

A COMPREHENSIVE CLINICAL STUDY ON THE ROLE OF SHIGRU LAVANA IN THE MANAGEMENT OF UDAVARTA

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ABSTRACT

In present era, people have adopted an improper life style, irregular diets, increasing stress and suppressing natural urges. For all these reasons mankind is prone to many disorders. *Udavarta* is one among them. Due to etiological factors, the *Vata* gets aggravated in *Koshta* and moves in *Prathiloma Gati*. Only this *Udavarta* is considered for the present study rather than 13 types. *Vibandha* (constipation) is the main feature as well as explanation in brief for *Udavarta*. It is grievous disease as it may lead to many of the serious disorders. Initially it will cause little difficulty in passing stools but in advanced stages, *Udavarta* leads to fatal diseases including *Pakshagata*, *Hridroga*, *Gulma*, *Manovikaras* etc. Unfortunately, *Vibandha* is considered as silly complaint and neglected often by the society. Thus clinical study was taken to evaluate the efficacy of *Shigru Lavana* in *Udavarta*. *Pakwashayagatavata* is *Samprapthi* in brief for *Udavarta*. *Lavanayukta yogas* like *Kalyanaka Lavana*, *Kanda Lavana* etc and

Deepana Karma are indicated in *Pakwashayagata Vata*vyadhis. *Shigru* is one of the ingredients in *Kalyanaka Lavana* and moreover *Shigru* is considered as one among the best *Vatahara* drugs according to *Vaidyasara Sangraha*. *Shigru* possess *Madhura Rasa*, *Teekshna Ushna Guna* and *Ushna Veerya*. *Lavana rasa* is given with combination in *Vatarogas* as it

wins over the *Vibandha* by producing *Prakledata*, (Moistness and softness to hard stools). Here *Shigru Lavana* is to be prepared according to *Putapaka Vidhi*. After considering all these points, as the drugs are easily available and cost effective, this study is planned.

KEYWORDS: *Udavarta*, *Vibandha*, Constipation, *Shigru Lavana*, *Pakwashayagata*.

INTRODUCTION

In the context of Yakshaprashna of Mahabharata, Dharmaraya opines that “*Labhanam Shreyamarogyam, Sukhanam Tushtiruttamam*” which means health is considered to be the superior one among all the gains of life. Nowadays people have adopted a wrong lifestyle, irregular diets, increasing stress and suppressing natural urges to achieve more pleasure and happiness in life but these factors influence on gastrointestinal tract (*Koshta*) which leads to following disorders i.e, *Gulma*, *Arshas*, *Anaha*, *Udavarta* etc.^[1] In India 22% of adult and 45% of elderly population is suffering from this condition.

In classics, *Udavarta* is explained under two aspects, First one is 13 types of *Udavarta* due to suppression of natural urges like *Kshudha*, *Trishna*, *Jrimbha*, *Mutra* etc^[2] are excluded from the present study. Later type of *Udavarta* is due to excessive ingestion of foods which are having *Kashaya* (astringent), *Tikta* (bitter), *Katu* (pungent) in taste and *Ativyayama* lead to aggravation of *Apanavayu* in the *Koshta* especially in *Pakwashaya*. This aggravated *Apana Vayu* obstructs the *Adhovahini Srotas* mainly *Pureeshavaha Srotas* which decreases the movements of stools, urine and flatus and produces *Vibandha* (Constipation). As a result of which, *Apana Vata* moves in opposite direction causing different disorders. This pathogenesis is named as *Udavarta*^[3] which is considered for the present study. *Acharyas* have explained various findings of *Udavarta* in which some of them are *Lakshanas* and some can be considered as *Upadrava (Roga)*, but in current study only *Lakshanas* are considered. *Dalhana* used the word *Vibandha* as an equivalent term for *Udavarta*.^[4] To explain the severity of disease, *Bhela* correlated *Udavarta* as dangerous as *Sarpavisha* (snake poison), *Shastra* (deadly weapons) and *Visha* (other poison substances).^[5]

