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Lekhan Karma of Haridra w.s.r. to Obesity - Pilot Study

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ABSTRACT

A clinical study was conducted on patients of *Sthaulya* resembling conditions with obesity to evaluate the *Lekhana Karma* efficacy of *Haridra* mentioned in *Charaka Samhita Lekhaniya Varga*. The aim and objective of the study was to evaluate the efficacy of *Haridraghanvati Lekhana Karma* on *Sthaulya*. The preliminary study was done on 5 cases of *Sthaulya* w.s.r. to Obesity. Result obtained from study revealed that it shows good effect in relieving subjective criteria's like *Kshudrashwasa*, *Atiswedapravruti*, *Aniyamit Mala Pravrutti*. Also shown result on objective criteria like lipid profile. The result of pilot trial provide preliminary support to continue work on larger sample size at OPD level.

Key words: *Haridra Kanda*, *Curcuma longa*, *Turmeric*, *Haridra Ghanvati*, *Sthaulya*, *Obesity*

INTRODUCTION

Obesity is an increasing, global public health issue. Patients with obesity are at major risk for developing a range of comorbid conditions, including cardiovascular disease (CVD), gastrointestinal disorders, type 2 diabetes, joint and muscular disorders, respiratory problems, and psychological issues, which may significantly affect their daily lives as well as increasing mortality risks. Obesity associated conditions are manifold; however, even modest weight reduction may enable patients to reduce their risk for CVD, diabetes, obstructive sleep apnea (OSA), and hypertension

among many other comorbidities. A relatively small and simple reduction in weight, for example, of around 5%, can improve patient outcomes and may act as a catalyst for further change, with sustainable weight loss achieved through a series of incremental weight loss steps.

The worldwide prevalence rate of obesity has risen dramatically in the developing countries over the past two decades. India, is the third most populous country of the world, has been severally affected by the obesity as a global epidemic recognized by WHO.

According to the World Health Organization (WHO), obesity is one of the most common, yet among the most neglected, public health problems in both developed and developing countries. According to the WHO World Health Statistics Report 2020, globally one in six adults is obese and nearly 2.8 million individuals die each year due to overweight or obesity. Due to the increased risk of morbidity and mortality, obesity is now being recognized as a disease in its own right. [ICMR-Aug 2015]^[1]

As confronted with an abundance of easily available food which contributes toward obesity there is need to invest much more in research which confront with an

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easily available drugs in obesity and so *Haridra* is one among those *Dravya*. *Haridra* (*Curcuma longa* Linn.) is being easily, extensively available throughout India and as it is even economically less expensive, it will help to carry out research work smoothly on *Sthaulya*. As it has its reference as *Lekhana Karma* and *Medohar* property as per *Charaka* and *Ashtang Hruday* it has been selected. Its aim is to evaluate the efficacy of *Haridra Ghan Vati* (*Curcuma longa* linn.) *Lekhana Karma* in management of *Sthaulya* w.s.r. to obesity.

REVIEW OF LITERATURE

Haridra is a Sanskrit word referring to *Curcuma longa* (turmeric) from the Scitamineae family. *Haridra* (*Curcuma longa* Linn.) is one of the important plants having ritual and medicinal both usage. *Haridra* is very widely used in Ayurveda for the treatment of various disorders through its *Rasapanchak*. The name *Haridra* signifies its colour.

Classically, *Haridra* is *Varnya*, *Medaghna*, *Vrana Ropak*, *Visodhani*, *Stanya Sodhak* etc. by its pharmacological activity. It is a well-known drug in Ayurveda which is auspicious and also has cosmetic and religious importance.

Vedic period

Atharva Veda^[3]

In *Switra* and *Palit*, *Haridra* is used with *Indravaruni* and *Nili*. Even for external use it is being used as *Udvartan* for *Kamala* and *Hrudrog*. *Kaushik Dharmasutra Sutra* mentioned *Haridra* as an antidote of snake venom.

Samhita

Charak Samhita - *Dashemani* - *Lekhaniya*, *Kushthaghana*, *Vishaghna*.

In *Chikitsa Sthan* it is found in *Prameh* and *Arsha Chikitsa*.

Sushrut Samhita - *Haridradi Gan*, *Mustadi Gana*, *Sleshma Samshaman*

Ashtang Hruday - *Haridradi*, *Mustadi*, *Tikta Skandha*, *Lekhaniya*, *Shirovirechanopag*, *Kushthaghna Dravya* in *Chikitsa Sthan*.

