

Ayurvedic approach in the management of Sthoulya- A case study

Case Report

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Abstract

A Female aged 30 years hailing from Muddebihal, Karnataka working as an Asst. Manager in Bank, a known case of obesity since 5 years. By her physical, clinical and anthropometric examinations, she was diagnosed to be *sthoulya* (Obesity). It is successfully managed by the principle of “*Guru Cha Atarpanam*”. In the present scenario *Sthoulya* (Obesity) is a overwhelming issue throughout the world. The changes in dietary habits and mode of living (sedentary lifestyle), Obesity is one of the most serious lifestyle disorders that endangers people's lives and is also a major cosmetic issue. Effective treatment for obesity is needed for present days. Obesity is linked with *Sthoulya* or *Medoroga* in *Ayurveda*. *Sthoulya* is most caused by *Ati Ahara Sevana*, *Avyayama* and *Beejadosha*. *Apatarpan chikitsa* is the main *Chikitsa* explained by *Acharya Charaka* for *Sthoulya*. Aims and objective: To demonstrate the role of Ayurveda in the management of Obesity. Methods: The current article is about a *Sthoulya* case that was treated with *Apatarpan chikitsa*, specifically *Udwartana*, *Bashpa sweda*, *sadyo virechana*, *shamana aushadhis*, *yogasana* and some dynamic exercises. Results: Patient experienced significant relief from all the symptoms, weight, BMI, Anthropometric measurements and lipid profile in just 20 days.

Key Words: Obesity, *Sthoulya*, *Udwartana*, *Navaka Guggulu*.

Introduction

Obesity is the most common disorder of metabolic and it is one of the oldest documented diseases among all diseases. *Sthoulya* is a condition of health where there are negligent excessive accumulation of fat in buttocks, breast and abdomen due to overload of *Meda* and *Mamsa Dhatu*.(1) The modern medical science defines obesity as one of the non communicable, malnutrition disorder characterized by abnormal rise in size or no. of adipocytes.(2) As per World Health Statistics 2012 one in six adults is obese. (3) As a chronic disease this burden causes a heavy economic and human loss due to its complications there by burdening the country with huge economy loss. Obesity is key factor in natural history of other chronic and non communicable diseases. The first adverse effects of obesity is to emerge in population in transition are hypertension, hyperlipidemia and glucose intolerance, while coronary heart disease, infertility, diabetes are few important long term complication of it.

Lifestyle assumes a significant part in the advancement of Obesity. Weight are characterized as unusual fat collection that might hinder wellbeing, for an individual, obesity is normally the result of a

discrepancy in the number of calories consumed and calories expended. In *Ayurveda*, *Sthoulya* is the closest clinical element for obesity or obese people are incorporated under *Asta Nindita Purusha*. The concept of *Ahara* (Diet) and *Vihara* (Lifestyle) are similarly or considerably more significant in *Sthoulya* to control or prevent entanglements of this disease. Improper eating pattern and absence of physical exercise will leads to Obesity. Along with this excessive sitting for long duration, watching TV or other indoor works like PC gaming which are currently turned into the fundamental piece of the present way of life, which will transfer from overweight to obesity, improper dietary patterns, intake of excessive fried items, fats, sugar, and refined starches are getting exposed to Obesity. Consideration of food things like entire grains, garlic, onion, bitter gourd in the eating routine, keeping away from the food stuffs like, pineapple, grapes, mangoes from the diet and including light exercise like walking, running, cycling in everyday way of life which will prevent from the obesity. (4)

The Case

A Female aged 35 years hailing from Muddebihal, Vijayapura, Karnataka working as a Asst. Manager in Bank, a known case of obesity since 5 years.

Chief Complaints:

Increased body weight for 5 years

Associated Complaints

Excessive sweating and thirst

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History of Present Illness

Patient was said to be apparently well 5 years back. From the age of 25 years patient started working in bank as a clerk, then she gradually observed that she is putting on weight. After getting promotion as an Asst. Manager due to prolonged sitting and stress work she observed that, this condition was increasing. She does not undergo any medication for this problem. Now she visited our hospital with above said complaints.