Koshtagata Vata and *Pakwashayagata Vata* is the *Samprapti* in brief for *Udavarta*. *Sneha Virechana*, *Shodhaka Basti*, *Deepana Karma* and *Lavanayukta Yogas (Kalyanaka Lavana, Kanda Lavana)* are indicated in treatment of *Pakwashayagata Vata Vyadhi*.^[6] *Shigru* is one of the ingredients in *Kalyanaka Lavana*^[7] and moreover *Shigru* is considered as one among the best *Vatahara* drugs mentioned by *Vaidyasara Sangraha*.^[8] *Shigru* possess *Katu Rasa*

and *Teekshna*, *Ushna Guna*.^[9] *Lavana Rasa* acts as *Deepaka* and *Anulomaka*.^[10] It has got *Prakledi bhava* which is responsible for moistness and softening of hard stool and thus it helps in easier evacuation of stagnated stool.^[11] To know the individual action of *Shigru* and *Lavana*, *Shigru Lavana* is taken for present study. Here *Shigru Lavana* is prepared according to *Putapakavidhi*. By combined effect of *Prakledana*, *Anulomana* and *Deepana*, *Shigru Lavana* may help to resolve the pathogenesis of *Udavarta*. *Sushruta* mentioned *Kshara Yogas* may be because of dominancy of *Lavana* in it. To draw attention about the *Udavarta* disease and severity, we have chosen this for present study.

AIMS AND OBJECTIVES- To know the comprehensive effect of *Shigru Lavana*.

- 1) Based on chronicity
- 2) Based on severity

MATERIALS AND METHODS

Preparation of trial drug

Shigru Lavana- Ingredients of *Shigru Lavana* are shown in table 1.

Table No. 1: Ingredients of *Shigru Lavana*.

Sl. No	Drugs	Latin name	Quantity
1	<i>Shigru Lavana</i>	Moringa Oleifera	1 part
2	<i>Saindhava Lavana</i>	Sodium Chloride	1 part

Shigru Lavana is prepared according to *Antardhooma Vidhi* mentioned in classics.^[12] The Ayurvedic measurements are in volumetric in nature. Hence all the ingredients were taken in volumetric measurements with the above mentioned proportion.

Method of Preparation

- ✓ Coarse powder of *Shigru twak* and fine powder of *Saidhava Lavana* were prepared. These powders were homogenously mixed and spreaded over *Sharava*. *Sandhibandhana* was done.
- ✓ *Sharava* was placed within the *Valuka puta* apparatus and started to heat. It took around 22 hours to open the husk/ to crack the paddy which was placed over the sand (*Siddhi Lakshana*).^[13]
- ✓ Later flame kept off. The *Putta* was left for self-cooling (*Swanga sheetata*). After ensuring that *Putta* has been completely cooled, it was opened and *Sharava* was collected, opened

and a black crystal form of medicines was seen inside it. Medicine was collected from *Sharava*.

- ✓ The medicine was packed into a single dose packet weighing about 1/3 *Karsha* approximately 2.3 gms and these sachets were kept in airtight container while prescribing.

Source of Data

- **Sample source:** Patients suffering from *Udavarta* were selected from OPD, IPD and Camps of KVGAMC, Sullia, duly following inclusion and exclusion criteria. In this study total number of 32 patients were registered, out of which 2 patients had discontinued.
- **Literary source:** Literary aspect of the study had been collected from classical Ayurvedic texts, Modern texts and with relevant medical journals and internet.
- **Drug source:** Raw drug was collected from local area and pharmacy after proper identification and formulation of *Shigru Lavana* was prepared in K V G Ayurveda Medical College and Pharmacy.

Method of collection of data

Study Design: An open clinical study.

Sample size: 30 patients fulfilling the inclusion and diagnostic criteria of either sex were selected and assigned in a group.

Selection criteria

- a) **Diagnostic criteria:** As per *Ayurveda* there is no subjective and objective parameters mentioned in classics.

Table No. 2: Subjective and Objective Parameters.

Subjective Parameters	Objective Parameters
<i>Pureesha Vibandha, Adhmana, Agnimandhya, Kukshishoola, Urdva Vata (Udgara Bahulya)</i>	Nil

b) Inclusion Criteria

- Patients between age group 18-70 years irrespective of gender, religion and occupation.
- Patients with symptomatology of *Udavarta* according to classics.

c) Exclusion criteria

- Patients of age below 18 and above 70 years
- Patients suffering from other systemic disorders.

Treatment plan: 30 patients of *Udavarta* fulfilling the inclusion criteria will be selected and assigned into single group. All the patients will be treated with *Shigru Lavana* as *Shamana Yoga*.

Table No. 3: Treatment schedule.

Sample size	30 patients
Dose	1/3 <i>Karsha</i> , ~2.3gms
<i>Anupana</i>	<i>Ushnodaka</i> ^[14]
<i>Sahapana</i>	<i>Goghrita</i> ^[15]
Time of administration	<i>Pragbhakta</i> ^[16] (Before breakfast)
Duration	14 days
Follow up	7 days
Total duration	21 days

The dose of *Choorna Kalpana* is 1 *Karsha*. Due to *Teekshnata* of *Shigru Lavana*, the dose is reduced to 1/3 *Karsha*.

