

## EFFECT OF *SHODHANA* IN THE MANAGEMENT OF OBESITY (*STHAULYA*) - A CASE STUDY

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### ABSTRACT

Obesity is such a disease, which provides the platform for so many hazards. Now a days Obesity considered as a 'Killer lifestyle' disease is a significant cause of preventable death worldwide. *Acharya* Charaka has described *Sthaulya* (Obesity) among the eight most unwanted diseases. Obesity is important because it develops over time and, once it has developed, is difficult to treat. *Sthaulya* is *Santarpana Janya Vyadhi* and treatment is *Apatarpana Chikitsa*. In *Panchakarma* procedure, *Udawartana*, *Vamana*, *Virechana* and *Lekhana Basti* like *Shodhana* procedures are under the *Apatarpana Chikitsa*. **Aim-** To study and evaluate the effect of *Shodhana Karma* in the management of *Sthaulya*. **Material and Methods-** A 27-year-old female obese patient was treated with classical *Shodhana* Procedures *Vaman*, *Virechana* and *Lekhana Basti* after *Udawartana* and proper *Deepana*, *Pachana*. **Results** – After the treatment, considerable reduction was noticed in weight as well as the anthropometric measurements. Significant changes were also noticed in the symptoms of the patient. No untoward effects of this therapy were observed during the treatment regimen.

**Keywords:** Obesity, *Sthaulya*, *Panchakarma*, *Shodhana*

### INTRODUCTION

Obesity is a major health problem of modern society which is due to sedentary lifestyle and faulty dietary habits. It is a chronic disease that is highly prevalent and that poses a serious risk for the development of diabetes mellitus, hypertension, heart disease, muscular disorder, and concerted.<sup>1</sup> Obesity prevalence is increasing worldwide at an alarming rate in both developed and developing countries. *Acharya Charaka* described the features of healthy body as having equal distribution of *Mamsa* (muscular tissue) and evenly distributed build-up.<sup>2</sup> But now a day, majority of people are not in

*Sama Samhanana* (well distributed body builds up). Overweighing & obesity is the chief complaint of the present era. 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.<sup>3</sup> If secular trends continue, by 2030 an estimated 38% of the world's adult population will be overweight and another 20% will be obese.<sup>4</sup> According to the WHO World Health Statistics Report 2012, globally one in six adults are obese and nearly 2.8 million individuals

die each year due to overweight or obesity.<sup>5</sup> Currently almost 1 in 5 men and over 1 in 6 women are overweight. In some urban areas the rates are as high as 40%.<sup>6</sup> Considering this, the global population is enthusiastically looking towards effective natural remedies. While describing the treatment of *Sthaulya*, *Acharya Charaka* emphasized on the use of *Rukshana* in the form of *Udwartana*, *Shodhana* and use of *Teekshna Basti* as various modalities of management of *Sthaulya*.<sup>7</sup> Considering all these, the current study is planned to validate the efficacy of *Panchakarma* management in the form of *Udwartana* and *Shodhana* i.e. *Vamana*, *Virechana* and *Lekhana Basti* in the management of *Sthaulya*.

**Aim** - To study and evaluate the effect of *Shodhana Karma* in the management of *Sthaulya*.

### Case Report

A 27 years old female patient visited OPD of *Panchakarma*, Institute for post graduate teaching and research in Ayurveda, IPGT and RA Hospital, Jamnagar and presented with chief complaints of increased body weight since 1 year and associated complaints were heaviness in body, fatigue, irregular and scanty menstruation. Onset of weight gain was gradual and progressive in nature. Patient had no history of any major disease like diabetes, hypertension or hypothyroidism. In family history, patient's mother was also obese.

Detailed *Dashavidh*<sup>8</sup> and *Ashtha vidha Pareeksha*<sup>9</sup> was done. No other Abnormality was found. Patient had regular bowel and bladder habits. Appetite was increased and sleep was sound. Patient was habituated to day sleep for 1hr daily. Pulse (82/min), Respiratory rate (18/min) and blood pressure (130/84mm of Hg) were within normal limit. The *Prakriti* was found to be *Vata kapha*.

