

STHAULYA (OBESITY) A SUCCESS STORY- A CASE STUDY

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ABSTRACT

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. Obesity increases the likelihood of various diseases and conditions, particularly Cardiovascular diseases, Respiratory Diseases, Type 2 diabetes, obstructive sleep apnea, certain types of cancer, osteoarthritis and depression. Obesity is a leading preventable cause of death worldwide, with increasing rates in adults and children. In 2015, 600 million adults (12%) and 100 million children were obese. Obesity is more common in women than men. Authorities view it as one of the most serious public health problems of the 21st century. Obesity is stigmatized in much of the modern world (particularly in the Western world), though it was seen as a symbol of wealth and fertility at other times in history and still is in some parts of the world. In 2013, the American Medical Association classified obesity as a disease. In India, the prevalence of overweight increased from 9.7% near the turn of the century to nearly 20% in studies reported after 2010. For children and adolescents, these studies show that obesity and overweight are rapidly increasing, not just in the higher income groups but also in the rural poor, where under nutrition and underweight remain major health concerns. In present research article a case of obesity taken. Patient was suffering from obesity since 8 years, overweight causing hindrance in day today life activities. *Ayurvedic* treatment employed by us has shown superior result comprising *Shodhana, Oushadha, Vyayama & Restricted Diet*.

Keywords: Sthaulya, Obesity Treatment, Ayurvedic, Shodhana, Vyayama

INTRODUCTION

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have a negative effect on health. Obesity increases the likelihood of various diseases and conditions, particularly Cardiovascular diseases, Respiratory Diseases, Type 2 diabetes, obstructive sleep apnea, certain types of cancer, os-

teoarthritis and depression. Obesity is a leading preventable cause of death worldwide, with increasing rates in adults and children. In 2015, 600 million adults (12%) and 100 million children were obese. Obesity is more common in women than men. Authorities view it as one of the most serious public health problems of the

21st century. Obesity is stigmatized in much of the modern world (particularly in the Western world), though it was seen as a symbol of wealth and fertility at other times in history and still is in some parts of the world. In 2013, the American Medical Association classified obesity as a disease [1]. In India, the prevalence of overweight increased from 9.7% near the turn of the century to nearly 20% in studies reported after 2010. For children and adolescents, these studies show that obesity and overweight are rapidly increasing, not just in the higher income groups but also in the rural poor, where under nutrition and underweight remain major health concerns [2]. However, India has also seen a surge in obesity. It had 0.4 million obese men, or 1.3% of the global obese population in 1975, but in 2014, it zoomed into the fifth position with 9.8 million obese men, or 3.7% of the global population. Among women, India has jumped to the third rank with 20 million obese women (5.3% of global population) [3]. Obesity has been described as *Sthaulya* or *Medoroga* in Ayurvedic texts. It is described under *Santarpanoththavikar* [4] (diseased caused by over nourishment). *Medodhatu* (adipose tissue) is the site of metabolic disturbance in an obese individual.

MATERIALS AND METHODS

1) ETYMOLOGY

- The term *Sthaulya* is derived from the *Atmanepadi Sthoolayate Dhatu* having meaning to grow, increase [5]
- The word Obesity is derived from the Latin 'obesitas', which means "stout, fat, or plump" [6]

2) CLINICAL FEATURES OF *STHAULYA* (OBESITY)

Medomamsaativrudhatvat Chala Sphig Udara Stanaha / Ayathopachayotsaho Naroatisthool Uchyate || [7]

The person is called over obese who, due to excessive increase of fat and muscles, has pendulous buttocks, abdomen and

breasts, and suffers from deficient metabolism and energy

The etiology of obesity is far more complex than simply an imbalance between energy intake and energy output. Obesity is far more than simply the result of eating too much or exercising too little. Factors responsible for the development of obesity include –Race, sex, and age factors, Ethnic and cultural factors, Socioeconomic status, Dietary habits, Pregnancy and menopause, Psychological factors, Lactation history in mothers, Endocrine factors, Metabolic factors, Genetic factors, Daily activity level.

