



ROLE OF LEKHANA VASTI WITH VARAADI KWATHA IN STHAULYA W. S. R TO OBESITY-A PILOT STUDY

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ABSTRACT

Obesity is a multi-factorial disorder, which is often associated with many other diseases such as DM, HTN, CHD, OA, infertility etc., In *Ayurveda Sthaulya* has been described since very early days. *Susrutha* described *Lekhana vasti* which can be used in *Sthaulya*. In present study *Lekhana vasti with Varaadi kwatha* was used to evaluate its role in case of *Sthaulya*.

Methodology: Obese Patients were selected from O.P.D & I.P.D of Dr.B.R.K.R.Govt. Ayurvedic College, Hyderabad, on the basis of wt, BMI, body circumferences etc., 2 cycles of *Lekhana vasti* were given to each selected patient in form of 9 days 1 *Anuvasana* in between 3 *Lekhana vasti* with gap of 10 days in between two cycles.

Results: The assessment of overall effect of therapy was done based on change in relevant examinations before and after treatment, and results found were encouraging.

Conclusion: However still now there is no effective medicine in modern medicine. So, mankind hopes to search the perfect remedy from *Ayurveda* by its holistic approach. In this present study *Lekhana vasti with Varaadi kwatha* was tried and significant results were found in case of *Sthaulya*.

KEY WORDS: *Sthaulya* (obesity), *Lekhana vasti*, weight, BMI, Body circumferences.

INTRODUCTION

The 21st century with its continuous changing life styles, environment and dietary habits, have made man the victim of many life style and mal nutritious diseases, *Sthaulya* is one among them which shows deleterious effect on both body and mind. WHO too caused on one's health and declared *Sthaulya* (~obesity) as a global epidemic problem in 1997, giving rise to a new term 'globesity' [1].

As per Modern view obesity is excess deposition of adipose tissue. It is most common nutritional disorder in affluent societies. It occurs as a result of lack of physical activity with increased intake of food. Industrialization, stress during the work, altered dietary habits results into the clinical entity which can be called as *obesity*. It is precursor to coronary heart diseases, high Blood pressure, Diabetes mellitus,

Osteo arthritis, infertility& impotence, as well as psychological disorders like stress, anxiety, depression etc., which have been recognized as the leading diseases of the millennium^[2].

A body weight 20% or more above desirable weight of age, sex, height, is recognized as obese. A Recent National institute of health consensus conference defines obesity as body mass index at or greater than 25 kg/m². Acc., to W.H.O approximately the world population is estimated at about 7 billion. There are more than 1. 6 billion overweight people in the world. This data reflect the world wise distribution of obesity and at least 500 million who are clinically obese.^[3] That's why so many countries are making an effort to find out the perfect remedy for this burning problem. However, still today there is no effective medicine in modern

medical science. So mankind hopes to search the perfect remedy from *Ayurveda* by its holistic approach.

In *Ayurveda*, *Sthaulya* has been described since very early days in various *Samhitas*, *Sangraha grantha's*, *Nighantu's* etc., As, Charaka has described *Sthaulya* among the "*Asta Ninditha Purusha*" & *Sleshma Nanatmaja*, *Santarpana Nimitaja*, *Ati Brumhana Nimitaja* and *Samsodhana yoga*. Besides that, other aspect of *Sthaulya* and line of treatment have been described on various places^[5].

In *Sushruta Samhita* *Susrutha* narrated the etiopathogenesis of *Sthaulya Roga* on the basis of an endogenous entity being caused due to "Dhatvagni Mandya", described *Lekhana vasti* in *Sthaulya*. Further, the course and complication of the disease with some different line of treatment are discussed at various places of *Samhitha*.^[4]

In *Ashtanga Hridaya* and in *Ashtanga Samgraha*, they have mentioned various therapeutic and prophylactic measures to cure and prevent this disease and considered *Rasanjana* as a drug of choice for *Sthaulya*. But, there is no treatment of excessive obesity. Use of *Langhana* therapy is indicated for *Brimhaniya* disorder like *Sthaulya*. Types of *Sthaulya* and their management has been first time mentioned by *Vagbhata*^[6]. It also explained in other *Samhitha's* like *Madava Nidhana-Medonidhana*, *Sharangadara Samhitha*, *Bavaprakasha* and *Sangraha granthas* like *Chakradatta*, *Dipika*, *Basavarajiyam*, *Yoga Ratnakara* etc.

