

## TO STUDY THE EFFICACY OF PANCHA-TIKTA KSHEERA SARPI BASTI IN ASTHIMAJJAGATA VATA W.S.R. TO KATI GRAHA

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### ABSTRACT

Due to present chaotic life style people are suffering from various somatic and psychosomatic disorders like premature aging, *Kati Graha* etc. The reason is due to faulty life style and not abiding the rules of hygiene i.e *Dinacharya* (daily regimen), *Ritu charya* (seasonal regimen), ethical code and conducts as well. *Kati Graha* is a *Vata vyadhi* showing features like *Stambha*, *Ruka* and *Toda*. The pain is produced due to stiffness which is produced by *Saama* (with *ama dosha*) or *Niraama* (without *ama dosha*) *Vata* and its movement in to *Kati* (lumber region) hence this suggests presence of *Dhatu Kshayatmaka* and *Marga Avarodhaka* type of *samprapti*. According to Ayurveda *Kati Graha* is “*Asthi Kshayaja vikara*”. Being a degenerative *Vata* disorder *Kati Graha* demand a pioneer treatment of *Vata* i.e *Basti*. *Acharya Charak* apply highlighted the glorified designation of *Basti* ‘*Basti vataharanam shreshtha*’. *Acharya Charak* the legendary healer has indicated *Basti* prepared with substance like *Go-dugdha*, *ghrita* and processed in *Tikta rasa dravya* especially for *Asthi-Majjagata Vata*. *Tikta Rasa* has *Vayau* and *Akasha Mahabhuta* dominancy hence it has affinity towards the body element like *Asthi* having *Vayau* and *Akash Mahabhuta* in dominance. So the medication was selected accordingly.

**Keyword:** *Pancha-Tikta Ksheera Sarpi Basti, Kati Graha* etc.

### INTRODUCTION

The word *Kati Graha* originated from the union of two words ‘*Kati*’ and ‘*Graha*’. *Kati* is derived from the root ‘*kat*’ in meaning ‘*shareera avayava vishesham*’. In *Amara Kosha* the word

meaning of *Kati* is ‘*Katau vastra varanau*’. The part of the body which is covered with cloth, *graha* means holding. It is originated from ‘*dhatu graham upadane*’ one which give

support thus *Kati Graha* indicated disease condition of the back associated with pain and stiff movement. In our classic it is mentioned under various terms like *Kati Graham*, *Trika Shula*, *Trika Graham*, *Prishtha Graham* and *Shroni Bheda*. *Kati Graha* is one such condition caused by vitiated *Vayu* characterized by *Stambha*, *Ruk* and *Toda* in the *Katipradesha*<sup>1</sup>. Even though it is not mentioned as a separate disease in *Bruhatrayees* ample references are found in other texts like *Gada Nigraha* by *Acharya Shodhala*<sup>6</sup> and *Sharangadhara Samhita*<sup>8</sup>. *Acharya Sharangadhara* has included it under the *Vataja Nanatmaja Vyadhis*<sup>8</sup> marking its importance. In modern treatment of low back pain (*Kati Graha*) include

conservative treatment like exercise, physiotherapy, rest and NSAID for temporary relief of pain. In this way *Ayurved Chikitsa* that is *shodhana*<sup>7</sup> can give permanent relief from the pain in *Kati*. Hence there is need to know the effect of *Pancha-Tikta Ksheera Sarpi Basti*<sup>4</sup> in management of *Kati Graha*. Low back pain is the most common condition next to common cold. Epidemiological studies shows that back pain is affecting nearly 60-80% of the population (Back Pain & Sciatica, N Engle J Med 1988). It is the number one cause for disability in patients younger than forty-five years of age causing more off work occasion than most of diseases.