3) *SAMPRAPTI*

Vayu gets vitiated due to obstruction caused by *Meda Dhatu* in the *Srotas* which stimulates digestion and absorbs food. Hence the digestion increases and the person desires more for the intake of food. In case of delayed eating he may get afflicted with some severe disorders. The two factors i.e. *Agni* and *Vayu* particularly complicates the problem of person many folds like conflagration burns the forest. In the event of excessive increase of fat, *Vayu* etc (*Doshas*) suddenly give rise to severe disorders and thus destroy life shortly [8].

Factors involved in Samprapti of Sthaulya

- *Doshas* : *Vata, Kapha*
- *Dushyas* : *Rasa, Mamsa, Meda*
- *Srotas* : *Rasavaha, Medavaha*
- *Strotodushti* : *Sanga*
- *Agni* : *Teekshna Jatharaagni*
- *Aam* : *Dhatwaagni- Maandya-Janya*
- *UdbhavaSthana* : *Aamashaya*
- *Vyakta Sthana* : *Sarva Shareera*
- *Adhishthana* : *Meda Dhatu*
- *Rogamarga* : *Bahya Rogamarga*

- *Sadhyasadhya* : *Krucchra Sadhya*

CASE REPORT

A case report as follow:

A 38 year old male patient occupationally electrician residing in *Kolhapur* region approached in my clinic for *Ayurvedic* treatment, with **Chief complaint of** increased body weight since 8 years, **associated complaints** were Dyspnoea on exertion, Constipation, decreased digestive capacity, chest heaviness Low backache, decreased sexual pleasure due to Pre-Mature ejaculation since six months.

History of Present illness:

Patient was apparently alright before 8 years. Due to consumption of high protein diet, non vegetarian substances, milk products, over eating, no exercise and occasionally liquor consumption etc factors tend to gain weight of patient. Since last six months intricate to live day today life for patient. Petite work causes dyspnoea, sweating, weakness. For these complaints patient took treatment from different doctors, underwent numerous investigations but didn't have relief and then he came to our clinic *Maauli Ayurved Clinic, Kolhapur*, for further management.

History of Past illness

History of Past illness doesn't reveal any major deficit. Fortunately patient was not suffering from High Blood pressure, Diabetes mellitus, Cardiac, Respiratory or Neurological disease.

Family History

Family history of Obesity present, Patients Paternal Father, and Grandfather were obese.

Laboratory Investigation

- All hematological, Urine, investigations were within normal limits, dated 16/07/2015
- **C.B.C.-**
HB 13.3 g/dl, WBC 7.3 (10 E³/μL), RBC 4.15 (10E⁶/μL), HCT 40%, MCV 67, MCHC 34, Platelet count 254000 /μL, Neutrophils- 58%, Lymphocytes-32%, Monocytes 5%, Eosinophils 5%, Basophils 0%, ESR – 19 mm/hr
- **URINE ROUTINE & MICROSCOPIC**
VOLUME - 40 ml, Color - Pale Yellow, Appearance – Clear, Specific Gravity - 1.010, pH - 6.9, Protein - Trace, Sugar - Absent, Urine Ketone – Absent, Bile Salt – Absent, Bile Pigment – Absent, Pus Cell - 1-2/hpf, RBC-NIL, Epithelial Cells – 1-2/hpf,
- Random Blood Sugar 80 mg/dl, Blood Urea 37.2 mg/dl, Serum Creatinine-1.09 mg/dl, Serum Uric Acid 4.83 mg/dl, Total Bilurubin 0.8 mg/dl, Direct Bilurubin 0.3 mg/dl, Indirect Bilurubin 0.5 mg/dl
- Serum Cholesterol 224 mg/dl, LDL 140 mg/dl, HDL 58mg/dl, Serum Triglycerides 146 mg/dl, Serum Sodium 136 μmol/lit, Potassium 4.2 μmol/lit
- HIV, HbsAg Negative