Past History

Not a known case of HTN/DM/Hypothyroidism.

Family History

Patients mother is obese.

Table 1: Personal History and Anthropometric measurements

Blood Pressure	120/80 mm of Hg
Pulse Rate	76bts/min
Height	174 cms
Weight	92 kg
Body mass Index(BMI)	30.4 kg/m ²
Chest Circumference	103 cms
Abdomen Circumference	115 cms
Mid Arm Circumference	
Right Arm	38 cms
Left Arm	37 cms
Mid Thigh Circumference	
Right Thigh	60 cms
Left Thigh	59 cms
Waist Circumference	110 cms
Hip Circumference	116 cms
Aahara(Diet)	Mixed diet/non vegetarian twice in a week
Vihara(Lifestyle)	Sedentary life style (Avyayama, Divaswapna)
Appetite	Good
Bowels	Hard stool, Twice in a day.
Micturation	Normal
Sleep	Sound
Habits	Fond of bakery items, chocolates, Junk food like pizza and burger.

Systemic Examination:

CVS: S1, S2 heard; RS: AEBE; CNS: Well oriented; P/A: Soft, No Organomegally

Dashavidha pariksha:

Prakriti: Kaphapitta; **Vikriti:** Kapha, Meda; **Sara:** Madhyama; **Samhanana:** Pravara; **Satva:** Madhyama; **Satmya:** Pravara; **Aharashakti:** Pravara; **Vyayamashakti:** Avara; **Pramana:** Adhika; **Vaya:** Yuva

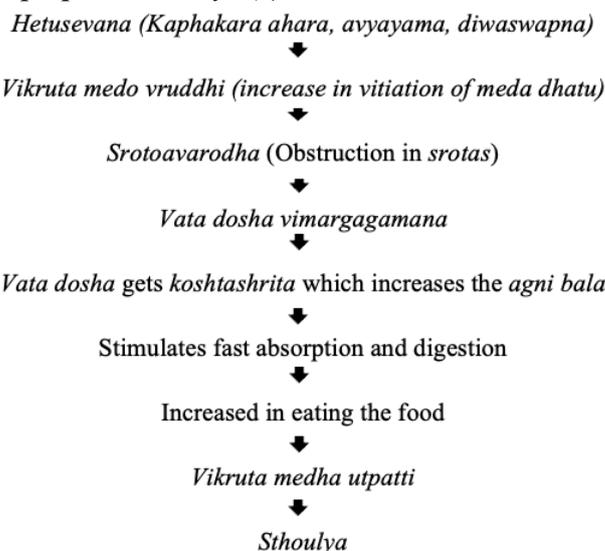
Astasthan Pareeksha:

Nadi: Prakruta; **Mala:** Prakruta; **Mootra:** Prakruta; **Jihva:** Aliptata; **Shabda:** Prakruta; **Sparsha:** Prakruta; **Drik:** Prakruta; **Aakruti:** Sthoola

Table 2: WHO classification of Weight Status (5)

Classification	BMI (kg/m ²)
Underweight	<18.50
Normal range	18.50 – 24.99
Overweight	≥25.00
Pre-obesity	25.00 – 29.99
Obesity	≥30.00
Obesity class 1	30.00 – 34.99
Obesity class 2	35.00 – 39.99
Obesity class 3	≥40.00

Samprapti of Sthoulya (6)



Samprapti Ghatakas:

Udbhava Sthana: Amashaya; **Vyaktasthana:** Sarva Shareera; **Adhistana:** Medo dhatu; **Roga marga:** Bahya; **Agni:** Teekshnagni; **Dosha:** Kapha and Vata; **Dushya:** Rasa, Mamsa and Medo dhatu; **Srotas:** Rasavaha, Medovaha; **Sroto dusti:** Sanga; **Sadhyo Asadhyata:** Krichra Sadhya