Method of assessment of clinical response

Assessment criteria: In Ayurveda there are no subjective and objective parameters for assessment. It is done purely based on *Roga Lakshana* (Symptomatology) as mentioned in classics. For assessment following *Lakshanas* were considered and they were assessed with different grading and analysed by Paired T-test.

Table No. 4: Grading of assessment criteria.

1. Pureesha Vibandha	
No <i>Vibandha</i> , smooth and normal shape stools	Grade 0
Passes stools once in a day with difficulty / dry and hard stools	Grade 1
Passes stools every alternative day with difficulty / Lumpy and sausage like	Grade 2
Wont passes stools for more than 2 day and above/ separate hard lumps	Grade 3

2. Adhmana	
No <i>Adhmana</i>	Grade 0
<i>Adhmana</i> present if no stools is passed	Grade 1
<i>Adhmana</i> present even after passing stools	Grade 2
Severe <i>Adhmana</i> irrespective of passing stools	Grade 3

3. Agnimandya	
No <i>Agnimandya</i>	Grade 0
<i>Agnimandya</i> occurs occasionally 2 to 3 times per week	Grade 1
<i>Agnimandya</i> occurs daily	Grade 2
Severe <i>Agnimandya</i> which doesn't relieve without medicine and disturbs the routine of patients.	Grade 3

4. Kukshishoola	
No Kukshishoola	Grade 0
Kukshishoola occurs occasionally 2-3 times per week	Grade 1
Kukshishoola occurs daily	Grade 2
Severe Kukshishoola which disturbs the routine of patients	Grade 3

5. Urdhvavata	
No Urdhvavata	Grade 0
2-3 times a day	Grade 1
4-6 times a day	Grade 2
More than 6 times a day with disturbing daily activity	Grade 3

RESULTS

Table No. 5: Overall assessment of Clinical response.

GRADING	RELIEF IN %	RELIEF IN PATIENTS
No improvement	0%	0
Mild improvement	1-30%	2
Moderate improvement	31-60%	8
Marked improvement	61-99%	16
Complete remission	100%	4

In overall effect of treatment in *Udavarta*, out of 30 patients in the study, 2 patients (6.67%) has mild improvement, 8 patients (26.67%) have moderate improvement, 16 patients (53.33%) have marked improvement and 4 patient (13.33%) has complete remission. Overall effect of the treatment is 63.33%.

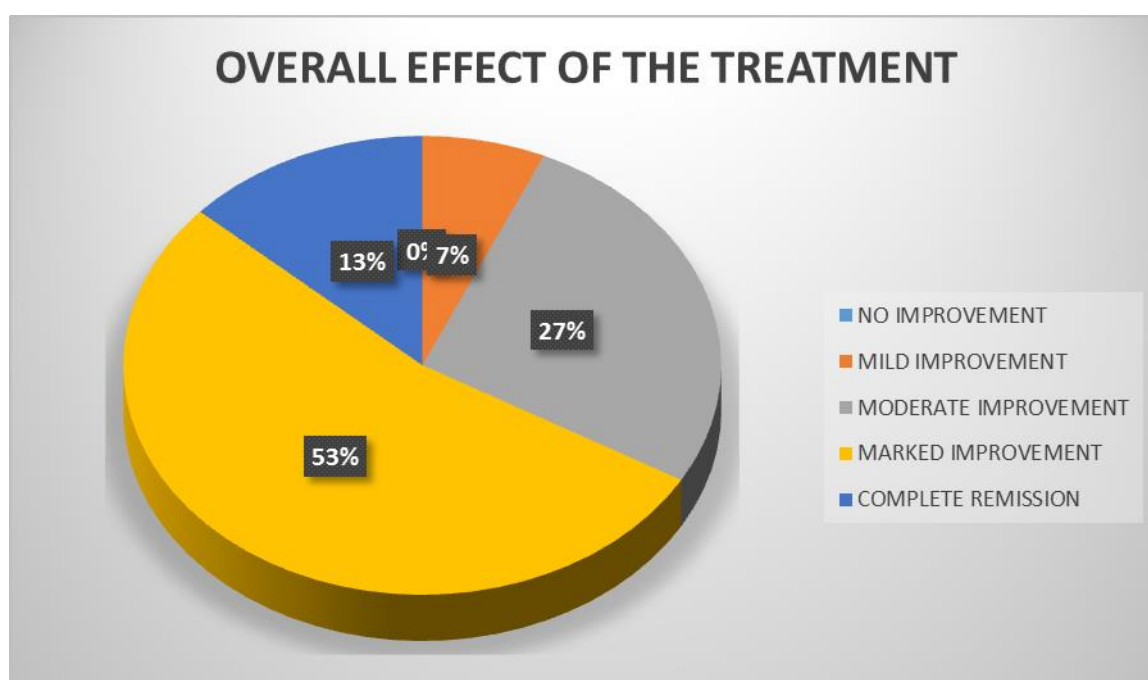


Chart No. 1: Showing overall effect of the treatment.