Table 1: Details of Physical Examination

VITALS		SYSTEMIC EXAMINATION	
Temperature	98.6 °f,	Respiratory System	Normal
Pulse	74/min	Cardio Vascular System	Normal
R.R.	20/min	Central Nervous System	Normal
B.P	130/80 mm of Hg	Per Abdomen	Normal
OTHER FACTORS			
Height	171 cms	Weight	90kg
Aahara	Mix Vegetarian	Vihara	Sedentary lifestyle
Appetite	Bad	Koshtha	Vibandha
Sleep	Good	Micturation	Normal

Sex	Twice a weak	Habbits	Occasionally Liquor
DASHAVIDHA PARIKSHANA		ASTHAVIDHA PARIKSHANA	
<i>Prakruti</i>	<i>Pitta Kaphaja</i>	<i>Nadi</i>	<i>Pitta Kaphaja</i>
<i>Vikruti</i>	<i>Kapha</i>	<i>Mala</i>	<i>Saam, Vibandha</i>
<i>Saar</i>	<i>Pravara</i>	<i>Mootra</i>	<i>Prakruta</i>
<i>Samhanana</i>	<i>Pravara</i>	<i>Jivha</i>	<i>Saama with Whitish fur</i>
<i>Pramana</i>	<i>Pravara</i>	<i>Shabda</i>	<i>Prakruta</i>
<i>Saatmya</i>	<i>Avara</i>	<i>Sparsha</i>	<i>Anushna Sheeta</i>
<i>Satva</i>	<i>Madhyama</i>	<i>Druka</i>	<i>Prakruta</i>
<i>Aaharashakti</i>	<i>Avara</i>	<i>Aakruti</i>	<i>Atisthoola</i>
<i>Vyayamashakti</i>	<i>Avara</i>		
<i>Vaya</i>	<i>Madhyama</i>		

- **ECG-** Normal
- **Chest X-RAY-** Normal
- **Physical Examination**

**MATERIALS & METHODS:
TREATMENT**

Shastamullekhanam Tatra Virekorakta-mokshanam /

Vyayamshchopavaasashchdhoomashch Swedanani Cha //^[9]

In *Ayurvea* Classics for diseases like *Sthaulya Vamana, Virechana, Raktamokshana*, Exercise, Fasting, Smoking, Swe-

dana etc are described as line of management.

TREATMENT GIVEN

Considering therapeutic guideline and deep seated nature of disease of prolonged duration treatment planned after proper counseling and written consent as,

Table 2: showing treatment given to Patient and its duration

Sr	Treatment Given	Duration
1	<i>Aam Pachan and Agni Deepan</i>	7 Days
2	<i>Vamana Karma (Snehapana, Vamana, Sansarjana Krama)</i>	23 Day
3	<i>Virechana Karma (Snehapana, Virechana, Sansarjana Krama)</i>	15 Day
4	<i>Abhyantara Oushadha, Vyayam, Diet plan</i>	45 Days

1. Aam Pachan and Agni Deepan- Duration 7 Days

Prabhoota Aam Laxana found on *Jeevha* and digestive capacity was diminished, improper hunger sensation present in patient, to combat this *Aam Pachan and Agni Deepan* processed with employing *Langhana*, only *Peya* (Rice water) and *Laja* (Pop corns) etc. light food given at meals on excessive hunger. *Sutshekhara Vati*^[10] 4 Tablets of 250 mg twice daily in morning & evening, *Chitrakadi Vati*^[11] 4 Tablets of 250 mg twice daily before Meal given with *Koshna Jala* as *Anupana*, for 7 days. This procedure got completed in 7 Days.

2. Vamana Karma

a) Abhayantara Snehapana with Mahatiktaka Ghrita - Duration 7 Days

After *Aam Pachana*, *Abhayantara Snehapana* conducted with *Mahatiktaka Ghrita*^[12] prior to *Vamana and Virechana Karma*. For *Abhayantara Snehapana*, *Hrasiyasi Matra*^[13] (Progressively increased Dose) taken. Dose started with 40 ml *Accha Pana of Ghrita*^[14] in liquid state of lukewarm temperature administered. *Koshna Jala* only provided to drink intermittently on *Utklesh Avastha*. On completion of *Sneha Pachana*, light food given to patient. This *Abhayantara Snehapana* conducted as per guidelines given in classics.