Dietary Habits- Irregular and frequently ate Junk food and bakery items.

Occupational H/O- Sedentary. Household work only 1-2hrs/day. Level of stress was low.

Menstrual H/O- It was scanty and delay since last 1 year. Duration of cycle was 40-45 days and duration of flow was 2-3 days.

### Criteria for Assessment:

The therapeutic efficacy was subjectively assessed on the base of different signs and symptoms of *Sthaulya*.

Changes in:

- Weight, BMI, Waist-Hip ratio, Anthropometry.

### Investigations:

Routine Haematological, and Biochemical investigation like F.B.S., PPBS, S. Cholesterol, S. Triglyceride, HDL Cholesterol, S.G.O.T, S.G.P.T., Alkaline Phosphates, S. Creatinine, Blood Urea, Uric acid, Total Protein, Albumin, Globulin, Bilirubin (Total & Direct) was done before and after treatment. All reports were within normal limit. Changes were noticed in lipid profile before and after treatment.

**Treatment-** The patient was treated with *Udwartana* followed by *Shodhana* therapy (*Vamana*, *Virechana* and *Lekhana Basti*). Treatment Protocol is described in table no.1 Before *Shodhana Karma Rukshana* was done by *Udwartana* Procedure along with *Dipana* (Appetisers) and *Pachana* (Digestives) for five days which was followed by *Snehapan* with *Murchita* Mustard oil. *Snehapana* schedule For *Vamana* was for 4 days in increasing dose-30ml, 50ml, 80ml and 110ml. After appearance of *Samyaka Snigdha Lakshana*<sup>10</sup>, after 4th day of *Snehapana* Patient advised *Sarwanga Abhyanga* (whole body massage) with *Sahachar taila* and *Swedana* by *Sarwanga Bashpa Sweda* (fomentation done by using medicated vapours for whole body) for next 1 days.<sup>11</sup> During these days Light, warm and liquid diet like green gram soup, rice was given.<sup>12</sup> Thereafter, on the 6th day in morning time at 5:30 am *Vamana* was performed. Patient had 6 Vega and 8 Upvega during *Vamana* Procedure. *Madhyama Shuddhi* was considered and then Patient was advised 5 days of *Samsarjana Krama* (special light to heavy diet schedule to get normalcy in digestive fire). After 7 days of *Vamana*, *virechana* was planned. *Virechana* procedure was started with *Snehapana* in increasing Manner for 4 days-40ml, 60ml, 90ml and last dose was 110ml. After *Snehapana*, *Sarwanga Abhyanga* and *Swedana* was done for 3 days.<sup>13</sup> On next day, *Virechana* medicine *Trivruta Avaleha* was given 60gm with lukewarm water at 10.am after full body massage and Fomentation. *Pravar Shuddhi* was done by *Virechana* procedure as

patient had 27 Vega on the day of Virechana. So, patient was advised to follow *Samasarjana Krama* for 7 Days. After Virechana continuously *Lekhana Basti* was planned for 8 days. *Basti* was done in every morning at 10.00 am around After Local Massage and fomentation (Lower abdomen, lower back and both lower limbs).

#### Observation and Results:

After 5 days of *Udawartana* along with *Dipana Pachana*, patient felt lightness in body and appetite was also increased. Scoring pattern of sign and symptoms are placed in Table no 2. Significant difference was also observed in sign and symptoms of *Sthaulya* which are summarized in table no.3 Changes in BMI, Anthropometry and lipid profile are placed in Table no 4 and 5 respectively.

