pashchatkarma

All *Pashchat Karma* will be performed as per classical method of *Anuvasan Basti Karma*.

Placebo capsules in dose of 2 B.D were orally given to the patient during complete treatment course to avoid discontinuity of patient.

Assessment Criteria

Subjective:- To assess the effect of therapy objectively, all the signs and symptoms are given scoring depending upon their severity.

1. Low backache(*Katiprishtha Shool*)
2. Joint stiffness(*Katiprishtha Graha*)
3. Radiating pain to thighs (*Sakthi Ruja*)
4. Tingling/numbness sensation(*Supti*)
5. Burning sensation(*Daha*)

Objective

1. SLR test
2. Walking time (50 meters)
3. Range of joint movement (flexion, extension, left and right lateral flexion)

Final Assessment of Result

The results were assessed with regards to improvement recorded in clinical findings i.e. on Subjective and Objective parameters.

- Complete Remission: 71-100
- Marked Improvement : 51-70
- Moderate improvement : 26-50
- Mild Improvement : 1-25
- No Improvement : 0

RESULT**Table no. 2: Changes after treatment in Group A and Group B.**

S. No.	Criteria	Group A		Group B	
		BT	AT	BT	AT
1	Low backache	2.63	0.93	2.7	0.4
2	Joint stiffness	1.73	0.3	2.06	0.2
3	Radiating pain to thighs	1.2	0.2	1.33	0.13
4	Tingling/ Numbness	1.03	0.03	1.33	0.1
5	Burning SENSATION	0.6	0	0.06	0.033
6	SLR test(Right leg)	40	63.03	40	63.03
7	SLR test(Left leg)	24.2	29.5	27	41.4
8	Walking time 50 mt/min	1.41	1.07	1.42	1.111
9	Flexion/cm	17.03	20.66	16.93	20.56
10	Extension	23.7	29.1	23.8	29
11	Rt lateral flexion	24.23	29.26	24	29
12	Lt lateral flexion	24.2	29.5	24.36	29

Table 3: Overall Changes after treatment in Group A & B (Subjective Criteria).

Criteria		Group A		Group B	
		BT	AT	BT	AT
1.	Low backache	2.7	0.4	2.7	0.4
2.	Joint stiffness	2.06	0.2	2.06	0.2
3.	Radiating pain to thighs	1.33	0.13	1.33	0.13
4.	Tingling/ Numbness	1.33	0.1	1.33	0.1
5.	Burning Sensation	0.06	0.033	0.06	0.03

Table 4: Overall Changes after treatment in Group A & B (Objective Criteria).

Criteria		Group A		Group B	
		BT	AT	BT	AT
6.A	Right leg	40	63.03	47	73
6.B	Left leg	27	41.4	27	41
7.	Walking time 50 mt/min	1.42	1.111	1.42	1.11
8.A	Flexion/cm	16.93	20.56	16.93	20.56
8.B	Extension*	23.8	29	23.8	29
8.C	Rt lateral flexion	24	29	24	29
8.D	Lt lateral flexion	24.36	29	24.36	29

Overall effect of the therapy: In Enema can group 83% patients achieved marked improvement, 14% of patients achieved complete remission followed by 3% patients with mild remission. None of the patient remained unchanged. Overall effect of therapy of group A is 64.35%.

In Drip method group 77% patients showed complete remission, 17% patient showed marked remission, followed by 6% patients with mild remission. None of the patient remained unchanged. Overall effect of therapy of group B is 68.25%.

Follow up: Data shows that none of the patient noticed any recurrence of disease during 16 days follow up while 20% patients noticed recurrence after 1 month of therapy.

This further confirms latent positive effect of *Basti* in not only non-production of recurrence but further improving quality of life of individual.

DISCUSSION

Maximum number i.e. 31.66% of the patients were reported in the age group 20 to 30 yrs. and 40 to 50 yrs each. 66.66% of the patients were male, Majority i.e. 30% patients in the study were from service class, followed by 25% patients were farmers, Prolonged sitting in wrong posture and excessive labor work may be the probable cause behind this. Maximum patients were having a history of heavy work duty (43.33%) i.e. they have *Shuddha Vata Prakopa*, whereas 25% patients with sedentary job i.e. they may have *Margaavrodha Vata Prakopa*.

In the present research work, all the patients i.e 100% were suffering from low backache, joint stiffness was observed in 95% of the patients, while 71.66% had complain of radiating pain to thighs, 70% of tingling/Numbness and 26.66% had complain of Burning sensation.