Details of *Snehapana* procedure *Sneha Matra*, *Jaranakala* etc are illustrated in Table no. 3.

b) Vamana Karma - Duration 1 Day

After completion of *Abhayantara Snehapana* on 8th day *Kapha Utkleshaka Aahara* was given and *Bahya Snehana* with *Tila Talila* and *Swedana* with *Dashamoola Kwatha Bashpa* [15] employed. On 9th Day *Vamana Karma* took place. For this, initially Milk 250 ml given orally. Then *Yashtimadhu Fanta* [16] has been given as *Aakanthapana* approximately 1800 ml, after that *Madanaphala* 3 grams + *Vacha* 2 Grams + *Saindhava* 1 gram + *Madhu* semisolid paste given [17]. *Vamana Vega* started after 1 hour. *Kapha Dosha* was clearly visible in vomits. Patient had 9 Vegas total and ceased with *Pittadarshana*. Whole procedure was carried out as per guidelines given in classics. Sudden after *Vamana Karma* symptoms like chest tightness, heaviness of body relieved.

c) Sansarjana Krama of 1 weak and 1 weak Normal Diet - Duration 15 Days

After completion of *Vamana*, *Sansarjana Krama* [18] adopted, On 1st day in evening *Peya* given, on 2nd day *Peya* for 2 times, on 3rd day *Vilepi* given for two times, on 4th day in Morning *Vilepi* and in evening *Akruta Yusha* given, on 5th day *Kruta Yusha* for 2 times, on 6th day *Akruta Mamsarasa* (Mutton soup) given considering increased intensity of Digestive fire, and in evening *Kruta Mamsarasa* given same repeated on 7th day Morning and in evening Normal diet given to patient. After 1 weak of *Sansarjana Krama* again 1 weak normal diet was given no medicine given during that period. Whole procedure carried out as per guidelines given in *Ayurved* classics.

4) Virechana Karma

a) Abhayantara Snehapana with Mahatiktaka Ghrita - Duration 7 Days

After *Vamana Karma*, again *Abhayantara Snehapana* conducted with *Mahatiktaka Ghrita* with same *Hrasiyasi Matra* (Pro-

gressively increased Dose) taken. Details of *Snehapana* procedure *Sneha Matra*, *Jaranakala* etc are illustrated in Table no. 3. This *Abhayantara Snehapana* conducted as per guidelines given in classics.

b) Virechana Karma - Duration 1 Day

After *Samyaka Snehapana*, *Samyaka Snigdhalaxana* of patient 3 day gap given. Patient advised to consume chicken soup, mutton soup etc plenty of watery substances. *Bahya Snehana* with *Tila Taila* and *Swedana* with *Dashmoola Kwatha Bashpa* given on 1st and 2nd day gap not employed on third day. On 4th day *Virechana* conducted. At 6 A.M. *Shyama Trivrutta Avaleha* [19] 10 grams churned with 1 glass of warm Milk. Considering *Pitta Dushti Shyama Trivrutta Avaleha* was taken for *Virechana*. *Trivrutta* considered as best *Virechana* Drug, for removal of Vitiated *Pitta Dosha*. Vega Started at 10 A.M. initially *Mala* wiped out in 1st and 2ndvega, then *Pitta Dosha Vega* tend to come. *Sukhoshna Jala*, *Sharbat* of *Sukhoshna Jala* given during procedure. Total 33 Vega occurred in whole day which show best *Virechana* result. Patient felt extreme weakness on *Virechana* day which was common. Whole procedure was uneventful and as per textual guidelines.

c) Sansarjana Krama - Duration 7 Days

On successful completion of *Virechana Karma*, *Sansarjana Krama* adopted for *Jatharagni Vardhana* as after *Vamana* for enhancement of digestive capacity. After completion of *Sansarjana Krama* considerable reduction in Waist size, body weight, mid arm circumference, mid thigh circumference etc noted

