



## A COMPARATIVE AND COMBINED CLINICAL STUDY ON EFFICACY OF UDWARTANA AND NITYA VIRECHANA IN STHOULYA W.S.R TO OBESITY.

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### ABSTRACT

Sthoulya as one of the Ashta nindita purusha. Ati-sthula is one among these. Ati is excess and Sthula refers to bulkiness in body parts of abdomen, arms, thighs, buttocks and make them pendulous, which leads to excessive sweating, accumulation of mala, bad odour. It is due to the accumulation of medadhātu in excess amount which gives invitation to further major diseases like HTN, DM etc and also leads to various complications. Even though it is said as incurable, but it can be manageable with Ayurveda by following various treatment protocols and by decoding the Dosha-Dhatu sammurchana. A comparative and combined clinical study to evaluate the efficacy of udwartana and nitya virechana in sthoulya was conducted between 45 patients. They were divided in to three equal groups, 15 patients in each group. Patients of group A were treated with Triphana churna Udwartana procedure. Patients of group B were treated with Triphala kashaya Nitya Virechana. Group C patients were treated with combined procedure of Triphala churna Udwartana and Triphala kashaya Nitya Virechana. Assessment was made on subjective parameters like Chala Stana Udara Sphik, Anga Gourava, Swedadhikya, Nidradhikya, Daurgandhya. Objective parameters were Body weight and Body mass index between. Observations were made before and after the treatment. Group C showed most significant results than Group A and B.

**KEYWORDS:** Sthoulya, Udwartana, Nitya Virechana, Triphala, Obesity.

### INTRODUCTION

Obesity may be defined as an abnormal growth of adipose tissue due to an enlargement of fat cell size (hypertrophic obesity).<sup>[1]</sup> Obesity is widely regarded as a pandemic with potentially disastrous consequences for human health. The prevalence of obesity has increased threefold within the last 20 years and continues to rise.<sup>[2]</sup> It is estimated that 22million Indians are obese.<sup>[3]</sup> India has third highest number of obese and overweight people after U.S and china, according to a recent study.<sup>[4]</sup>

In 21st century there is a drastic change in lifestyle, dietary habits and environment. Lack of exercise, sedentary lifestyle, stress and strain results in a man become victim of many disease. In today's modern practice obesity is treated with comprehensive lifestyle management i.e diet, physical activity, behaviour modification, surgery etc.

Sthoulya is a Lakshana of Bahudoshā Avasthā<sup>[5]</sup> which is Santarpana Janya<sup>[6]</sup>, Rasa Nimittaja Vyadhi.<sup>[7]</sup> Dosha

involvement refers to Kapha dosha and Dhātu involvement refers to accumulation of Meda dhātu.<sup>[8]</sup> Kapha and Meda are interrelated with Ashrayi-Ashraya bhava. Management modalities illustrated in classics for sthoulya includes Nidana parimarjana, Apatarpana chikitsa which includes Rukshana karma, Udwartana, Basti karma. which are having properties like kapha-medohara and has the ability to do shodhana as there is srotoavarodha. In order to do Karshana, Rookshana line of treatment is mentioned which does the Medaghna. In Bahya Chikitsa, Udwartana is indicated which does Kaphaharana & Medovilayana.<sup>[9,10]</sup> It reduces the pendulous movement of body and makes the body compactness.<sup>[10]</sup>

Triphala is indicated in Sthoulya as it has the Kapha Shamana, Kledana and Medohara property.<sup>[11]</sup> Triphala comes under Virechaniya Gana, which has Virechaka (purgative) property.<sup>[12, 13a]</sup>

Several studies of Nitya Virechana have been done on Kushta, Amavata, Ascites and Hypothyroidism etc. Nitya

Virechana does the Sroto Mukha Shodhana.<sup>[14]</sup> In Sthoulya there is Srotoavarodha, in order to do Sroto Shodhana Nitya Virechana with Triphala can be taken as it does Rukshana also.

So the study is conducted to compare and combine to evaluate the effect of Udvartana and Nitya Virechana in sthoulya.