## MATERIALS & METHODOLOGY:

**Table-1**

	<i>Latin Name</i>	<i>Rasa</i>	<i>Guna</i>	<i>Virya</i>	<i>Vipaka</i>
<i>Kantakari</i>	<i>SolanumXanthocarpum</i>	<i>Tikta, Katu</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>
<i>Patola</i>	<i>Trichosantheoica</i>	<i>Tikta, Katu</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>
<i>Nimba</i>	<i>Azadirachtaindica</i>	<i>Tikta, Kashaya</i>	<i>Grahi, Laghu</i>	<i>Sheeta</i>	<i>Katu</i>
<i>Vasa</i>	<i>Adhatodavastica</i>	<i>Tikta, Katu</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>
<i>Guduchi</i>	<i>Tinosporacardifolia</i>	<i>Tikta, Katu, Kashaya</i>	<i>Laghu, Snigdha</i>	<i>Ushna</i>	<i>Madhura</i>
<i>Go-dugdha</i>	-	<i>Madhura</i>	<i>Guru, Snigdha, Mrudu</i>	<i>Sheeta</i>	<i>Madhura</i>
<i>Go-ghrita</i>	-	<i>Madhura</i>	<i>Sheeta, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>
<i>Saindhava</i>	-	<i>Lavana, Madhura</i>	<i>Laghu, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>
<i>Madhu</i>	-	<i>Madhura, Kashya</i>	<i>Guru, Ruksha,</i>	<i>Sheeta</i>	<i>Katu</i>

### Method of Preparation of *Niruha Basti*:

Blend the ingredients in the following sequence-<sup>7</sup>

**Table-2**

<i>Dravya</i>	<i>Matra</i>
<i>Madhu</i>	80ml
<i>Saindhava</i>	5gm
<i>Go-ghrita</i>	80ml
<i>Kalka</i>	20gm
<i>Kwatha</i>	160ml
<i>Go-dugdha</i>	80ml

### Qualities of prepared *Basti Dravya*:

1. A prepared *Basti Dravya* should be homogenous.
2. *Basti Dravya* should be kept at body temperature at the time of administration.
3. No oil drops should be floating on the surface of *Basti Dravya*.
4. Consistency of *Basti* should be not so thick and not so liquid.

In *Yoga Basti* combination we were given *TilaTailaMatraBasti* 60 ml (according to *Acharya Charaka*) and *Pancha-TiktaKsheeraSarpiBasti* approximately 400ml (5Prasrati according to *Acharya Charaka*) alternately for 8 days.

### GROUPING OF PATIENTS:

30 Patients were randomly selected from the OPD & IPD of Rani Dullaiya Smriti Ayurved P.G. Mahavidyalaya Evam Chikitsalaya, Bhopal (M.P.)

### INCLUSION CRITERIA:

- Patients having the classical signs & symptoms of *Kati Graha*.
- Patient of both the sexes.

### SCORINGPATTERN:

#### *Stambha* (Stiffness):

Table-3

Parameters	Score
No <i>Stambha</i>	0
Sometimes for 5-10 min.	1
Daily for 10-30 min.	2
Daily for 30-60 min	3
Daily for more than 1 hour.	4

- Patient having the age above 18 years & below 70 years.
- *Basti Arha* Patients.
- Patient willing for the treatment.

### EXCLUSION CRITERIA:

- Patient having the age below 18 years & above 70 years.
- *Basti Anarha* patient.
- Patient with disease like- *UdaraVyadhi*, *Urakshata*, *Garbhini*, Ano rectal disease, any acute disease & any infective disease.

### ASSESSMENT CRITERIA:

Assessment of effects of the *Pancha-Tikta Ksheera Sarpi Basti* was done on the basis of various Subjective Criteria.