In pathogenesis of *Sthaulya*, *dosha's* like "*Kapha (kledaka)*, *Pitta (pachaka)*, *Vata (Samana & vyana)* *Dusya's* like *rasa*, *Meda* and *Medo Datvagni mandyata*" are main responsible factors^[7-9]. Hence, in the present study a humble effort is made to cure obesity, using *Ayurvedic Panchakarma* therapy i. e., *vasti* because *Vata* is playing an important role in *Samprapti* of *Sthaulya*. Here, in *Vasti* procedure, *Acharya susrutha* described a *Lekhana vasti* (a type of *Niruhavasti*) in *Chikitsastana*^[4] which can be used in *Sthaulya*.

The drugs which are used for preparation of *Lekhana vasti* possess following *gunas* like; *Katu*, *Tikta*, *Kashaya rasa*, *Laghu*, *Ruksha*, *Tikshna guna*, *Ushna virya*, *Katu vipaka Lekhana*, *Kapha-vata hara*, *Deepana-pachana & Sroto-shodhaka* properties^[10]. Having all these properties, *Dravya* of *Lekhana vasti* performs *Shodana* by means of the penetration into deeper *Dhatu's* & corrects the *Datvagni* that which helps in reducing *Sthaulya*.

Aims & Objectives

- To assess the role of '*Lekhana vasti with Varaadi Kwatha*' in *Sthaulya*.

MATERIALS AND METHODS

Material Required

1. *Varaa (Triphala) Kwatha* : 8 Pala (320ml)
2. *Gomutra* : 3 Pala (120ml)
3. *Saindhava* : 1 Karsha (10gms)
4. *Madhu* : 4 Pala (160ml)
5. *Yavakshara* : 3 Karsha (30gms)
6. *Yavanyadhi Kalka* : 2 Pala (80gms)
7. *Katu tail* : 6 Pala (240ml)

*For *Anuvasana vasti Murchchita tilatail* - 120ml^[11]

Method of preparation of *Lekhana vasti*

1. Preparation of *Varaa [Triphala-Harithaki (Terminalia chibula) Vibhitaki (Terminalia bellirica) Amlaki (Phyllanthus emblica)] Kwatha*; As per method of *Kwatha* Preparation described in texts.^[12]
2. *Saindhava lavanam* is taken in a *kalwa* then finely powdered; *Madhu* is added and rubbed with a *Pestle*.
3. *Sneha* is added in above *kalwa* & mixed properly.
4. Then *Yavakshara & YavanyadhiKalka [Yavani (Carum capticum), phala (Randia dumetorum), Bilwa (Aegle marmelos), Kusta (Saussurea lappa), Vacha (Acorus calamus), Shatapusp (Anethum sowa), Musta (Cyperus rotundus), Pippali (Piper longum)]* is mixed.

5. *Varaa (Triphala) Kwatha* is poured in above mixture & mixed thoroughly to make Homogeneous mixture.
6. Finally *Gomutra* is added & mixed properly.

Plan of study

10 patients of the *Sthaulya* (~obese) will be selected from I.P.& O.P Units of Panchakarma, Dr.B.R.K.R Govt.Ayurvedic College Erragadda, and Hyderabad

Diagnostic criteria

Detailed medical History was taken and physical examination was done in detail according to both Modern & *Ayurvedic* clinical methods. patient was diagnosed according to diagnostic criteria of *Sthaulya* as mentioned in the classes with the Symptoms of *Chala spik Udara stana, Alasya, Anga Gourava* etc.,^[5] and patients with BMI (25kg/m²-35kg/m²), weight, circumference of Chest, Abdomen, Hip, mid-Arm, -Thigh, are taken into consideration. Necessary investigations like FBS, PLBS, RBS, TSH, Lipid profile are done.

Revised BMI for Indian status

- ✓ 23.0kg/m² - 24.9 kg/m² – over weight.
- ✓ 25.0kg/m²-26.9kg/m² – Grade-I obesity.
- ✓ 27.0kg/m² - 28.9kg/m² – Grade-II obesity.
- ✓ 29.0kg/m² - 31.9kg/m² – Grade-III obesity.
- ✓ 32.0kg/m² - morbid obesity.

Inclusion criteria

- 1) Age of pt 18 yrs-60 years.
- 2) Having clinical signs & symptoms.
- 3) BMI-between 25kg/m² to 35kg/m².
- 4) Controlled DM (RBS 140-200mg/dl), HTN (sys-upto140/dia-upto90mm of Hg), and Hypothyroid (Below10miu/l).