### OBJECTIVES OF THE STUDY

1. To evaluate the efficiency of Udvartana with Triphala Churna in Sthoulya.
2. To evaluate the efficiency of Nitya Virechana with Triphala Kashaya in Sthoulya.
3. To combine and compare the efficiency of Udvartana with Triphala Churna and Nitya Virechana with Triphala Kashaya in Sthoulya.

### STUDY DESIGN (INTERVENTION)

**Table No. 1: Study design.**

Group	Group A	Group B	Group C
Therapy	Udvartana	Nitya Virechana	Udvartana+Nitya Virechana
No of sample	15	15	15

### PLAN OF TREATMENT

Duration : 7 days

Selected 45 patients of sthoulya are randomly divided in to Group A, Group B, Group C.

**Table No. 2: Showing treatment protocol.**

	Udvarthana	Nitya virechana
Poorva Karma	<ol style="list-style-type: none"> <li>1.Patient is asked to have Laghu Aahar.</li> <li>2.Patient is asked to empty bowel bladder.</li> <li>3.Patient with minimum dress is said to lie down.</li> <li>4.Churna is warmed by indirect heating.</li> </ol>	<ol style="list-style-type: none"> <li>1.Preparation of triphala kashaya by boiling 1 part of triphala churna in 4 parts water and reducing it to 1/4<sup>th</sup>.</li> </ol>
Pradhana karma	<ol style="list-style-type: none"> <li>1.Churna is rubbed in direction opposite to that of hair follicles starting from legs, arms, chest, abdomen, back and gluteal region i.e in seven positions.</li> <li>2.Duration: 45 minutes.</li> </ol>	<ol style="list-style-type: none"> <li>1.Dosage of Triphala Kashaya is selected according to Koshta of patient.</li> <li>2. Warm Kashaya is administered before the hunger at morning hour on empty stomach.</li> <li>3.Given instruction to take hot water frequently.</li> <li>4.Patient should be empty stomach up to stoppage of Vegas.</li> <li>5.Diwaswapna is avoided.</li> </ol>
Paschat karma	<ol style="list-style-type: none"> <li>1.Rest for 15 min.</li> <li>2.Take hot water bath.</li> </ol>	<ol style="list-style-type: none"> <li>1.Observation of Vegas.</li> <li>2.After complete stoppage of Vegas, Ganji is administered.</li> <li>3. At night Khichchadi is administered.</li> </ol>

DOSAGE : Dose of Triphala Kashaya was fixed on the basis of Koshta of the patient

### INCLUSIVE CRITERIA

- Patients fulfilling the diagnostic criteria.
- Patients between age group of 18-50 years.
- Patients Yogya for Rukshana Karma and nitya Virechana.
- Patients whose BMI is between 25 and 30

**EXCLUSIVE CRITERIA**

- Patients below the age of 18 and above 50 years.
- Patients suffering from diabetes, hypertension, thyroidism, skin disease.
- Patients Ayogya for Rukshana Karma and Nitya Virechana.
- Obesity due to secondary cause.

Blood routine, Urine analysis., Lipid profile  
Other investigations will be done as per requirement.

**DIAGNOSTIC CRITERIA:**

Chala Stana Udara Sphik, Anga Gourava, Swedadhikya, Nidradhikya, Daurgandhya.  
Body weight, Body mass index between 25 – 30.

**LABORATORY INVESTIGATION:****Grading of subjective parameters****1. Chala Sphik Udara Stana**

- Absence of Chalatra Grade 0
- Little visible movement (in the areas) after fast movement - Grade 1
- Little visible movement (in the areas) even after mild movement - Grade 2
- Movement (in the areas) even after changing posture - Grade 3

**2. Angagaurava**

- No heaviness in body - Grade 0
- Feels heaviness in body but it does not hamper routine work - Grade 1
- Feels heaviness in body which hamper daily routine work - Grade 2
- Feels heaviness in body which hamper routine work and movement of the body -. Grade 3

**3. Sweda Adhikya**

- Sweating after heavy work and fast movement or in hot season - Grade 0
- Sweating after moderate work and movement - Grade 1
- Profuse sweating after little work and movement - Grade 2
- Sweating even at rest or in cold season - Grade 3

**4. Nidradhikya**

- Normal sleep 6-7 hours per day- Grade 0
- Sleep up to 8 hours per day with anga gaurava- Grade 1
- Sleep up to 10 hours per day with tandra- Grade 2
- Sleep more than 10 hours per day with tandra and klama- Grade 3

**5. Daurgandhya**

- Absence of bad smell - Grade 0
- Occasional bad smell in the body removed after bathing - Grade 1
- Bad smell in the body persist even after bathing Grade 2
- Persistent bad smell, intolerable to the patient himself - Grade 3

**6. BMI (body mass index)**

As per WHO standard Classification of obesity based on BMI.