OBSERVATION

In the present study, 30 patients fulfilling the inclusion criteria were randomly selected and studied. Each patient was observed thoroughly and the observations are recorded with necessary charts and graphs. In the sample taken for study, 60% of male patient were registered in comparison to 40% of female patient. Analysis of age incidence of 30 patients suffering from *Udavarta* shows more number of patients between the age group of 51-60 years i.e., 30%. Analysis of occupational incidence shows 36.67% of patients were agriculturists. Chronicity of *Udavarta* shown 46.67% patients with less than 1 year duration and 53.33% of patients more than 1 year of duration. Analysis of *Prakruthi* shows maximum of 36.67% of patients with *Vatapitta Prakruthi*. Analysis of *Vyadhibala* shows 26.67% of patients were having *Avara Vyadhibala*, 60% of patients were having *Madhyama Vyadhibala* and 13.33% were having *Pravara Vyadhibala*. Analysis of *Doshadhikyata* of 30 patients of *Udavarta* shows 46.67% of *Vatakapadhika*, 33.33% of *Vatadhika* and 20% of *Vatapittakapadhika Udavarta* condition.

The treatment was given for 14 days with *Shigru Lavana* as *Shamana Yoga* which showed significant result. The treatment modalities are safe and are of therapeutic value. The outcomes of the treatment indicate that the patients have shown marked improvement in all criteria of assessments of *Udavarta*.

DISCUSSION

Generally, in all forms of *Udavarta*, the preliminary treatment consists in restoring the deranged and incarcerated bodily *Vayu* to its normal cause and direction. *Pakwasahayagata Vata Vyadhi Chikitsa* which is explained by *Sushruta* can be implemented for the disease *Udavarta* as *Pakwashyaaya* and *Apana Vayu* is involved. They are *Sneha Virechana*, *Shodhaka Basti*, *Deepana Karma* and *Lavanayukta Yogas*. The general management includes *Abhyanga*, *Snehana*, *Swedana*, *Niruha Basti*, *Sneha Virechana*, *Varti*, *Anuloma anna*, and *Anuvasana Basti*.

To assess the effectiveness of *Shigru Lavana* in *Udavarta*, Paired t test was used for statistical analysis. It was observed that the parameters like *Puresha Vibandha*, *Adhmana*, *Agnimandhya*, *Kukshishoola*, *Urdvavata* showed significant results as explained below.

a. Effect on Vibandha: Here, *Vibandha* is seen because of *Udavarta* due to *Vata Prakopa*. *Shigru Lavana* has drugs with *Snigdha*, *Madhura*, *Anulomana Karma* and *Prakledana Karma* which reduces the *Rooksha Guna* of aggravated *Vata* and helps in easy evacuation of stools. Statistical analysis showed that the mean score of 2.2 before the treatment was reduced to 1 after the treatment and to 0.933 after follow up with 57.59% improvement on follow up and there is a statistically significant change ($P < 0.001$).

b. Effect on Adhmana: *Adhmana* again is a *Lakshana* seen due to aggravated *Vata*. It is produced due to *Pureesha Vibandha* of *Udavarta*. *Adhmana* reduces, when *Udavarta* returns to normalcy due to *Vata Shamana* by *Snigdha* and *Madhura Guna*, Statistical analysis showed that mean score of 1.93 before treatment was reduced to 0.66 after the treatment and further to 0.53 at the follow up with an improvement of 72.53% and there is a statistically significant change at $P < 0.001$.

c. Effect on Agnimandhya: *Agnimandhya* manifests due to the aggravated *Vata and Kapha*. When the *Apanavayu* reverts back to normalcy because of *Deepana* and *Anulomana Karma* of *Shigru Lavana*, *Agnimandhya* is reduced.

Statistical analysis showed that the mean score of 1.566 before treatment was reduced to 0.466 after treatment and further to 0.4 on follow up with an improvement of 74.45% and has statistically significant changes at $P < 0.001$.

d. Effect on Kukshishoola: *Kukshishoola* is due to *Sheeta Guna* of *Vata*. *Shigru* is having *Katu Rasa*, *Ushna veerya* and *Saindhava Lavana* is having *Ushna Guna* subsides the *Sheeta Guna* of *Vata* which helps in reducing pain.