Exclusion criteria

- 5) Age below 18yrs & above 60 years.
- 6) Patient having cardiac problems (CHD, MI etc.) Renal problems, Hepatic problems, using Long-term Steroid patients, uncontrolled DM, HTN, Hypothyroid.
- 7) Pregnant mother & lactating mother.

Study design

To all the 10 patients *Lekhana vasti with Varaadhi kwatha* will be administered in 2 sittings each of 9 days^[13] in the form of 1 *Anuvasana* in between 3 *Lekhana vasti*^[6] duration with a gap of 10 days between each sitting.

Follow up period: Once in 15 days for 2 months

Assessment Criteria

Each selected patient after completion of 2-cycles of treatment (28 days) subjected for both subjective and objective parameters and treatment were assessed in terms of statistical evaluations based on change in both parameters, before treatment & after treatment.

Showing Grading of Subjective Parameters

1. Flabbiness in Hip-Abdomen-Breast (*Chala Spika Udara Stana*):
 - Absence of *Chalatva* - 0
 - Little visible movement (in the areas) after fast movement - 1
 - Little visible movement (in the areas) even after moderate movement - 2
 - Movement (in the areas) after mild movement - 3
 - Movement (in the areas) even after changing posture - 4
2. Laziness/ Lack of Enthusiasm (*Alasya / Utsahahani*):
 - No *Alasya* (doing work satisfactory with proper vigour in time) - 0
 - Doing work satisfactory with initiation late in time - 1
 - Doing work unsatisfactory with lot of mental pressure and late in time - 2
 - No starting any work in his own responsibility doing little work very slowly - 3
 - Does not have any initiation and not wants to work even after pressure - 4
3. Dyspnoea On Exertion (*Kshudra swasa / Ayasena swasa*):
 - Dyspnoea after heavy work (movement) but relieved soon and upto tolerance - 0
 - Dyspnoea after moderate work but relieved later and up to tolerance - 1
 - Dyspnoea after little work but relieved later and upto tolerance - 2
 - Dyspnoea after little work but relieved later and beyond tolerance - 3
 - Dyspnoea in resting condition - 4
4. Excess sleep (*Nidradhikya*)
 - Normal sleep 6-7 hrs. per day - 0
 - Sleep upto 8 hrs./day with *Anga gaurava* - 1
 - Sleep upto 8 hrs./day with *Anga* and *Jrimbha* - 2

- Sleep upto 10 hrs./day with *Tandra* - 3
 - Sleep more than 10 hrs./day with *Tandra* and *Klama* - 4
5. Excess Sweating [*Swedadhikya*] (At normal temperature in normal condition) :
- Sweating after heavy work and fast movement or in hot season - 0
 - Profuse sweating after moderate work and movement - 1
 - Sweating after little work and movement - 2
 - Profuse sweating after little work and movement - 3
 - Sweating even at rest or in cold season - 4
6. General weakness (*Daurbalya* (*Alpa Vyayam*):
- Can do routine exercise - 0
 - Can do moderate exercise without difficulty - 1
 - Can do only mild exercise - 2
 - Can do mild exercise with very difficulty 3
 - Cannot be even mild exercise - 4
7. Heaviness in the Body (*Anga Gaurava*) :
- No heaviness in body - 0
 - Feels heaviness in body but it does not hamper routine work - 1
 - Feels heaviness in body which hamper daily routine work - 2
 - Feels heaviness in body which hamper movement of the body - 3
 - Feels heaviness with flabbiness in all over body which cause distress to the person - 4
8. Oily Body luster [*Snigdhangata*] :
- Normal *snigdhatata* (luster) - 0
 - Oily luster of body in summer season - 1
 - Oily luster of body in dry season - 2
 - Excessive oily luster of body in dry season which can be removed with difficulty - 3
 - Persistence and profuse stickiness all over body - 4

Grouping of the results of subjective parameters were made as follows

% of relief of all symptoms are assessed below mentioned pattern

- 0% - 25% - no relief.

- 25% - 50% - mild relief.
- 50% - 75% - moderate relief
- 75% - 100% - marked relief.

Procedure Pattern

Vasti karma is preceded by local *Abhyanga* and *Sweda* to abdomen, back and thigh regions. In *Pradana karma* 1st day administering *Anuvasana vasti*, 2nd, 3rd, 4th days administering continuously *Niruha vasti*'s again on 5th day *Anuvasana vasti*, 6th, 7th, 8th, days administering continuously *Niruha vasti*'s again on 9th day *Anuvasana vasti*. Same procedure is followed again with a gap of 10 days.