5) Abhayantara Oushadha, Vyayam, Diet plan - Duration 60 Days

After completion of *Shodhan Karma*, *Abhayantara Oushadha*, *Vyayam*, *Diet plan* given for 60 days,

a) Abhayantara Oushadha

- *Sutshekhara Vati* - 1
Tablet of 250 mg Twice Daily Before Meal

- *Aarogyavardhini Vati* ^[20] -
1 Tablet of 250 mg Before Dinner
- *Anupana* - *Koshna Jala*
- *Lekhaniya Mahakashaya* ^[21] -2
Gram Powder +1 Cup water, boil it & reduced till it remains half from original volume, then filtered water was administered twice daily

b) Vyayam (exercise)

Patient was advised to do walking exercise, climbing stairs daily. Exercise started with daily 1.5 Kilometer walking gradually increased to 3 Kms in Second week, 4 kms in 3rd, 6 kms in 4th week, same distance maintained in 2nd month. Patient advised to climb stairs 3-4 times twice daily.

c) Diet

Patient's diet habits completely changed, overeating, and non vegetarian food eating was banished. In morning breakfast light food as *Poha*, *Upit* with tea, in lunch and dinner only one *Chapati*, *Dal*, curry, 1 bowl rice maintained. It was utmost difficult to maintain, but family members specially patients wife took charge and initiated patient to follow it.

RESULTS:

On admission day dated 17.07.2015 patient's weight was 91 kg, which got reduced to 72 kg at the time of completion of treatment on 16.09.2015. The results showed that there were significant changes in reduction of weight by 19 Kgs in 90 days. Patient was advised to continue restricted diet, avoid day sleep, plenty of water to drink and exercises for next 4 months. On completion of treatment patient got rid of dyspnoea, weakness, constipation and important cheerful sexual intercourse. Details of body weight changes etc enumerated in Table no.5.

DISCUSSION

In present Case study I utilized *Aam Pachana*, *Vamana*, *Virechana Abhyantara*

Oushadha, *Vyayam*, *Diet plan Chikitsa* for management of disease.

1. Aam Pachana and Agni Deepan

Before initiation of Purificatory measures, *Aam Pachana* and *Agni Deepan* are important. In *Sthaulya* bodily *Kapha Dosha* along with *Aam Annarasa* circulates all over body ^[22], loosens *Dhatu*s and causes obesity. In this patient *Dhatwagni Mandhya* and *Bhutagnimandhya* was there and accumulation of *Aam* which causing *Strotorodha* (blockage of body channels) by its *Guru*, *Abhishyandi*, and *Picchila* properties resulting in Obesity. For its execution *Langhana*, *Koshna Jala Sevana*, *Sutashekhara Vati*, *Chitrakadi Vati* employed which act on *Aam*, *Agni*, *Kapha Dosha* producing lightness in body, *Agnivardhana*, removal of *Strotorodha*, *Aam* by *Laghu*, *Ushna*, *Tikshna*, *Vishada*, *Sukshma*, *Khara* qualities.

2. Abhyantara Snehapana with Mahatiktaka Ghrita

Before employing *Panchakarma*, *Snehana-Swedana* is mandatory. *Snehapana* pacifies *Vata*, brings softness in body parts, stagnated or accumulated *Mala*, in body part gets loosened, *Swedana* cause liquefaction of *Doshas*. *Dosha* gets *Anuloma Gati* and brought towards *Koshtha* ^[23]. *Mahatiktaka Ghrita* used in this clinical study for *Abhyantara Snehapana* having superior properties and *Pittahara Guna*, so it brings vitiated *Doshas* to *Koshtha*, pacifies *Vata* by *Sneha Guna*.

3. Vamana and Virechana Karma

In *Sthaulya* there is predominance of *Kapha* along with *Aamrasa* causing *Dhatushaithilya* ^[24] which is of *Guru*, *Snigdha*, *Picchila*, and *Sandra Guna*. Appropriate utilization of *Vamana*, *Virechana Karma* removes bodily vitiated *Kapha*, *Pitta Dosha*, and *Aam* from body cause *Samprapti Bhanga* and makes body disease free.