### SUBJECTIVE CRITERIA:

Signs & Symptoms of *Kati Graha* - (According to *Acharya Sharangadhara*)

1. *Stambha* (Stiffness of Kati)
2. *Ruk* (Pain)
3. *Toda* (Pricking Sensation)

**Ruk (Pain):**

**Table-4**

Parameters	Score
No Pain	0
Painful walk without limping	1
Painful walk with limping but without support	2
Painful walk only with support	3
Painful & enable to walk	4

**Toda (Pricking Sensation):**

**Table-5**

Parameters	Score
No Toda	0
Occasional pricking sensation	1
Pricking sensation for 10-30 min.	2
Pricking sensation for 30-60 min.	3
Pricking sensation for more than 1 hour.	4

**OBSERVATIONS AND RESULTS**

A total number of subjects filling the inclusion criteria were studied.

- Number of subjects registered for the study- 35
- Number of subjects completed the study- 30

- Number of drop-out- 5

Observation was made under the following headings:

- A. Descriptive data
- B. Data related to the disease

**Table-6**

Total Number of Subjects Registered	Number of Subjects Completed The Study	Number of Drop-Out
35	30	5

**DESCRIPTIVE DATA:**

**1. AGE:** Age wise distribution of 30 Patients of *Kati Graha*.

**Table-7**

AGE GROUP	NO.	PERCENTAGE
18-31	3	10
32-45	5	17
46-58	16	53
59-72	6	20

**2. GENDER:** Gender wise distribution of 30 Patients of *Kati Graha*.

**Table-8**

GENDER	NO.	PERCENTAGE
MALE	19	63
FEMALE	11	37

**3. RELIGION:** Religion wise distribution of 30 Patients of *Kati Graha*.

**Table-9**

RELIGION	NO.	PERCENTAGE
HINDU	28	93
MUSLIM	2	7

**4. EDUCATION:** Education wise distribution of 30 Patients of *Kati Graha*.

**Table-10**

EDUCATION	NO.	PERCENTAGE
GRADUATE	11	37
HIGHER SECONDARY	8	27
HIGH SCHOOL	6	20
ILLITRATE	5	16

**5. OCCUPATION:** Occupation wise distribution of 30 Patients of *Kati Graha*.

**Table-11**

OCCUPATION	NO.	PERCENTAGE
BUSINESS	12	40
SERVICE	6	20
TEACHER	2	7
STUDENT	3	10
HOUSEWIFE	5	16
LABOUR	2	7

**6. SOCIO ECONOMIC:** Socio economic status wise distribution of 30 Patients of *Kati Graha*.

**Table-12**

SOCIO ECONOMIC STATUS	NO.	PERCENTAGE
RICH	4	13
UPPER MIDDLE	10	33
LOWER MIDDLE	14	47
POOR	2	7

**7. DIET:** Diet wise distribution of 30 Patients of *Kati Graha*.

**Table-13**

DIET	NO.	PERCENTAGE
VEG	14	47
MIXED	16	53

**8. MARITAL STATUS:** Marital status wise distribution of 30 Patients of *Kati Graha*

**Table-14**

MARITAL STATUS	NO.	PERCENTAGE
MARRIED	27	90
UNMARRIED	3	10

**9. ADDICTION:** Addiction wise distribution of 30 Patients of *Kati Graha*.

**Table-15**

ADDICTION	NO.	PERCENTAGE
SMOKING	4	13
TOBACCO	6	20
ALCOHOL	5	17
NONE	15	50

**10. AGNI:** Agni wise distribution of 30 Patients of *Kati Graha*.

**Table-16**

AGNI	NO.	PERCENTAGE
SAMAGNI	12	40
MANDAGNI	8	27
TIKSHNAGNI	6	20
VISHAMAGNI	4	13

**11. KOSHTHA:** Koshtha wise distribution of 30 Patients of *Kati Graha*.

**Table-17**

KOSHTHA	NO.	PERCENTAGE
MRIDU	12	40
MADHYAMA	10	33
KRURA	8	27

**12. PRAKRATI:** Prakrati wise distribution of 30 Patients of *Kati Graha*.

**Table-18**

PRAKRATI	NO.	PERCENTAGE
VP	15	50
VK	6	20
PK	9	30

**DATA RELATED TO THE DISEASE-**

**CHRONICITY OF THE DISEASE:**

Among 30 Patients 6 (20%) had chronicity less than 3 months, 8 Patients (27%) in between 3-6 months, 9 (30%) between 6-9 months, 7 (23%) are more than 1 year chronicity of the disease.