Statistical analysis showed that the mean score of 0.6 was reduced to 0.13 after treatment and remained same during follow up with an improvement of 78.33% and has statistically significance at $P < 0.001$.

e. Effect on Urdhvavata: Whenever *Pureeshavaha Srotas* gets obstructed (hard stools), *Vata* moves in opposite direction and leads to *Urdhvavata*. *Lavana Rasa*, *Madhura Rasa*, *Madhura Vipaka* and *Snigdha Guna* helps in liquefaction and evacuation of stools. Hence *Urdhvavata* is reduced.

Statistical analysis showed that the mean score of 0.8 was reduced to 0.3 after treatment and further to 0.23 during the follow up with an improvement of 71.25% and has statistically significant changes at $P < 0.001$.

f. Effect of treatment according to chronicity: In the study among 30 patients, 14 patients were observed with chronicity 1 year and below, 1 patient got mild relief (7%), 4 patients got moderate relief (28.57%), 7 patients got marked relief (50%) and 2 patients had complete

remission(14.28%). In the group with chronicity of above 1 year, among 16 patients, 5 patients got moderate relief (31.25%), 9 patients had marked relief (56.25%) and 2 patient had complete remission from the symptoms (12.5%). So with above mentioned parameters, it can be concluded that *Shigru Lavana* has no much difference in its action on chronicity below and above 1 year.

g. Effect of treatment according to severity: In the study, 8 patients had *Avara Vyadhibala*, 18 patients of *Madhyama Vyadhi Bala* and 4 patients of *Pravara Vyadhi Bala*. Patients with *Avara Vyadhibala* got mean relief of 84.58%, patients with *Madhyama Vyadhibala* got mean relief of 65.58% and patient with *Pravara Vyadhibala* got mean relief of 48.99%. Hence it is found that *Shigru Lavana* is effective in patients with *Avara Vyadhibala* and is comparatively less effective in patient with *Madhyama* and *Pravara Vyadhibala*. Higher doses of *Shigru Lavana* may be required in patients with *Pravara Vyadhibala* and *Madhyama Vyadhibala* for the desired effect

PROBABLE MODE OF ACTION

The *Samprapti* of *Udavarta* should be resolved by bringing back *Apana Vayu* to its normal site and to do its normal function like evacuation of stools, urine and flatus. According to different *Chikitsa Sutra* of *Udavarta*, *Deepana*, *Anulomana*, *Lavana yoga*, *Snehana*, *Swedana*, *Virechana*, *Shodhaka Basthi* are mainly advocated.^[17-18] *Shigru Lavana* is one drug which does *Deepana Karma* by *Katu Rasa* and *Ushna Veerya* of *Shigru*, attains *Ushna Guna* to *Shigru Lavana* by *Putapaka Samskara* itself and *Anulomana*, *Snehana Karma* & *Prakledi Bhava* by *Snigdha*, *Sara Guna* and *Madhura Vipaka* of *Lavana*.

CONCLUSION

The following conclusions are drawn from the clinical study undertaken on the topic *Shigru Lavana* in *Udavarta* at K.V.G. Ayurvedic medical college and Hospital, Sullia.

1. Based on clinical features, the disease *Udavarta* can be correlated with all classes of constipation.
2. As *Udavarta* is a *Vata Nanatmaja Vyadhi*, the *Vata* Predominant *Prakriti* subjects are prone to *Udavarta* which is evident in the present study.
3. *Katu*, *Tikta Rasa Pradhana*, *Rooksha Ahara*, *Vega Sandharana*, *Prajagarana* and *Ativyayama* are the main causes of *Udavarta*.
4. In this study age group between 51-70 years was more affected with *Udavarta*.

5. The *Yoga* is more effective in the younger group of patients than older age group with chronicity of more than 1 year.
6. It is found that *Shigru Lavana* is more effective in patients with *Avara Vyadhibala* than *Madhyama* and *Pravara Vyadhibala*.
7. *Shigru Lavana* has no much difference in its action on chronicity below and above 1 year.
8. *Shigru Lavana* showed *Vatahara* actions, because of the drugs used in having *Snigdha Ushna Guna* and *Madhura Vipaka*.
9. Overall effect of *Shigru Lavana* showed result of 63.33% in resolving pathogenesis of *Udavarta*, showing statistically significant result (P Value <0.001) on symptoms like *Vibandha*, *Adhmana*, *Agnimandhya*, *Kukshishoola*, and *Urdhvavata*. Hence it can be concluded that the treatment is effective in *Udavarta*.

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