## DISCUSSION

In *Sthaulya*, *Kapha Dosha* and *Meda Dushya* are mainly involved. Before starting any *Shodhana* procedure proper digestion and No *Ama* (undigested food substance) condition in body is must. So, Before *Snehapana* (internal administration of *Sneha* like oil or Cow ghee) *Udawartana* along with *Dipana Pachana* is planned for 5 days. If digestive fire is poor, then *Snehapana* will be not done properly. *Sunthi* (*Zingiberofficinale* Roscoe) and *Haritaki* (*Terminalia chebula* Retz.) are selected for *Dipana Pachana*. *Sunthi* is having *Katu Rasa* and *Ushna Virya*,<sup>14</sup> because of this property *Sunthi* is good appetiser and *Haritaki* is *Anulomaka* (carminative).<sup>15</sup> So, both drugs are used as *Dipana Pachana*. In this study *Udawartana* was done by Barley Powder<sup>16</sup> which is dry in nature. *Sthaulya* is *Santarpana Janya Vikara*. *Apatarpana* and *Rukshana* is main treatment for *Sthaulya*. All the *Shodhana* procedures are included under *Apatarpana Chikitsa*. So this much of *Shodhana* (*Vamana*, *Virechana* followed by *Lekhana Basti*) has been done in the case study. *Rukshana* is an *Apatarpana Chikitsa* specially used to treat the *Santarpana Janya Vyadhi*. It can be achieved by external or internal or by both methods. *Udawartana* is being practised widely as external method. *Udawartana* is told as *Kaphamedovilapana*<sup>17</sup> After 5 days of *Udawartana* procedure patient felt lightness in body, fatigue was also decreased and 1.2kg weight was also decreased after

5days procedure. *Sarshapa Taila* (Mustard oil) is used as *Snehapan Dravya* in the study. Sushruta explains *Sarshapa Taila* as *Lekhana* and *Kaphamedohara*.<sup>18</sup> *Murchana* has been done for enhancing the potency of *Sharshapa Taila* and to remove bad odour and *Ama Dosha*. *Taila* is also indicated for *Sthaulya*<sup>19</sup> *Snehapana* does *Utklesha* of *Dosha*, these *Dosha* are expelled from nearest route. Entire *Shodhana* Procedure depends upon the proper mobilization of *Dosha* from the *Shakha*, which is achieved with the help of *Snehana* and *Svedana*. Proper *Snehpana* is very important in both *Vamana* and *Virechana*. In both the procedure *Snehpana* is stopped after achieving the proper *Snehapana Lakshana* (symptoms of proper oleation). After completion of *Snehapana*, Full body massage and fomentation done for 1 day in *Vamana* and 3 days in *Virechana*. It is done for external oleation and to liquify the vitiated *Dosha* which are spread throughout the body. *Vamana* is best treatment of *Kapha Dosha*. Main involved *Dosha* in *Sthaulya* is *Kapha*. So, After *Rukshana* therapy *Vamana* is planned. It is for correcting the status of *Kapha Dosha* and *Medo Dhatu* which is affected in *Sthaulya*. After this vigorous *Shodhana* procedure, Digestive fire is very low. For achieving normalcy of *Agni*, *Samsarjana Krama* is advised. Then after 8 days patient is again prepared for *Virechana*. Though *Virechana* is Main treatment of *Pitta*, but it is also under *Apatarpana Chikitsa* and best for correcting the *Agni* which is hampered in *Sthaulya*. After *Virechana* seven days gap is must for planning of *Basti*.<sup>20</sup> *Lekhana Basti* is planned in this case study, because Acharya Charaka has recommended *Ushna Tikshana Basti* whereas Sushruta has indicated *Lekhana Basti* for *Sthaulya*.

## CONCLUSION

This case study revealed that *Panchakarma* procedures are found to be effective in Obesity. *Shodhana* is effective in the management of obesity by virtue of its *Apatarpana* property. Changes are not noted in only weight but also in anthropometry measures and lipid profile. However, to produce more effective conclusions in this respect study needs to be conducted on a larger sample size.