Table 3: Treatment plan

Days	Treatment	Used Medicines	Observations
Day 1 to 18	<ul style="list-style-type: none"> Udvarthana(Powder massage) 30 minutes, followed by bhaspa sweda (steam bath) Yoga and Pranayama Physiotherapy Pathyahara. 	<ul style="list-style-type: none"> Triphala Choorna for Udwarthana Navaka Guggulu Amla juice 	<ul style="list-style-type: none"> Appetite- Good Bowel- Passed Micturation- Passed Sleep- Sound
Day 19	<ul style="list-style-type: none"> Sarvanga abhyanga for 30 minutes, sarvanga swedana followed by SadhyoVirechana(Purgation) 	Trivrit Lehyan 70 gms with Draksha kashaya 200 ml	Total 19 vegas passed till the 5pm
Day 20	Advised to follow the Samsarjana krama	—	Feeling Lightness

Table 4: Advised Asanas, Pranayama and Physiotherapy for 18 days

	Advised	Names	Time/Duration
Morning Session (6.30 to 8.30)	Walking	Brisk Walk	40 minutes
	Warm up exercises	Loosening exercises	20 minutes
	<i>Surya Namaskara</i>	12 rounds	10 minutes
	Standing posture <i>Asana</i>	<i>Trikonasana, Ardha Kati Chakrasana, Arda Chakrasana.</i>	10 minutes
	Sitting posture <i>Asana</i>	<i>Vajrasana, Gomukhasana, Ardha Matsyendrasana.</i>	10 minutes
	Supine posture <i>Asana</i>	<i>Pavana Muktasana.</i>	10 minutes
	Prone posture <i>Asana</i>	<i>Bhujangasana, Dhanurasana, Shavasana.</i>	10 minutes
Evening Session (4 to 6pm)	Warm up exercises	Loosening exercises	20 minutes
	<i>Pranayama</i> advised	<i>Kapalabhati, Bhastrika, Surya- Anuloma Viloma, Surya Bhedana, Nadi Shudhi, Brahmari.</i>	40 minutes
	Walking	Brisk Walk	40 minutes

Udwarthana

She was treated with *Udwarthana* (Powder massage) for 30 minutes with *triphala choorna* which pacifies the aggravated Kapha dosha, Softens and exfoliates dead skin followed by *bhaspasweda* (steam bath) for 18 days.

SadhyaVirechana

On 19th day *Sarvanga abhyanga* for 30 minutes, *Sarvanga Swedana* followed by *SadhyaVirechana* (purgation therapy), one of the purificatory *Panchakarma* was administered with *Trivrit Lehyam* 70 gms with *Draksha kashaya* 200 ml. The patient had passed 19 *vegas* and observed *samyaka virechana laxanas* then *Peya* diet was given at night.

During the first 18 days she was also treated with some *Yogasanas, Pranayama* along with some of the relaxation techniques and dynamic exercises for around 2 hours at 6.30am and 4pm of the day. The oral medication included *Navaka Guggulu* twice daily before food and *Amla* juice 20 ml with 100 ml of water at 6 AM & 6 PM for 18 days. The diet during this period consisting *Guru & Atarpaka Ahara* (heavy to digest and non nutritive food - *Jeeraka Siddha Jala, Mudga/Kulatha/chanaka Yusha, Takra, Ragi/Jowar/ Yava rotika, Upma, Boiled vegetables, Madhudaka, Nartaki* preparations, carrot or tomato soup, boiled vegetable salad like cucumber, carrot, cabbage, cauliflower and fruits like water melon, muskmelon, orange, pineapple, kokum, lemon juice etc.) along with 2.5 to 3 liters of water per day. On discharge, she was given *Cap. Decrin plus*, two capsules twice daily before food, *Asanadi kashaya* 15 ml thrice daily, advised to follow exercises, *yogasana, pranayama* for two hours per day along with low calorie high fiber diet (no rice preparations) and 7 to 8 hours of sleep. The don'ts included tea and coffee with milk, deep fried foods, meat, curds, sweets, too much oil/ghee, refined flour and its preparations, ice cream, chocolate, junk foods, cola and sedentary life. The clinical and laboratory

findings on discharge and during follow up are given below in table 5, 6 and table 7.