Kashyap Samhita - It is mentioned as ingredients of *Dhupa* in *Kalpsthana* and *Khila Sthan* for *Kasa*, *Shwas*, *Charmadala*.

Nighantu - Almost *Haridra* is mentioned in various *Nighantu*^[4-5]

SN	Nighantu	Varga
1.	<i>Bhavprakash Nighantu</i>	<i>Haritkyadi Varga</i>
2.	<i>Raja Nighantu</i>	<i>Pippalyadi Varga</i>
3.	<i>Kaiyadev Nighantu</i>	<i>Aushadhi Varga</i>
4.	<i>Madanpal Nighantu</i>	<i>Abhyadi Varga</i>
5.	<i>Shodhal Nighantu</i>	<i>Guduchyadi Varga</i>
6.	<i>Ashtang Nighantu</i>	<i>Haridradi gana</i>
7.	<i>Adarsha Nighantu</i>	<i>Ardakadi Varga</i>
8.	<i>Dhanwantari Nighantu</i>	<i>Guduchyadi Varga</i>
9.	<i>Soushrut Nighantu</i>	<i>Haridradi Varga</i>

Adhunik Kala

In India *Materia Medica* by *Nadakarni* (1908),

Indian medicinal plants by *Keerthikar* and *Basu* (1918),

The Wealth of India, *indigenous drug of India* by *R.N* have identified the drug as *Curcuma longa*

In *Dravyaguna Vigyan* by *Acharya Yadavji Trikamji*, *Haridra* is mentioned in *Haridradi Varga*. In the *Ayurvedic Pharmacopoeia of India*, part 1, vol viii detailed description of *Haridra* is found.^[6]

In database of medicinal plant used in Ayurveda by *PC Sharma*, vol 1, *Haridra* morphology, pharmacognosy, cultivation, toxicity, substitutes are given in detail.^[7]

Bhavprakash Nighantu^[8]

Haridra Paryaya as per *Bhavprakash*

Varvarnini, *Hattvilasini*, *Nisha*, *Yoshitpriya*.

Therapeutic uses in *Kamala*, *Pandu*, *Kaph-Pittahara*.

Charak Samhita	Sushrut Samhita	Ashtang Sangraha
Lekhaniya	Haridradi	Haridradi
Kushthaghna	Mustadi	Mustadi
Vishaghana	Sleshma Sanshaman	Shirovirechan
Aptarpan Aushadh	Lakshadi	Tikta Skandhas
Tikta Skandhas		Lekhaniya
		Vishaghana
		Vaman Dravyas
		Kushthaghana

Sthaulya

The *Sthaulya* is describe in details in classical text. There are few ref. in Mythological form but described in details in Brihatrayi Viz. Charak Samhita, Sushruta Samhita, Asthanga Sangraha, Asthanga Hridaya and Laghutrayees Viz. Sharangadhar Yogaratnakara, Bhavaprakasha.

The word “*Sthoola*” is derived from ‘*Sthu*’ with suffix ‘*Ach*’ which stands for thick or solid or strong or big or bulky.

Definition

The excessive deposition of *Meda* and *Mamsa Dhatu* in body specially at *Sphika* (buttocks), *Udara* (belly) and *Stana* (breast) resulting in their increased and abnormal movement along with their loss of enthusiasm (*Utsaha*). The person having this kind of personality is known as “*Atisthula*”.

A person having heaviness and bulkiness of the body due to extensive growth especially in *Udaradi* (Abdominal) region is termed as “*Sthula*” and the state (*Bhava*) of *Sthula* is called “*Sthaulya*”. As per *Charaka Sutra* 29th *Adhyaya*.

Pathophysiology of Sthaulya

Sthaulya is *Rasa* and *Meda Dushya* dominant *Vyadhi*, *Meda* plays a major role in pathogenesis of *Sthaulya*. Therefore, it is very important to know different

aspects of *Meda*, which is describe as below. Literally, the word *Meda* is derived from root “*Jhimida Snehana*” Which stands for *Sneha*, Fat, Oil etc. It means the substance, which has *Snigdhatva* property, is called *Meda*. There are many oily substances in the body like *Vasa*, *Majja* etc.