**STAMBHA (stiffness): -**

In the whole clinical study 15 Patients (50%) were having *stambha* of grade 4, 11 Patients (37%) of grade 3 *stambha* and 4 Patients (13%) having grade 2 *stambha* i.e. stiffness in various parts of back.

**Table-19**

STAMBHA	NO.	PERCENTAGE
GRADE 0	0	0
GRADE 1	0	0
GRADE 2	4	13
GRADE 3	11	37
GRADE 4	15	50

**RUK (PAIN):-**

In the whole clinical study 12 patients (40%) were having pain of 4 grade, 17 Patients (57%) of grade 3 pain and 1 (3%) Patients have grade 2.

**Table-20**

RUK	NO.	PERCENTAGE
GRADE 0	0	0
GRADE 1	0	0
GRADE 2	1	3
GRADE 3	17	57
GRADE 4	12	40

**TODA (PRICKING TYPE OF PAIN SENSATION): -**

In the whole clinical study 1 Patient (3%) were having toda of grade 4, 16 Patients (53%) of grade 3 toda and 14 (44%) Patients having grade 2 toda i.e. pricking type of pain sensation.

**Table-21**

TODA	NO.	PERCENTAGE
GRADE 0	0	0
GRADE 1	0	0
GRADE 2	13	44
GRADE 3	16	53
GRADE 4	1	3

**RESULTS**

The result of therapy was evaluated on the basis of improvement in subjective parameters on various rating scales. For statistical analysis, we calculated mean, standard deviation and standard errors, percentages. Student's paired 't'

test was used for assessment. The obtained result was interpreted as:

- Non-significant :  $p > 0.05$
- Significant :  $p < 0.01$
- Highly significant :  $p < 0.001$

Effect of Pancha- Tikta Ksheera Sarpi Basti on Stambha of Kati Graha.

**Table-22**

SYMPTOM	MEAN		BT-AT	%	S.E. ±	S.D. ±	t value	P value
	BT	AT						
STAMBHA	3.367	1.133	2.234	66.34%	0.149	0.817	14.96	<0.001

Statistical analysis showed that the mean score which was 3.367 before the treatment was reduced to 1.133 after the treatment with

66.34% improvement. The change was statistically Highly significant with P <0.001.

Effect of Pancha-Tikta Ksheera Sarpi Basti on Ruk of Kati Graha.

**Table-23**

SYMPTOM	MEAN		BT-AT	%	S.E. ±	S.D. ±	t value	P value
	BT	AT						
RUK	3.367	1.033	2.333	69.24%	0.087	0.479	26.655	<0.001

Statistical analysis showed that the mean score which was 3.367 before the treatment was reduced to 1.033 after the treatment with

69.24% improvement. The change was statistically highly significant with P <0.001.

Effect of Pancha- Tikta Ksheera Sarpi Basti on Toda of Kati Graha.

**Table-24**

SYMPTOM	MEAN		BT-AT	%	S.E. ±	S.D. ±	t value	P value
	BT	AT						
TODA	2.600	0.833	1.767	67.96%	0.092	0.504	19.199	<0.001

Statistical analysis showed that the mean score which was 2.600 before the treatment was reduced to 0.833 after the treatment with

67.96% improvement. The change was statistically highly significant with P <0.001.