**Table 1:** Treatment protocol

Procedure	Drug & dose	Duration		
<i>Deepana &amp; Pachana along with Udawartana</i>	<i>Deepan-Pachana- Sunthi+Haritaki</i> <i>Sunthi-2gm (Zingiberofficinale Roscoe) +Haritaki-3gms (Terminalia chebula Retz.)</i> thrice a day with warm water	5 Days		
	<i>Udwartana- YavaChurna</i> <i>(Hordeum vulgare Linn. /Barley powder)</i>			
<i>Snehapana For Vamana</i>	<i>Murchchhita SarshapaTaila</i> <sup>22</sup> (Mustard oil) as per <i>Agni &amp; Kostha</i>	4days		
<i>Abhyanga-Bashpa Swedana</i>	<i>Sahachara Taila (Barleriapronitis Linn.)</i>	1 Day		
<i>Vamana Karma</i>	<ul style="list-style-type: none"> <li>• Milk (1-2 lit)</li> <li>• <i>Madanaphalapippali</i> (Randiadumetorum Lam.)4-6gms</li> <li>• <i>Vacha (Acoruscalamus Linn.)</i> - 2-3gms</li> <li>• Saindhava (Rock salt) - 5-10 gms</li> <li>• Makshika (Honey) - 30-50ml</li> <li>• <i>YashtimadhuPhant (GlycyrrhizaglabraLinn.)</i> - 3-5 litres (As per requiremt)</li> <li>• <i>Saindhava Jala-</i> 1-2 litres</li> </ul>	1 Day		
<i>Samsarjana Karma</i>	Diet Plan (as per <i>Shuddhi</i> )	7 Days		
<i>Snehapana for Virechana</i>	<i>Murchchhita Sarshapa Taila</i> -40ml,60ml,90ml,110ml	4 Days		
<i>Abhyanga &amp; Bashpa Swedana</i>	<i>Sahachar Taila (Barleriapronitis Linn.)</i>	3 days		
<i>Virechana Karma</i>	<i>TrivrittaAvaleha</i> <sup>21</sup> -60gms	1 day		
<i>Samsarjan Karma</i>	Diet Plan (as per <i>Shuddhi</i> )	5 Days		
<i>After 7 days of virechana Karma Lekhana Basti</i> <sup>23</sup> was given	Honey-140ml	<i>Ushakadi Kalka</i> -15gm	8 days	
	Rock salt-10gm	<i>Triphala Kashaya</i> -250ml		
	Mustard oil-70ml	<i>Avapa</i>		Cow urine-70ml
				<i>Yavakshara</i> -5gm
Total dose of Basti-560ml				

**Table 2:** Scoring pattern

Symptoms		Score
1. <i>Chala Sphika Udara Stana</i> (Visible Movement in Hip-Abdomen-Breast)	Absence of <i>chalatva</i>	0
	Little visible movement after fast movement	1
	Little visible movement after moderate movement	2
	Movement (in the areas) after mild movement	3
	Movement even after changing posture	4
2. <i>Alasya/Utsahahani</i> (Laziness/ Lack of Enthusiasm)	doing work satisfactorily with proper vigor in time	0
	Doing work satisfactorily with late initiation	1
	Doing work unsatisfactorily under mental pressure and takes time	2
	Not starting any work on his own responsibility and doing little work very slowly	3
	Does not take any initiation and does not want to work even after pressure	4
3. <i>Kshudra Shvasa /Ayase Shvasa</i> (Dyspnoea On Exertion)	Dyspnoea after heavy work (movement) but relieved soon and up to tolerance	0