Causes

Avyayam, *Divaswap*, *Sleshmal Aharsevan*, *Madhur Rasa Sevan* leads to *Sneha Meda Vardhan* as per *Madhav Nidan*, *Medorog*^[10]

Samprapti Ghataka

Dosha

Kapha - Kledaka

Pitta - Pachaka

Vata - Samana, Vyana

Dushya - Rasa, Meda

Agni - Jatharagni, Dhatvagni (Medodhatvagni)

Srotas - Rasavaha, Mansavaha, Medovaha

Strotodushti - Sanga

Adhithana - Whole body (Vapavahan and Medodhara Kala)

Udbhavasthana - Amashya

Prasara - Medadhatu

Rogamarga - Bahya

Ama - Jatharagni Vaigunyata and Dhatvagni Mandhya Janit

Vyaktisthana - Sarvanga, specially in Sphic, Udara and Stana, Gala.

MATERIALS AND METHODS

Source of data

Botanically identified *Curcuma longa* Linn. Belonging to family scitaminae, its rhizome was procured from Sangali and identified by Department of Dravyaguna, Smt. K.G. Mittal Ayurveda Mahavidyalya, Charni Road, Mumbai, India. Authenticated and standardized by Alarsin pharmaceuticals, Andheri, Mumbai, India in March 2020.

Source of the patients

Patients were selected after subjection them through clinical examination from OPD of Dravyaguna Department of Smt. K.G. Mittal Ayurveda Mahavidyalya, Charni Road, Mumbai, India.

Preparation of Medicine

Raw material procured from Sangali and as per *Sharangdhar Samhita Ghanvati* preparation was done. *Haridra Kand* was procured from three regions of Maharashtra, Sangali district. After standardization and authentication from authentic laboratory. Rhizomes were cleaned and kept at concerned department museum. Later It was crushed into *Bharad* Form and *Kwath* preparation was done in 16 times of water. It was kept to boil on low flam till the one eighth of water is left. Strain the content and keep it on flame again till *Ghan* is extracted. *Vati* preparation was done in tablet making device (10% of *Haridra Churna* is added as binding agent).

**Haridra Kand****Haridra Kand Bharad****Kand Kwath****Punah Paakam****Haridra Ghanavati****Place of work**

Clinical trial was done at Dravyaguna department of Smt. K.G. Mittal Ayurvedic Mahavidyalaya, Mumbai, India.

Methods of collection of data

Written and informed consent was taken of the enrolled patients based on the classical signs and

symptoms of *Sthaulya*, the patients screening for inclusive criteria irrespective of sexes between the age group 18-50 years were selected from the OPD of Dravyaguna department of Smt. K.G. Mittal Ayurvedic Mahavidyalaya, Mumbai, India. Pilot study was carried out on 5 patients according to inclusion and exclusion criteria.

Drug administration details

1.	Drug	<i>Haridra Kand</i>
2.	Kalpana	Ghanvati
3.	Dose	500mg for 3 months
4.	<i>Sevan Kaal</i>	<i>Pragbhakta</i>
5.	<i>Anupan</i>	<i>Sukhoshna Jal</i>
6.	Mode of administration	Oral

Inclusive criteria

- Irrespective of gender (Male, female, Transgender)
- Patient with BMI ranging between 25-40
- Patient with classical symptoms of *Sthaulya Roga* mentioned in Ayurveda texts.
- Age - 18-50years
- Religion - no barrier
- Economic status - no barrier

Patient who have signed written and informed consent.

Exclusive criteria

- Patient having major cardiac disorders, diabetes mellitus, hormonal disorders, infectious disease or any other major illness
- Pregnant and lactating mothers
- Patient with BMI > 40
- Medicolegal Cases.

Plan of study

In this pilot study 5 patients were selected as per inclusion and exclusion criteria. 500mg *Haridra*

Ghanvati has been given to each patient twice before meal for 3 months.

Name of centre	Concern institute OPD
Written consent	Before starting treatment
Number of patients	5
Drug	<i>Haridra</i>
<i>Kalpana</i>	<i>Ghanvati</i>
Dose	500mg before meal twice a day
<i>Sevan Kal</i>	<i>Pragbhakta</i>
Period of clinical study	3 months
Mode of administration	Oral
Follow up	follow up after every 15 days till completion of 3 months
<i>Pathyapathya</i>	Will be explained to every patient individually as mentioned in <i>Sthaulya</i> .

Clinical Assessment

Objective Criteria

- Weight
- Body Mass index (BMI): A key index for relating weight to height. BMI is a person's weight in kilograms divided by his/her height in meters squared

< 18.5	Underweight
18.5 – 24.9	Normal weight
25.0 – 29.9	Overweight
30 – 39.9	Obese

> 40	Severely obese
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3. Waist and Hip Ratio (WHR) – Waist circumference/ Hip circumference (N.R. - <0.9 for men & <0.85 for women.)
4. Mid arm circumference
5. Lipid Profile (before treatment and after treatment)

Subjective criteria

Chala Sphik Stan Udar,

Kruchhavyavya,

Pipasadhiya,

Swedadhikya,

Angagandha,

Kshudraswas,

Kshudhadhikya,

Nidradhikya and as per severity of symptoms its gradation is given between 0-3.

