

A CLINICAL STUDY ON EFFECT OF *UDAVARTANA KARMA* IN CENTRAL OBESITY

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ABSTRACT

Obesity can be android/ apple shaped (central obesity) or gynoid/ pear shaped based on Fat distribution. The WHO states that abdominal obesity is defined as a waist-hip ratio (WHR) above 0.90 for males and above 0.85 for females. According to NIDDK report, person with WHR more than 1.0, are at increased risk of hypertension, CHD and diabetes because of their fat distribution. In *Ayurveda* classics, *Udvaratana Karma* is mentioned as *medas pravilapanam*, so it may help to reduce such fat deposition. The aim of the study was to evaluate the effect of *Udvaratana Karma* in central obesity over abdominal area. Many obese as well as normal persons require inches loss over abdominal area due to medical and cosmetic purposes. *Udvaratana* seems a treatment of choice in such individuals.

Keywords: *Udavatana*, Central Obesity.

INTRODUCTION

Obesity has become an increasing health concern globally. The prevalence of obesity is rising worldwide at an alarming rate affecting developed and developing countries. In low-income countries, obesity is more common in middle-aged women, people of higher socioeconomic status and those living in urban communities.

Obesity is generally classified as generalized obesity and central obesity. It can be android/ apple shaped (central obesity) or gynoid/ pear shaped based on Fat distribution. Obesity is defined as excess deposition of body fat that poses a health risk¹. The WHO states that abdominal obesity is defined as a waist-hip ratio (WHR) above 0.90 for males and above 0.85 for females². According to NIDDK report, person with

WHR more than 1.0, are at increased risk of hypertension, CHD and diabetes because of their fat distribution³. The risk for these disorders increases mainly in persons having body mass index (BMI) more than 25 kg/m².

Obesity can be correlated with *Sthaulya* from *Ayurveda* perspective. *Sthaulya* is a condition of excess deposition of vitiated *Medodhatu* in the body. Clinical features of *Sthaulya* as mentioned in the classics like *Chala Sphik*, *Udara*, *Stana* and *Ayathopachaya*, *Utsaha*⁴.

In *Ayurveda* many *shodhana* and *shaman* treatments are mentioned for *Sthaulya*, amongst them *Udvaratana Karma* is mentioned as *Medas Pravilapanam*, so it may help to reduce such fat deposition.

Reinforced rubbing of the body by *Churna* is called as *Udavartana*⁵. Benefits of *Udavartana* are mentioned as follows.

“*Udvartanam kaphaharam medasah pravilayanam . sthirikaranamanganam twakprasadkaram param*”⁶

Aim & Objectives:

- The aim of the study was to evaluate the effect of *Udvaratana Karma* in central obesity over abdominal area.

Material & Methods:

60 subjects were selected from OPD & IPD of SAMC&H, Indore (M.P.) and were divided into 2 groups. *Udvaratana* was done with *Triphala churna* + *Lodhra churna* + *Bengal Gram flour* in one group and *Medohara Guggulu* in a dose of 2 BD with warm water was used as a control drug in both groups for 14 days. Thereafter, necessary statistical tools were applied to the study and assessment of results was done on subjective and objective parameters.

METHODS

➤ Selection criteria –

- 60 subjects were selected from OPD & IPD of Shubdeep Ayurveda Medical College & Hospital, Indore (M.P.) and divided into 2 groups.
- Group A - *Udvaratana* + *Medohara Guggulu*
- Group B - *Medohara Guggulu* (control group)

INCLUSION CRITERIA & DIAGNOSTIC MEASURES

1. A person having heaviness and bulkiness in body due to extensive growth especially in *Udara* region is considered for the study.
2. Waist to Hip ratio more than one
3. BMI < 29
4. To measure circumference of abdomen & hip, measuring tape was used.
5. A standard weighing machine was used to measure weight and it was noted in Kilograms.

Exclusion Criteria:

1. Patients having major health issues like thyroid disorder, renal disorders, cardiac disorders.
2. Pregnant women and lactating mother.

PROCEDURE

➤ Group A – *Udvartana* (procedure)

1. *Udvartana* was done in morning in subjects with empty bowel and bladder.
2. *Trifala* + *Lodhra* + *Bengal Gram Churna* was dusted on abdomen region of subject.
3. Linear massage (in upward direction) and circular massage with applying thorough pressure was done on abdominal regions for 30 min.
4. Then subject was advised to take rest for 15 min. and take hot water bath after relaxation.

➤ *Medohara Guggulu* – 2 tablets BD along with hot water were given to subjects in both group.

➤ Assessment of result

Grading of present study was done on basis of subjective and objective parameters.