Duration of Basti Karma: Average duration of *Basti* administration is maximum in Group B (Drip method) i.e 17 min followed by Group A (Enema can) i.e.2 min and average retention time of *Basti* is maximum in Group B (Drip method) i.e 15 min followed by Group A (Enema can) i.e.5 min.

- **Effect of therapy on subjective parameters**

Enema can group and Drip method group both provided statistically highly significant result as shown by paired t test ($p < 0.001$) in improving Low backache, Joint Stiffness, relieving Radiating pain to thigh, relieving tingling/numbness, relieving burning sensation.

- **Effect of therapy on objective Parameters**

Enema can group and Drip method group both provided statistically highly significant results as shown by paired t test ($p < 0.001$) in relieving SLR test, improving

Walking time, improving flexion, improving extension, improving left lateral flexion, improving right lateral flexion.

Comparison of Effect of therapy on both groups

- **Low backache:** There is a statistically significant difference between the two groups ($p < 0.001$). Drip method group was found better as compared to Enema can group. "*Basti Vata Haranam*" itself explains the findings. Low backache symptom found to be relieved by very next day. Here, both the groups showed significant results but Drip method group was found to be better. It is a *shudhdha Vata* symptom perhaps more retention time of Enema helped to give better results.
- **Joint Stiffness:** There is a no statistically significant difference between the two input groups ($p > 0.05$). The *Shodhana* and *Vatanuloman* action of *Basti Dravya* helped to reduced the symptom.
- **Radiating pain to thigh:** There is a no statistically significant difference between the two input groups ($p > 0.05$). Perhaps reduced pressure of rectum may reduces the compression.
- **Tingling/Numbness:** there is a no statistically significant difference between the two input groups ($p > 0.05$).
- **Burning sensation:** There is a no statistically significant difference between the two input groups ($p > 0.05$). The *Ksheer-ghrita* base of *Basti* and *Vata pitta shamaka* drugs like *Shatavari* and *Guduchi* are responsible to reduce this symptom.

Effect of therapy on objective Parameters

There is a no statistically significant difference between the two input groups ($p > 0.05$) in SLR Test (Rt. leg & Lt. leg), Walking time, Range of movement at lumber spine i.e Flexion, Extension, Right lateral flexion. *Basti* produces *snigdha* and *shlakshnata* at the diseased area hence reduces the mechanical compression of the nerve.

Although, there is a statistically significant difference found between the two groups in left lateral flexion, Enema can group was found better as compared to Drip method group ($p < 0.001$).

Though, it's very difficult to quote about the cause behind this, as among all movement parameters only this one showed difference, but it may possible due to better shodhana action of the *Basti* given by Enema can method.

Probable Mode of Action of Brihatyadi Yapana Basti

Yapana Basti is a milder form of *Asthapana (Niruha)*. Though, said to be *Ubhayartkara* in nature i.e. *Shodhana* as well as *Shamana Karamakara*. Here the meaning of the word *Asthapana* holds importance in degenerative conditions. *Asthapana* means to sustain life therefore, it can be said that this particular therapy itself has rejuvenation effect. Further, *Yapana Basti*, by the nutritive elements in it, (like *Ksheer*) has *Jivaniya* and

Brimhaniya effect on all over body and well as targeted *Dhatu*.

Nowadays, conventional method is in trend to give *Basti* through Enema can. Administration of *Basti* by Drip method with help of a saline set and rubber catheter/infant feeding tube is also done especially for *Brimhana Basti*. It is reported that *Basti* administration by this method facilitates more absorption over conventional method and with low doses too it offers better results. Moreover, it stays in body for long time too.

This method can help to the *Brimhana* effect of this *Yapana Basti* here. Though, required *shodhana* may not occur but *sthanik mridu shodhana* still possible as that of *Anuvasana Basti*. Keeping in mind that only *mridu sanshodhana* is indicated for *Vata Vyadhi*; this method was adopted and has proved itself. *Mridu shodhana*, *shaman* as well as *Brimhana* effects were seen in spite of low doses too. Probably its prolonged retention time made this possible.