**Table no. 3: classification of obesity according to BMI.**

Classification	BMI [kg/m <sup>2</sup> ]
Normal Range	18.5-24.9
Overweight/Pre obese	25.0-29.9
Obese class I	30.0-34.9
Obese class II	35.0-39.9
Obese class III	≥40.0

**OBSERVATIONS**

Among 45 Patients selected maximum patients 23 (51.1%) were in the age group of 26 – 36yrs, 33 (73.3%) were male patients, 30 (66.6%) were Hindu patients,

33(73.3%) were married, 20 (44.4%) were Vatakapha prakurti patients, 18(44.4%) were Upper middle class patients, 22(48.8%) were from Urban areas, 31(68.8%) patients were having mixed diet, 24(53.3%) patients were having Madhyama koshta, 24(53.3%) patients were not doing vyayama, 24(53.3%) patients Abhyavarana Shakti was Pravara.

**RESULTS**

The results of the each parameter, in each of the group in the study is analysed statistically with the **Paired T test** and between the groups analysed statistically with **F test**. The results obtained are tabulated. Among the results the some parameters were purely subjective, where as some were of objective. The details are as given in below table.

**Table no 4: Results of each group and their comparison with other groups.**

Parameters	Group A			Group B			Group C		
	Mean score		Percentage of Relief	Mean score		Percentage of Relief	Mean score		Percentage of Relief
	BT	AT		BT	AT		BT	AT	
Chalastanaudarasphik	1.6	0.8	50%	1.6	1.0	37.5%	1.4	0.2	85.7%
Angagaourava	1.6	0.8	50%	1.8	1.1	38.8%	1.6	0.2	87.5%
Swedadhikya	1.5	0.8	46.6%	1.6	1.0	37.5%	1.5	0.2	86.6%
Nidradhikya	1.4	0.6	57.1%	1.4	0.5	64.2%	1.2	0.1	91.6%
Daurgandhya	1.5	0.8	46.6%	1.4	1.0	28.5%	1.3	0.2	84.6%
Body weight	71	70	1.40%	71	70	1.40%	75	72	4%
Body Mass Index	28	28	00%	28	28	00%	29	27	6.8%

BT- Before treatment, AT- After treatment.

## DISCUSSION

Sthoulya is a medovaha sroto vikara in which there is accumulation of excessive amount of fat mainly in abdominal region due to which there will be bulkiness heaviness all over the body. It is due to the vitiation of Vata, kapha dosha and Meda dhatu. There is an involvement of all the three Doshas in Sthaulya but the dominancy of Kapha-Vata and Meda is of prime importance. This vitiated Meda obstructs the path of Vata and causes its Avarana which results into provocation of Vata hence leads to Atikshudha which inturn leads to Atisthulata by over-eating. In Atisthula virechana karma is described as one of the therapeutic measures. Nitya virechana can be administered in case patients don't will for classical virechana. In Bahya Chikitsa, Udwartana is indicated which does Kaphaharana & Medovilayana.

## PROBABLE MODE OF ACTION

### Triphala

Triphala contains three drugs Haritaki (Terminalia Chebula), Bibhitaki (Terminalia Bellerica), Amalaki (Phyllanthus Emblica). Ayurveda pharmacodynamic property of all the three are nearly same. All the three drugs have Kashaya Rasa, Haritaki and Amlaki have additional Katu Tikta Rasa along with Kashaya. All the three drugs possess Laghu Ruksha Guna. Hence due to this Rasa Guna, It does Kaphaharana and thereby deplets Kapha dosha.