Acharya Vagbhata in *Sutra stana* explained about *Vasti krama* regarding administering of *Niruha vasti* continuously for 3 days, and giving of 4th day *Niruha* continuously is fatal and these 3 continuous *Vasti* in body act as *Utkleshanam*, *Suddikaram*, *Shamanam kramaath*.^[6]

Acharya Kashyapa in *khila stana* explained about no. of days of *Vasti* as, looking into the specific status of *Dosa*, time period and on strength of patient; the physician can increase or decrease the number of *Vastis*. One should increase in *Yogavasti*; decrease in *Karmavasti* according to once own *Yukti*.^[13]

And he also said that "the irregular diseases (the irregularity/abnormalities in diseases caused by irregularly abnormal *Dosha*'s) are cured by odd *Vasti*'s.

Basing on the above references, the procedure pattern was selected for present study. With the above procedure pattern of *Vasti*, no complications were observed. The significant changes in Wt, BMI, Body circumferences, & symptoms shows reduction with effect of "*Lekhana vasti with Varaadi kwatha*" due to *Lekhana prabhava* of the drugs.

OBSERVATIONS & RESULTS

Overall from the study conducted on 10-patients for duration of 28 days, Following observation is made before and after treatment in Wt, BMI, Circumferences of Chest, Abdomen, Hip, mid-Arm, mid-Thigh and the therapeutic effect was evaluated and results were analyzed statistically by paired t-test, which is shown in tables.

Table 1: Changes in objective Parameters (Wt & BMI) during the *Lekhana Vasti with Varaadi kwatha* in *Sthaulya*.

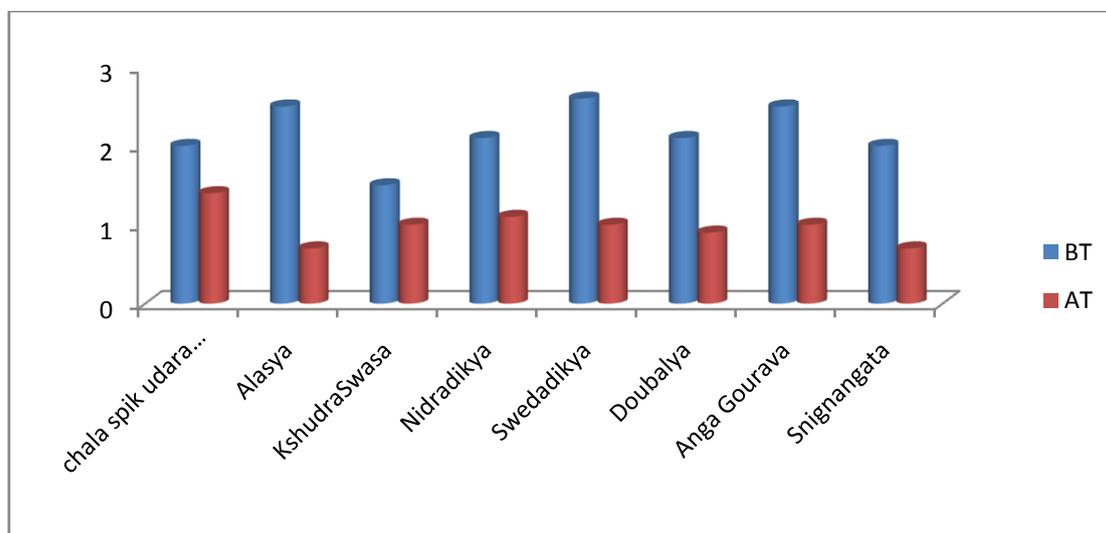
Changes in parameter	Mean score in mE/L		Mean difference	S. D		S. E		t value	p value	Significance (S)
	BT	AT		BT	AT	BT	AT			
Wt (Kgs)	79.30	75.30	4.00	10.89	11.12	3.44	3.52	8.090	<.0001	H.S
BMI (Kg/m ²)	30.32	28.78	1.54	2.774	2.775	0.87	0.87	7.673	<.0001	H.S

Table 2: Changes in body circumferences during the *Lekhana Vasti with Varaadi kwatha* in *Sthaulya*