Brihatyadi Yapana Basti in the present study seems exclusively suitable for *Asthigata Vata*. This combination of *Tikta Dravyas* in composition of *Ksheer Basti* makes it worth to break the *Samprapti* of *Asthigata Vata*, as *Tikta Ksheer Basti* is clearly indicated for *Ashthyashrit Vikaras*. To make the composition more *Tikta*, *Panchatikta Ghrita* was added inspite of plain *Ghrita*.

Plain *Ksheer Basti* is totally *Brimhana* in nature and may cause *Agni Maandha* on continuous use, whereas these *Tikta Dravyas* of *Yapana Ksheer Basti* will never hamper *Agni*.

Milk, *Panchatikta Ghrita*, *Til Taila* along with *Saindhava* and *Madhu Dravya* in the formulation mainly will keep maintaining its *Shodhana* as well as *Shamana Karma*. Moreover, *Tikta Rasa* facilitates the action of *Basti Dravya* on *Asthi Dhatu*.

Presence of milk increases the nutritive properties as it is *Brimhaniya* and *Jivaniya*. Preparation of *Basti* increases the bio availability of nutrients and minerals in milk to the bone and allied tissues.

Kalka Dravya of *Basti* composition, also known to be the main active ingredient, was *Vrihati*, *Kantakari*, and *Guduchi* here, are also *Tikta* in nature and having *Vata Kapha Shamak* properties were further supported to the action. *Shatavari* and *Guduchi* are good *Rasayana* also.

Honey, along with helping formation of the much required emulsion (due to presence or saponins in these drugs) for easy absorption in large intestine also possess *Vata Kapha Shamaka* properties.

Thus this *Yapana Basti* through its entry to blood stream reaches targeted site of lumbar region where due to *Kha Vaigunya* there would be a plea from cells for nutrition and there would be inflammatory changes etc. The drugs through their *Prabhava* correct the vitiation of *Vata* and offer *Brimhana* effect on *Asthi Dhatu* simultaneously. Moreover, *Vata Anulomana* property keeps *Apana* in control. *Basti* acts on *Apana* area which is nearer to lumbar region helps to give better results due to *Sthan Samipya* also.

Thus, it can be clearly seen that *Brihatyadi Yapana Basti* holds promising hope as non-invasive intervention in the management of Lumbar Spondylosis (*Kati Asthigata Vata*).

CONCLUSION

Both groups found highly significant on all parameters. On comparison, Drip method was found more beneficial in low back ache symptom. On the other hand Enema can method was found better in lt.lateral flexion of lumbar spine.

Retention time could be increased by Drip method and with half doses too, it could give results. This cost effectiveness is its another benefit. However, it's work is limited to *shaman* and *brimhan* purpose mainly. It can be stated that *shodhana* action of *yapana Basti* can be achieved better by Enema can method whereas for *shaman / brimhana* action Drip method can be a better option.

REFERENCES

1. Charaka Samhita, revised by Charaka and Dridhbala, Text with English Translation & critical exposition on Chakrapani Datta's Ayurveda Dipika commentary, 2nd edition, R.K. Sharma and Bhagvandas, Chaukhambha Sanskrit Series Office, Varanasi, Vol. 1, (Ch.Su.25/40), 2002
2. Charaka Samhita, revised by Charaka and Dridhbala, Text with English Translation & critical exposition on Chakrapani Datta's Ayurveda Dipika commentary, 2nd edition, R.K. Sharma and Bhagvandas, Chaukhambha Sanskrit Series Office, Varanasi, Vol. 2, (Ch.Si.1/40), 2002.
3. Murthy-KRS; Astanga samgraha of Vagbhata, vol.II; 5th Edition; As.ka.7/35; Chaukhambha Orientalia Varanasi; 2005: 570
4. Charaka Samhita, revised by Charaka and Dridhbala, Text with English Translation & critical exposition on Chakrapani Datta's Ayurveda Dipika commentary, 2nd edition, R.K. Sharma and Bhagvandas, Chaukhambha Sanskrit Series Office, Varanasi, Vol. 1, (Ch.Su.28/27), 2002.
5. Murthy-KRS; Astanga samgraha of Vagbhata, vol.II; 5th Edition; As.ka.5/18; Chaukhambha Orientalia Varanasi, 2005; 589
6. Sastri Vaidhya Satya Narayana; Carak Samhita, vol.II; Ca.Si.8/4; Chaukhambha Bharati Academy, 2011; 1043.

7. Dr.Yadaiah P.; Prayogika Panchakarma Vigyan, 2nd Edition; Jaya Prakashan, 2006; 117.