### OVER ALL EFFECT OF PANCHA- TIKTA KSHEER SARPI BASTI ON KATI GRAHA

**Table-25**

CATEGORY	NO. OF PATIENTS	PERCENTAGE
Complete remission	2	6.6 %
Marked improvement	5	16.7 %
Moderate improvement	20	66.7 %
Mild Improvement	3	10 %
Unchanged	0	0 %

### DISCUSSION

Tikta Substance used in Pancha-Tikta Ksheera Sarpi Basti are having predominance of Vayu and Aakash Mahabhuta. Hence, it can enter any part of the body specially the part having the similar Mahabhuta predominance like Asthi Dhatu. So the Basti prepared with Tikta Substance has capacity to reach Asthi Dhatu. As Acharya Arundutt in his commentary said that any drug having properties like Snigdha,

Shoshana and Khartva would increases the Asthi Dhatu. No such drug is available having these properties but these properties are achieved by processing Tikta Substance with milk where milk is having Snigdha property and Tikta Rasa is having Shoshana property and combination of these two produce Kharata in Asthi Dhatu which in turn increase the Asthi Dhatu. Maximum effect of Basti is on Pakwashya which is Purishadhara Kala.



According to Acharya Dalhana Purishadhara Kala is nothing but Asthidhara Kala and there is a definite relation between these two Kalas. So it is observed that after giving Ksheera Basti in Pakwashya there is relief in symptom like pain and tenderness etc. Many bones and joint disorders are arising due to deficiency of calcium due to which bone density decreases and degeneration of bones occurs. As milk is good source of calcium and other minerals so by giving Ksheer Basti calcium level improved in the body and bony tissue are repaired. Only 20% – 30% of calcium is absorbed from our dietary food and remains excreted in stool. Maximum calcium absorption occurs in jejunum and ileum but some of the calcium is also absorbed from colon also. Hence as Basti Dravya reaches to colon and calcium absorption occur there it provides more calcium to bone. Chief proteins in milk are caseinogen and lactalbumin. Caseinogen is a phosphor protein and is associated with calcium as calcium caseinogen so milk is a good source of calcium. Also the carbohydrate of milk is lactose which is useful for absorption of calcium.

## CONCLUSION

The following conclusions are drawn on the basis of the conceptual analysis and observations made in the clinical study done in Rani Dullaiya Smriti Ayurved P.G. Mahavidyalaya Evam Chikitsalaya, Bhopal (M.P.)

*Kati Graha* (Low Back pain) is a type of degenerative disease in which there is loss of bones (*Asthi Dhatu*). In Ayurveda Low Back pain can be correlated with *Kati Graha*. *Kati Graha*/Low Back Pain is commonly seen in society as a prominent problem. The disease *Kati Graha* is a *Sthana Visheshha Vata Vyadhi*. It

is explained as a separate disease in *Gada Nigraha* and *Bhava Prakasha*. Main causative factor of *Kati Graha* is provoked *Vata* and all the factors causing increase in *Vata* are *Nidanas* for *Kati Graha*. Strenuous physical work, old age and direct *Abhigata* are the predisposing factors in the manifestation of the disease.

Other risk factors includes smoking excessive alcohol intake.(The most widely accepted explanations for the association between smoking and disc degeneration (*Kati Graha*) is malnutrition of spinal disc cells by carboxy-hemoglobin-induced anoxia or vascular disease.) *Vyana Vayu* is an essential factor for manifestation of the disease *Kati Graha*. Maximum incidence of this disease was seen in the age group of 46-58years. There is no direct reference regarding *Nidana* and *Samprapti* of *Kati Graha*. Mainly *Vata Vyadhi Chikitsa* has been advocated in *Kati Graha*. No complications of *Pancha-Tikta Ksheera Sarpi Basti* (*atiyoga*, *ayoga* and *mithya yoga*) were observed in this study.

*Pancha-Tikta Ksheera Sarpi Basti* showed high significance in decreasing *Stambha*, *Ruk* and *Toda*. which was noted completely after follow up ( $P < 0.001$ ), this can be due to the fact that *Basti* is supposed to be best *Vata Shamaka* therapy and pain is mainly caused by *Vata* as is explained by *Acharya Sushruta*.

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