Demographic detail of patient selected in pilot study

SN	Reg no.	Age	Sex	Education	Profession	Economic Status	Diet	Addiction	Family History	Prakriti	Agni
1.	202005973	49	F	Literate	Nurse	Middle	mixed	No	No	KP	Visham
2.	202128092	37	F	Literate	Housewife	Middle	Mixed	No	Yes	PK	Visham
3.	202006815	50	F	Illetrate	Housewife	Low	Mixed	No	Yes	KP	Visham
4.	202100502	39	M	Illetrate	Shopkeeper	Low	Veg	No	Yes	PK	Visham
5.	202100053	50	F	Literate	Housewife	Middle	Mixed	Yes	No	KP	Manda

Subjective criteria with gradation before and after treatment

SN	<i>Cala-Sphik-Udara -Stan</i>		<i>Kruchhvyavyata</i>		<i>Anga-Gandha</i>		<i>Pipasadhikya</i>		<i>Swedadhikya</i>		<i>Kshudhadhikya</i>		<i>Kshudraswas</i>		<i>Nidradhikya</i>	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	2	1	1	0	1	0	2	1	1	1	0	0	2	1	2	1
2.	2	2	2	1	1	1	2	2	2	2	2	1	3	2	2	2
3.	3	1	2	1	1	0	2	1	3	1			2	1	3	2

Grades

0	Absent
1(+)	Mild
2(++)	Moderate
3(+++)	Severe

Statistical analysis of data

The value of data were expressed as percentage of relief. The data was analyzed by standard mean deviation, mean deviation for comparing before and after treatment obtained scores.

OBSERVATION

In this all 5 patients completed the study. In this 4 patients were female and 1 was male.

All the above Subjective Parameters P value was <0.0001, which statistically differs and is significant.

Effect on objective criteria was also statistically significant.

4.	3	2	2	2	3	3	2	1	2	2	3	2	3	2	2	2
5.	3	1	2	1	2	1	3	1	3	1	2	1	3	1	2	1

Objective criteria of patient with grades before and after treatment

SN	Height	Weight		BMI		WHR (waist hip ratio)		WC (waist circumference)		MC (mid arm circumference)	
		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	154	69	66	29.1	27.8	0.86	0.82	96	92	35	32
2.	150	70	70	31.1	31.1	0.88	0.87	97	96	33	33
3.	156	77	74	31.6	30.4	0.88	0.83	92	88	30	28
4.	170	87	86	30.1	30	0.89	0.88	108	107	34	34
5.	152	90	88	39	38.1	0.93	0.89	112	110	30	29

Laboratory parameters with grades before and after treatment

SN	Lipid Profile									
	Sr. Cholesterol		Sr. Triglyceride		HDL		LDL		VLDL	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1.	242	236	168	160	55	60	123	120	68	60
2.	238	236	158	156	40	40.2	124	125	55	54
3.	236	228	160	154	50	54	110.2	104	38	36
4.	228	218	162	154	48	55	120	108	52	38
5.	243	220	149	136	48	54	136	128	58	49

DISCUSSION

In this study 5 patients were selected for pilot study and following observation were found which has been recorded in before and after treatment chart as per the gradation. It has been seen that the HDL of the patients has been raised to normal value and even along with *Lekhana Karma* of *Haridra* in *Medodushti* also *Malashodhan* has been noticed in all 5 patients.

Probable mode of action of *Lekhana Karma* of *Haridra* in *Sthaulya*

In *Sthaulya*, *Medodhatvagni* *Poshakansha* stated at *Jatharagni* level is vitiated. *Medodhatvagni* does not function properly and leads to accumulation of fats in depots and *Kshay* of *Utar Dhatu*. *Haridra* possess properties like *Kaph Vaathar* and even *Pittahar* as per

Bhavprakash Nighantu, by having *Katu Vipak* works on eliminating *Medodhatvagni Mandya*. As per *Ashtang Hruday*, *Pachakansha* present in each *Dhatu* is referred as *Dhatvagni*. *Dhatvagnimandya* of specific *Dhatu* causes *Vridhhi* of that *Dhatu*.