Probable Mode of Action of therapies

Udwarthana and *Bhashpa Sweda* remove the *Srotorodha* due to their *Rooksha guna* and cause liquefaction of *Medas* and mobilize it. *Virechana* with *Trivrit Lehyam* with *draksha kashaya* causes *Medoharana*. *Yoga* and other physical exercises (*Vyayama*) – Normalizes the fat metabolism and helps in energy expenditure. Increases the level of *Dhathvagni*, mobilizes *Medhodhatu* & hence gives shape and stiffness to the body. Low calorie high fiber diet – Fulfills the *Chikitsa Sutra* “*Guru Cha Atarpanam*” (Due to high fiber content food is *guru* and due to low calorie it is *Atarpana*).⁽⁸⁾ In the case of the excessively obese, *GURU* (heavy) and *ATARPANA* (non-nourishing (diet) therapy) are suggested for slimming, which is the polar opposite of *krush chikitsa* (*Guru cha tarpana*). In order to control increased *Vata* and *Agni* the *Guru Ahara* (heavy food) is necessary and to reduce the *Meda Dhatu* and *Kapha Dosha Atarpana Ahara* (Non Nourishing food) is necessary.

The afferent system generates humoral signals from adipose tissue (leptin), pancreas (insulin), and stomach (ghrelin) due to etiological factors, the central processing unit (lateral hypothalamus [feeding centre] and ventromedial nucleus [satiety centre]) integrates afferents signals, and the effectors system carries out orders from the hypothalamic nuclei that are from the feeding or hunger centre and satiety centre, which promotes a sustained rise in food intake while decreasing energy expansion. The main essential part of diet therapy is calorie consumption is to be reduced by containing Very low energy diets, Low calorie diets, very low carbohydrates, high protein diets. Protein and fiber rich food sources are regularly high satiety that they keep an individual loaded with stomach and less hungry. A fiber rich food source impedes the pace of processing, slow stomach discharging and retention of the carbohydrates from the gastrointestinal and f brings

down the blood glucose level and play a part in decreasing the weight. Eating food sources high in water and fiber can give satiety without overabundance calories. Guru and atarpana form of diet means heavy and bulk agents which give fundamental supplements and produce a sensation of satiety.(9)

Navaka Guggulu has *Trikatu*, *Triphala*, *Chitraka*, *Musta*, *Vidanga* one part each, *Shuddha Guggulu* 9 parts – *Meda*, *Kapha*, *Ama* & *Vatahara*.(7) *Amla* Juice contains *Amalaki* (Dominant), *Tulsi*, *Ela* (*Prakshepaka Dravyas*) which acts as *Tridosahara*, *Rasayana* and *Medohara*.(8) *Amla* juice has a high antioxidant quality. (10) *Draksha* have *madhura rasa* and *sheeta virya* but because of *prabhava* it acts as *virechana*.(11) *Virechana* is to be administered when *pitta* has undergone increase alone or in association with *kapha* or when *kapha* has got localised in the seat of *pitta*.(12) Each capsule of *Decrin Plus* contains *Amrutadi Guggulu* 250mg, *Navaka Guggulu* 60 mg, *Shudda Shilajitu* 30mg, *Aghada* 60mg, *Bhavana* with *Guduchi*, *Punarnava* & *Gokshura* Swarasa.(13) *Asanadi kashaya* having *tikta* predominance *kashaya rasa* reduces *kapha dosha* as it causes dryness; regularizes the metabolism (*Deepana-Pachana*); dries up *medas* (*medoshoshaka*); uses up the fat/moisture (*kleda shoshaka/kleda upayokta*); leans the body (*karshana*). The combined effect is seen on *Medodosha*. (14,15)