Changes In body circumferences (cm's)	Mean score in mE/L		Mean difference	S. D		S. E		t value	p value	Significance (S)
	BT	AT		BT	AT	BT	AT			
Chest	97.20	95.60	1.60	5.59	5.82	1.77	1.84	6.000	0.0002	H.S
Abdomen	97.10	94.10	3.00	9.92	10.3	3.14	3.25	11.619	<.0001	H.S
Hip	102.20	99.70	2.50	5.53	5.52	1.75	1.75	5.5141	0.0004	H.S
mid-Arm	30.20	29.10	1.10	3.26	3.00	1.03	0.95	3.9727	0.0032	H.S
Mid-Thigh	54.10	52.40	1.70	5.72	5.76	1.81	1.82	5.0747	0.0007	H.S

Table 3: Changes in subjective parameters during the *Lekhana Vasti with Varaadi kwatha* in *Sthaulya*

Symptoms	Mean score in mE/L		Mean difference	S. D		S. E		t value	p value	Significance (S)
	BT	AT		BT	AT	BT	AT			
<i>Chala spik udara stana</i>	2.00	1.40	0.60	0.94	0.97	0.30	0.31	2.7136	0.0239	S
<i>Alasya</i>	2.50	0.70	1.80	0.71	0.48	0.22	0.15	9.0000	<.0001	H.S
<i>Kshudra Swasa</i>	1.50	1.00	0.50	1.08	0.82	0.34	0.26	3.0000	0.0150	S
<i>Nidradikya</i>	2.10	1.10	1.00	0.74	0.74	0.23	0.23	4.7434	0.0011	H.S
<i>Swedadikya</i>	2.60	1.00	1.60	0.84	0.94	0.27	0.30	7.2363	<.0001	H.S
<i>Dourbalya</i>	2.10	0.90	1.20	0.57	0.57	0.18	0.18	6.0000	0.0002	H.S
<i>Anga Gourava</i>	2.50	1.00	1.50	1.08	0.82	0.34	0.26	6.7082	<.0001	H.S
<i>Snignangata</i>	2.00	0.70	1.30	1.15	0.82	0.37	0.26	4.3333	0.0019	H.S



Overall result

Subjective Improvement:
Among all the 10 patients,
7 patients got --- moderate relief,
3 patients got --- mild relief,
0 patients got --- no relief, & marked relief.

Objective Improvement

For all the 10 patients weight shown 5.044% relief, BMI shown 5.096% relief, Chest Circumference shown 1.646% relief, Abdomen Circumference shown 3.09% relief, Hip Circumference shown 2.446% relief, mid-Arm Circumference shown 3.642% relief, mid-Thigh Circumference shown 3.142% relief.

DISCUSSION

Lekhana Vasti with Varaadi Kwatha' by virtue of its ingredients have *Katu, Tikta, Kashaya rasa, Laghu, Ruksha, Tikshna Guna, Ushna virya, Katu vipaka, Lekhana, Kapha-vata hara, Deepana-pachana & Sroto-shodhaka* properties.

According to *Acharya susrutha Lekhana vasti* preparation has, *Ushakadi gana prativapa* as one the ingredient, and he doesn't mentioned about *kalka*^[4].

As *Ushakadigana prativapa* drugs has Corrosive property, which fact was also concluded by previous research work that by the addition of *Ushakadigana* drugs, some complications like *Atopa, Shoola*, burning pain in Abdomen etc., were noted. Basing on the above observations, in the present study, in the preparation of *Lekhana vasti, Putoyavanyadi Kalka* was taken as an alternate to *Ushakadigana* drugs.

Putoyavanyadi Kalka is mentioned by *Vagbhata and Charaka*, where ever *Kalka* was not mentioned in *Niruha vasti* preparation in dose of 2 *Palas*. Drugs in the *Putoyavanyadi kalka* are *Yavani, Phala, Bilwa, Kusta, Vacha, Shatapuspa, Pippali*^[5,6]. These drugs are supposed to reduce symptoms of *Sthaulya* with their *Kapha-Vatahara, Lekhana, Deepana-Pachana* and *Srotoshodana* property. Hence, *Putoyavanyadi Kalka* is added as *Kalka dravya* in the present study.

According to, modified the *Vasti karma* pattern, to give more significant results.

CONCLUSION

- "*Lekhana Vasti with Varaadi kwatha*" produced statistically significant improvement in both subjective parameters & objective parameters but, when compared to objective parameters, subjective parameters produced high significant improvement.
- But, a clinical study on a larger sample is also required before coming to any conclusion on regarding the procedure & drug.
- However the outcome of the present study definitely gives an inspiration to proceed with the study on this *Lekhana vasti* in the disease *Sthaulya*.

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