OBSERVATIONS

Table 1: Showing percentage relief in *Sthaulya* symptoms after treatment in group A & B

Symptoms	No. of patients	Total % of relief
1. <i>Udarachalatva</i>	Group A -30 Group B-30	Group A -63.3% Group B-20%
2. <i>Shwaskrucchata</i>	Group A -30 Group B-30	Group A -66.6% Group B- 30%
3. weight	Group A -30 Group B-30	Group A -73.3% Group B-33.3%
4. BMI	Group A -30 Group B-30	Group A -73.3% Group B-26.6%
5. Inches loss	Group A -30 Group B-30	Group A -73.3% Group B-13.3%

Table 2: Showing Overall effect in group A

Symptoms	Mean BT	Mean AT	Mean difference	Total percentage relief	t - value	P value
1. <i>Udara chalatva</i>	2	0.63	1.37	63.3%	9.78	< 0.001
2. <i>Shwas krucchata</i>	2	0.57	1.43	66.6%	10.78	<0.001
3. weight	2.16	0.53	1.63	73.3%	11.06	<0.001
4. BMI	2.16	0.53	1.63	73.3%	11.06	<0.001
5. Inches loss	2.17	0.50	1.67	73.3%	11.37	<0.001

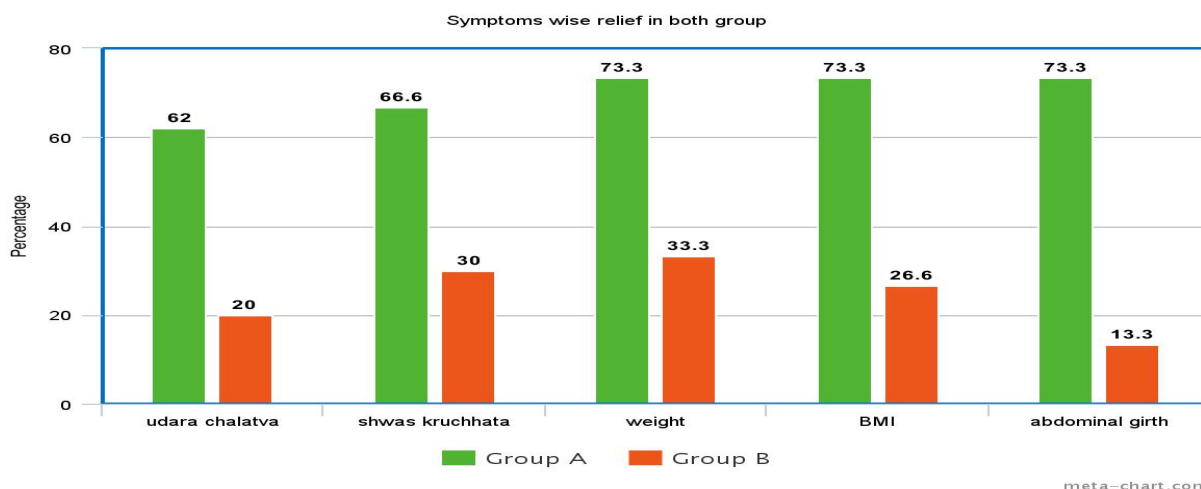
Table 3: Showing overall effect in group B

Symptoms	Mean Bt	Mean AT	Mean difference	Total percentage relief	t - value	P value
1. <i>Udara chalatva</i>	2	1.23	0.77	38.5%	8.33	< 0.001
2. <i>Shwas krucchata</i>	2	1.1	0.9	45%	12.2	<0.001
3. weight	2.2	1.46	0.74	33.8%	3.33	<0.001
4. BMI	2.2	1.46	0.74	33.6%	3.18	<0.001
5. Inches loss	2.1	1.63	0.47	22.4%	5.03	<0.001

RESULT & DISCUSSION

- In group A among 30 patients 22 patients had complete relief i.e. 73.3% showed highly significant results ($p < 0.001$) in abdominal inch loss.
- 7 patients had mild relief i.e. 26.6% showed highly significant results ($p < 0.001$) in abdominal inch loss.
- In group B among 30 patients 10 patients had complete relief i.e 34.8% showed highly significant results ($p < 0.001$) in weight loss.
- The effect of *Udvartana* and *Medohara Guggulu* were very encouraging in inches loss and weight loss.
- In *Udvartana*, due to increased friction to all parts of the body, the increased *meda* is depleted thus shows effect on fat deposition in particular areas.
- *Medohara Guggulu* shows significant effect on weight loss.
- *Udvartana* when given along with *Medohara Guggulu* shows reduction in fat deposition and results were quite encouraging in central obesity.