Table 5: Anthropometry changes before and after treatment

Parameters		Day 1 Before treatment	Day 20 After treatment	Day 60 Follow up
Mid Arm Circumference (cm)	Right	38	35	32
	Left	37	34	30
Mid Arm Circumference (cm)	Right	60	57	54
	Left	59	57	54
Abdomen Circumference(cm)		115	112	108
Waist Circumference(cm)		110	107	103
Hip Circumference(cm)		116	113	109
Weight (kg)		92	89	85
Body mass Index(kg/m ²)		30.4	29.4	28.1

Table 6: Lipid profile changes before and after treatment

Parameters	Day 1 Before treatment	Day 20 After treatment	Day 60 Follow up
Total Cholesterol	201 mg/dl	185 mg/dl	170 mg/ dl
H.D.L Cholesterol	55.2 mg/dl	72.3 mg/dl	89.6 mg/dl
L.D.L Cholesterol	122.1 mg/dl	117.5 mg/dl	111.3 mg/dl
Triglycerides	181.1 mg/dl	162.3 mg/dl	142.5 mg/dl
VLDL	39.3 mg/dl	29.5 mg/dl	20.6 mg/dl

Table 7: Changes in signs and symptoms

Signs and Symptoms	Day 1 Before treatment	Day 20 After treatment	Day 60 Follow up
Exertional dyspnea (<i>Ayasena swaskasthata</i>)	3	1	1
Excessive perspiration (<i>Swedabadha</i>)	4	3	2
Polydipsia (<i>Atipipasa</i>)	4	2	2
Polyphagia (<i>Atikshudha</i>)	4	3	2
Continuous feeling of laziness (<i>Utsahahani</i>)	3	2	1
Heaviness in body (<i>Gurugatrata</i>)	3	2	2

Abbreviations: 1-No symptom; 2-Least; 3-Mild; 4-Moderate; 5-Severe.

Discussion

The *Sthoulya* is one among the oldest metabolic disorders. The excessive accumulation of fat in buttocks, breast and abdomen are significant features. As patient had adopted herself to sedentary lifestyle (*Sukhavyavahara*), day sleep (*Diwaswapna*), lack of exercises (*Avyayama*). Due to these *Meda* and *Mamsa Dhatu* had *ati upachaya* (excess) this condition described as *Sthoulya*.

The treatment protocol had been planned with *Udwarthana* for the period of 18 days and *Sadhyovirechana* on 19th day. Patient felt lightness in body during the period of the *Udwarthana* and this feature continued till the last day of the procedure. On the day of the *Sadhyovirechana* patient had *Samyaka yogya Laxanas*. On discharge, advised *Cap. Decrin plus*, two capsules twice daily before food, *Asanadi kashaya* 15 ml thrice daily, to follow exercises, *yogasana*, *pranayama* and encouraged to follow the proper diet and lifestyle. On completion of the trial I had assessed significant changes in the symptoms, weight, BMI and anthropometric measurements. The laboratory measurement of Lipid profile had shown significant changes before, after treatment and during follow up.

Conclusion

Sthoulya can be effectively managed with *Ayurvedic Apatrapana chikitsa*. In the present contextual study the case *Sthoulya/obesity* the consolidated utilization of *Nidana parivarjana* like *Shamana*, *Shodhana*, dietary changes (*Pathyahara*), Physical exercise (*Vyayama*) and behavioral approaches has given a significant result in the reduction of symptoms, weight, BMI, Anthropometric measurements and lipid profile.

For successful weight loss to become permanent, an individual has to adopt new behaviors to maintain weight loss. In this regard the condition of *sthoulya* has to be dealt with continuous motivation for lifestyle changes including changes in *aahara* and *vihara*. Some of the therapies which are also part of *Dinachaya* & *Ritucharya* can be adopted to enhance the recovery process.

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