4. Abhyantara Oushadha

Sutshekhara Vati, Aarogyavardhini Vati given for maintenance of bodily *Pitta, Vayu* and *Kapha Dosha* normality. *Lekhaniya Mahakashaya* enumerated by *Charakacharya* is excellent in *Lekhana Karma*. In *Sthaulya* there is accumulation of *Kapha* all over body along with *Meda, Mamsa Ati Vruddhi*. Drugs of *Lekhaniya Mahakashaya* act on augmented *Meda, Mamsa, and Kapha* causing reeducation of them and to end with reduction in body weight.

5. Vyayama (Exercise)

Vyayama^[25] (Exercise) is important in *Sthaulya Chikitsa*. It causes lightness in body, improvise working power, digestive fire, and depletes raised bodily *Meda Dhatu*. Considering Patients economic condition walking, climbing stairs chosen as exercise which effect in weight loss.

6. Role of Diet

Diet is utmost important in obesity management. The most basic consideration is that the food energy intake should not be greater than what is ne-

cessary for energy expenditure. It requires modification of patient's behavior and strong motivation to lose weight and maintain ideal weight. In present case Restricted modified diet worked and result in loss of body weight was incredibly. Restricted diet doesn't cause over nutrition so body won't gain overweight.

CONCLUSION

Based on the signs and symptoms, *Sthaulya* was treated with *Shodhana* diet, exercise and medicines followed by the *Vishista Nidana Parivarjana* in the form of *Ahara Vihara, Aushadha, Vyayama* showed remarkable changes in reducing the weight of the patient

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Sincere gratitude to my first patient, who bestowed in my treatment, followed all instructions made me renowned in Society as Successful *Ayurved* Physician.

Table 3: Presentation of *Snehapana* Procedure prior to *Vamana & Virechana Karma*

Vamanapurava Snehapana			Virechanapurava Snehapana		
Day	Sneha Matra	Jarana Kala	Day	Sneha Matra	Jarana Kala
1 st	40 ml	2 Hours	1 st	40 ml	2.5 Hours
2 nd	80 ml	3 Hours	2 nd	80 ml	4 Hours
3 rd	100 ml	4 Hours	3 rd	100 ml	4 Hours
4 th	120 ml	5 Hours	4 th	120 ml	6 Hours
5 th	120 ml	6 Hours	5 th	120 ml	7 Hours
6 th	120 ml	9 Hours	6 th	120 ml	9 Hours
7 th	240 ml	24 Hours	7 th	240 ml	24 Hours

Table 4: Showing *Shodhana Parikshana*

Sr	Pariksha	Vamana	Virechana
1	Antiki (End of Procedure)	Pitta, Vayu	Kapha Vayu
2	Vaigiki (Number of Vegas)	9 Vega	33 Vega
3	Maniki (Measure of Dosha removed out)	1.5 Prastha Approx	4 Prastha Approx

Table 5: Follow up Assessment Chart

Sr		B.T.	After Vamana	After Virechana	After 90 Days Rx
1	Weight	91 Kg	86 kg	80 kg	71 Kg
2	B.M.I.	31.1	29.4	27.4	24.3
3	Chest Circumference	120 cm	118 cm	114 cm	102 cm
4	Mid Arm Circumference	Rt - 36 cm	Rt - 34 cm	Rt - 32 cm	Rt - 26 cm
		Lt - 35 cm	Lt - 33 cm	Lt - 32 cm	Lt - 26.5cm

5	Mid Thigh Circumference	Rt - 68 cm	Rt - 66 cm	Rt - 63 cm	Rt - 57 cm
		Lt - 67.5 cm	Lt - 66 cm	Lt - 63 cm	Lt - 57.5cm
6	Waist Circumference	120 cm	118.5 cm	115 cm	108 cm
7	Hip Circumference	136 cm	134 cm	131 cm	122 cm

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