Dosha involved in *Sthaulya* is *Kledak Kaph* and *Pachak Pitta*.

Strotas involved is *Rasavaha*, *Medovaha* and *Swedavaha*, *Haridra* being *Ruksha*, *Laghu Gunatmak* works on *Mala* of *Rasa Dhatu* that is *Kaph (Kleda)*.

Haridra being *Katu-Tikta Rasatmak* and has reference in *Ajirna* it leads to *Karma* mentioned in *Tikta Rasa* like *Deepan*, *Pachan*, *Kledhara*, *Medohara*. Due to *Deepan Pachan Karma* it corrects *Jatharagni* and leads to *Vatanuloman*. *Vibandha*, *Malabadhata* (constipation)

seen in *Sthaulya Rogi* has been found to be corrected by *Ushna Veerya* and *Katu Vipak* of *Haridra* which leads to *Srotoshodhan*. It possess property like *Medaghna* as per *Ashtang Hruday*. Considering above all properties it corrects the *Medodhatvagni Mandya* and also having *Ruksha*, *Laghu* and *Lekhana* property it tends to do *Lekhana* of accumulated *Medodhatu* and corrects pathogenesis of *Sthaulya*, hence it may be the probable mode of action *Lekhana Karma* of *Haridra* in *Sthaulya*.

CONCLUSION

On comparing the before and after treatment result it is observed that significant result has been found and study can be selected for further detailed study in larger sample size and for long duration than one month. As it corrects the *Medodhatvagni Mandya* and also having *Ruksha*, *Laghu* and *Lekhana* property it may tends to do *Lekhana* of accumulated *Medodhatu* and corrects pathogenesis of *Sthaulya*. *Haridra Ghanvati* along with its *Lekhana Karma* even *Mala Shodhan Karma* of *Haridra* is found to seen in all 5 patients selected in this study.

REFERENCES

1. <https://www.cybermedlife.eu/attachments/article/2468/Prevalence%20of%20Obesity%20Among%20Adults%20and%20Youth.pdf> - Prevalence of Obesity Among Adults and Youth.pdf
2. Acharya Priyavarta Sharma, Naamroopgyan, edition 1st – 2000, Satyapriya Prakashan, Haridra, pg no.195.
3. Atharva veda - <https://vedicheritage.gov.in/samhitas/atharvaveda-samhitas/>
4. K.C.Chunekar, Bhavprakash Nighantu, reprint-2002, Chaukhamba Bharati Academy, Varanasi, haritkyadi *Varga/Haridra*,pg no.114
5. Indradev Tripathi, Acharya Vishwanath Dwivedi, Raj Nighantu, Krshnadas Academy, Varanasi, edition-1982, Pipallyadi *Varga, Haridra/199*,pg no.175
6. The Ayurvedic Pharmacopoeia of India, part – 1, vol-8, published by the controller of publications civil lines, delhi, *Haridra*, page no.77
7. P.C.Sharma, Database on medicinal plants used in Ayurveda, vol-1, published by Yugantar Prakashan, New Delhi, *Haridra (curcuma longa linn)*,pg no.152
8. Bhavprakash Nighantu, author dr.K.C.Chunekar, published reprint-2002,Chaukhamba Bharati academy, Varanasi, haritkyadi *Varga/Haridra*,pg no.115
9. Acharya Acharya Charaka,"*Charaka Samhita* "sutrasthan 21/9,vol-1, edited by Dr.Ravidutta Tripathi, Chaukhamba Bharti Academy, Varanasi, 2011; pg.301
10. Brahmanand Tripathi, Madhav Nidan, Chaukhambha Surbharti Prakashan, Uttarardha, Adhyay 34 *Medoroganidan*, pg no.35
11. Brahmanand Tripathi, Ashtang Hruday, sutrasthan 14/14, Chaukhamba Sanskrit Pratishthan, Delhi, Edition-2014,pg no.192
12. Bramhanand Tripathi, Sharangdhar Samhita, purva khanda 5/21 Chaukhamba Surbharti Prakashan Varansi, Edition 2016.
13. Anantram Sharma, Sushrut Samhita, vol-2, Chaukhambha Surbharati Prakashan, Varanasi, 2017, Sharirsthan-9/12,pg no.122
14. Indradev Tripathi, Vishwanath Dwivedi, Raj Nighantu, Krshnadas Academy, Varanasi, edition-1982, Anupadi *Varga*, pg no.7-8
15. <https://www.worldobesity.org/about/about-obesity/obesity-classification>

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