Figure 1: Symptom wise relief in both groups



Effect of *Udavartana* in Obese person (*Sthaulya*)⁷

- *Kaphaharam* – Destroys morbid *Kapha*
- *Vataharam* – Destroys morbid *Vata*
- *MedasahaPravilaapanam* – Liquefies and mobilizes the stagnant morbid *meda* (fat / adipose tissue)
- *Sthireekaranamangaanam* – Provides stability to body parts
- *Twakprasadakaramparam* – Rejuvenates the skin and brings freshness in it
- *Dourgandhya haram* – Alleviates foul smell
- *Gourava haram* – Alleviates heaviness of the body
- *Tandra haram* – Removes drowsiness, brings freshness
- *Mala haram* – Removes dirt and dust
- *Sweda haram* – Removes sweat
- *Beebhatsa haram* – Removes awkward look, gives glamour
- *Sira mukhaviviktatvam* – Opens up the blocked channels, blood vessels and transport systems of the body and enables free circulation of nutrients and essentials in the body
- *Twakstha Agni samyakaram* – Stabilizes and normalizes the *Agni* (*Bhrajaka Agni* or *Bhrajaka Pitta* in the skin which is responsible for skin immunity, to provide good colour and complexion)
- *Kantikaram* – Provides good shine and complexion
- *ShariraParimarjanam* – Cleanses the body

Modern view

Rubbing in the therapy of *Udavartana* aids in the absorption of effusions, infringement of blood stasis and carrying away the morbid products in the system. Deep pressure during the massage facilitates the interchange of tissue fluids by increasing the circulation in the superficial vein and lymphatics.

Important qualities of rubbing are –

- Rubbing gives mechanical stimulation to muscles causing them to contract.

- It increases circulation and the alternate pressure and relaxation brings fresh blood to the part.
- It improves the nutrition of the particular area and influences metabolism.
- It raises temperature locally.
- It increases elimination of waste products.
- It increases secretion and absorption.
- It stimulates the cutaneous nerve endings and inturn improves the condition of the nervous system
- It also helps in breaking down thickening and adhesions in sub acute and chronic conditions. Also helps in the re-absorption of inflammatory products and absorption of fat in fatty tissues.

Mode of Action of *Udvartana*

- In *Ruksha Udvartana* mainly *Katu*, *Tikta*, *Kashaya Rasa Dravyas* having *Laghu*, *Teekshna*, *Ruksha Guna* & *UshnaVirya* were used. The drugs possessing *Katu*, *Tikta*, *Kashaya Rasa* acts as *Kaphahara*. *Ushna Virya* produces *Srotoshuddhi*. *Ruksha Guna* has predominance of *Agni* & *Vayu Mahabhuta* pacifies *Snigdha* & *Pichila Guna* of *Kapha* & subsequently decreases *Kledatwa*.
- The drugs applied & rubbed over skin were digested by *Bhrajakapitta/Twachagni* (local temperature increases) which is present in the skin, its *Ushna-Virya* enter *Rasadhatu* remove the obstruction in the *Rasa* & *Swedavaha Srotasa*, its *Gunas* & *Vipak*, *Veerya* spreads all over the body & does there action then produce systemic effect and resolve the *Dosha-Dushya Sammurchana*, *Twacha* is *Upadhatu* of *Mamsa*, All *Upadhatus* having its own *Bhootagnis*, by doing *Udvartana* the increased *TwakgataAgni/Bhrajakapitta* will increase *Uttarottara Dhatwagni* functions, by increased *Medodhatwagni*, the *Dhatupaka* process increases, thus excessive accumulated *Vikruta MedoDhatu* decreases.
- When the vitiated *Medo Dhatu* gets dissolved, formation of excessive *Sweda*, diminishes

thus cures *Kandu*, *daurgandhyata* (*Sweda* being a *Mala* of *Medo Dhatu* excessive sweating results into bad smell of the body), thus normalizes *Dosha Dhatu PoshanaKriya*. And the process of *Udvaratana* slowly reduces the *Lakshanas of Sthaulya* over abdominal area (*central obesity*).

Medohara Guggulu: It contains drugs having *Katurasa*, *Laghu- Ruksha Guna*, *Ushnavirya*, *Katuvipaka*, *Kapha Shamak* properties which aids in disintegrating *Samprapti* of *Sthaulya*. It helps in scrapping excessive *Meda* and *Kapha* due to its *Kleda- Medo Shoshka* and *Srotovishodhaka* property.

CONCLUSION

The study revealed that *Udavartana* significantly causes inches loss over abdominal area without any adverse effects. Many obese as well as normal persons require inches loss over abdominal area due to medical and cosmetic purposes. *Udvaratana* seems a treatment of choice in such individuals. In the present study the results obtained are statistically highly significant at $p < 0.001$ i.e. In group A among 30 patients 22 patients had complete relief i.e. 73.3% & 7 patients had mild relief i.e. 26.6% in abdominal inch loss. In group B among 30 patients 10 patients had complete relief i.e. 34.8% in weight loss.

By this it can be said that *Medohara Guggulu* was also significant in losing weight in both groups. But for the treatment of central obesity, *Udavartana* is proved best option for inches loss.

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