Haritaki and Amlaki have Madhura Rasa. Haritaki and Bibhitaki have Ushna Veerya. All the three drugs possess Madhura Vipaka. Due to this Rasa veerya and Vipaka combination it does Tridosaharana, Tridoshashamana and does Anulomana, and Hence reduces Vata dosha. Ingredients of Triphala churna also have the property of reducing Meda dhatu. Therefore Udwartana i.e Bahya chikitsa and Nitya Virechana i.e Abhyantara chikitsa with Triphala definitely cobmats Atisthaulya.

### Udwartana

The procedure of massaging the whole body below the neck in the direction opposite to the orientation of hair with some pressure is called Udwartanam. Katu, Tikta,

Kashaya Rasa present in Triphala acts as Kaphahara. Ushna Virya does Srotoshuddhi, Ruksha Guna having Agni and Vayu Mahabhuta predominance dries up Snigdhatata and Pichila quality of Kapha and hence decreases Kledatwa.

When Udwartana churna is rubbed all over the body skin, the local temperature of body skin i.e Twachagni rises up.

Due to this the drugs potency gets absorbed and gets digested by Bhrajaka pitta present in skin.



The Ushna veerya of these drugs enter the Rasdhatu and remove the srotorodha i.e obstruction in the Rasa and Swedowahasrotas.



The gunas and veerya of drugs thus spreads all over the body and hence increases Dhatwagni.



When Medodhatwagni increases, its Dhatupaka process starts and hence leads to digestion of Vikruta Medo Dhatu.



When this Vikruta Medo Dhatu gets dissolved, formation of excessive Sweda diminishes and thus cures Daurgandhya and Sweda Ati Pravrutti (Sweda being a Mala of Medo Dhatu excessive sweating results into bad smell of the body).

Hence Udwartanam provides good results in all parameters because they eliminate the dosha and perform the action of Samprapti Vighatan i.e Breakdown of pathogenesis at cellular level.

### Nitya Virechana

Haritaki is one of the main Virechaniya gana drug present in Triphala, it has virechaka property. The Virechana dravya spreads through out the body up to cellular level due to its pharmacological properties.

Kapha and Avritavata as dosha and Meda as dushya, Medodhatwagnimandya are main key factors in pathogenesis of sthoulya. The principle action of virechana karma is elimination of vitiated pitta dosha as it is an important factor in regulation of Agni. When the Agni gets normalized it enhances the Dhatwagni and hence leads to increase Medodhatwagni which inturn increases Dhatupaka and leads to digestion of Vikruta Medo Dhatu.

Hence by all these Pharmacodynamics of Triphala and the Mode of action of Udwartanam and Nitya Virechanam Tridosaharana takes places leading to Lakshana Upashamana of Sthoulya.

## CONCLUSION

Sthoulya is one of the Ashta Nindita purusha but can be managed by Ayurveda along with dietic restrictions, strictly following Pathya and Apathya. Sthoulya usually occurs in age groups of 25 to 50 yrs and male female ratio is 3:1.

The present study was conducted on 45 patients who were diagnosed as Sthoulya were randomly divided in to 3 groups. Patients of A group were treated with Udwartana and B group were treated with Nitya Virechana. Group C were treated with combined procedures of Udwartana and Nitya virechana. Duration of procedure was 7 days.

The Percentage of improvement in Group A- on Chalastana udara sphik is 50%, on Angagaurava is 50%, on Swedadhikya is 46.6%, on Nidradhikya is 57.1%, on Dargandhya is 46.6%, on Body weight is 1.4%, on BodyMassIndex is 00%.

The Percentage of improvement in Group B- on Chalastana udara sphik is 37.5%, on Angagaurava is 38.8%, on Swedadhikya is 37.5%, on Nidradhikya is 64.2%, on Dargandhya is 28.5%, on Body weight is 1.4%, on BodyMassIndex is 00%.

The Percentage of improvement in Group C- on Chalastana udara sphik is 85.7%, on Angagaurava is 87.5%, on Swedadhikya is 86.6%, on Nidradhikya is 91.6%, on Dargandhya is 84.6%, on Body weight is 4%, on BodyMassIndex is 6.8%.

Overall results of treatment in Group A is 35.95% , Group B is 29.7% and Group C is 63.82%.

Thus Combined treatment of Udwartana with Triphala churna and Nitya virechana with Triphala kashaya is more fruitful than single treatment in management of Sthoulya.

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