	Dyspnoea after moderate work but relieved later and up to tolerance	1
	Dyspnoea after little work but relieved later and up to tolerance	2
	Dyspnoea after little work but relieved later and beyond tolerance	3
	Dyspnoea in resting condition	4
4. <i>Daurbalyata-Alpa Vyayama</i> (Weakness)	Can do routine exercise	0
	Can do moderate exercise without difficulty	1
	Can do only mild exercise	2
	Can do mild exercise with difficulty	3
	Cannot do even mild exercise	4
5. <i>Nidradhikya</i> (Excess sleep)	Normal sleep 7 hrs per Night	0
	Sleep up to 8-10 hrs per day with <i>Angagaurava</i>	1
	Sleep up to 8-10 hrs per day with <i>Angagaurava</i> and <i>Jrimbha</i>	2
	Sleep up to 8-10 hrs per day with <i>Tandra</i>	3
	Sleep more than 10 hrs per day with <i>Tandra</i> and <i>Klama</i>	4
6. <i>Swedadhikya</i> (Excess Sweating)	Sweating after heavy work and fast movement or in very 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
7. <i>Daurgandhya</i> (Body Odour)	Absence of body odour	0
	Occasional body odour removed after bathing	1
	Persistent body odour limited to closed areas difficult to suppress with deodorants	2
	Persistent body odour limited felt from long distance not suppressed with deodorants	3
	Persistent body odour limited felt from long distance not tolerated even by patient himself	4
8. <i>Snigdhangata</i> (Oily Body luster)	Normal body luster	0
	Oily luster of the body in summer season	1
	Oily luster of the body in dry season	2
	Excessive oily luster of the body even in dry season which is removed with difficulty	3
	Persistent and profuse stickiness all over the body	4
9. <i>Atipipasa</i> (Excess Thirst)	Normal thirst	0
	Upto 1 liter excess intake of water	1
	1 to 2 liter excess intake of water	2
	2 to 3 liter excess intake of water	3
	More than 3 liter excess intake of water	4
10. <i>Atikshudha</i> (Excess Hunger)	The person not at all taking food or once a day	0
A. <i>Abhyavaharana Shakti</i>	Person taking food in less quantity twice in a day	1
	Taking food in moderate quantity twice in a day	2
	Taking food in normal quantity twice in a day	3
	Taking food in excessive quantity twice or thrice	4
B. <i>Jarana Shakti</i>	Presence of one symptom after 6 hours	0
	Presence of two symptoms after 6 hours	1
	Presence of three symptoms after 5 hours	2

	Presence of all symptoms after 4 hours	3
	Presence of all symptoms within 4 hours	4
11. <i>Angagaurava</i> (Heaviness in the Body)	No heaviness in the body	0
	Feels heaviness in the body but it does not hamper routine work	1
	Feels heaviness in the body which hampers daily routine work	2
	Feels heaviness in the body which hampers movement of the body	3
	Feels heaviness in the body along with flabbiness which causes great distress to the person	4
12. <i>Gatrasada</i> (Fatigue)	No fatigue	0
	Little fatigue in doing hard work	1
	Moderate fatigue in doing routine work	2
	Excessive fatigue in doing routine work	3
	Excessive fatigue even in doing little work	4
13. <i>Anga Shaithilya</i> (Flabbiness in the body)	No flabbiness in the body	0
	Flabbiness in one anatomical region	1
	Flabbiness in more than one anatomical region which does not cause distress	2
	Flabbiness which causes distress to the patient	3

**Table 3:** Changes in scoring pattern before and after treatment

Sr. No.	Complaints	BT	AT	
1.	ChalsphikaUdaraStana	3	2	
2.	Aalasya/Utsahahani	2	1	
3.	AyaseShwasaKastata/Kshudrashwasa	2	1	
4.	Daurbalya(Alpavyayam)	3	2	
5.	Nidradhikya	1	1	
6.	Swedadhikya	2	2	
7.	Daurgandhya	1	1	
8.	Snigdhangata	1	1	
9.	AtiPipasa	3	3	
10	AtiKshudha	Abhyavaharana Shakti	4	3
		Jarana Shakti	2	2
11	Angagaurava	3	2	
12	Gatrasada	2	1	
13	AngaShaithilya	1	1	

**Table 4:** Changes in weight, BMI and Anthropometry before (BT) and after treatment Height- 152 cm

	BT	After <i>Udawartana</i>	After <i>Vamana</i>	After <i>Virechana</i>	After <i>Lekhana Basti</i>
Weight (kg)	86.4	85.2	83	80	78.1
BMI (kg/m <sup>2</sup> )	37.4	36.9	35.9	34.6	33.8
Chest (inch)	40	40	39	38.5	38
Waist (inch)	42	41.5	41	40	39
Hip (inch)	46	46	46	45.5	45
Mid Arm(inch)	14	14	13.5	13	13
Waist hip ratio	0.91	0.90	0.89	0.87	0.86

**Table 5:** Lipid profiles before and after treatment

	Serum Cholesterol	Serum Triglyceride	HDL	LDL	VLDL
BT (mg/dl)	203	252	38	148	17
AT (mg/dl)	158	236	36	98	16

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