

Ayurvedic Interventions for Sthoulya Obesity: A Single-Case Analysis

Dr. Swathi Ramamurthy¹, Dr. Arpitha C Rao²

¹Head, Research & New Product Development, Herbal Chakra Pvt Ltd.

²Ayurveda Consultant, Herbal Chakra Pvt Ltd.

Abstract

In the present era, the prevalence of lifestyle-related disorders is rapidly on the rise globally. Modernization and the advancement of science and technology have contributed to increasingly sedentary lifestyles. Among these lifestyle disorders, obesity or overweight (Sthoulya) stands out as a significant issue, disrupting individuals' physical, mental, and social well-being. Obesity is characterized by an excessive accumulation of body fat. In Ayurveda, obesity is referred to as Sthoulya, classified under the category of Santarpanajnya Vyadhi. Ayurveda offers a holistic approach to managing Sthoulya, and Acharya Charaka has recommended the use of Aparparana Chikitsa for its treatment. The Chikitsa adopted was Deepana-Pachana, followed by Shamana Chikitsa with Classical Ayurveda and Proprietary medication for the duration of 3 and half months with diet and lifestyle advice. After completion of the course of the treatment has shown significant results in reducing weight by about 9 kilograms and reducing the signs and symptoms of Sthoulya. Therefore, the Ayurvedic approach to management delivers gratifying outcomes and proves equally advantageous for both the management and prevention of obesity while promoting overall health.

Keywords: Aparparana, Obesity, Shamana Chikitsa, Sthoulya.

1. Introduction

Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Overweight and obesity are major risk factors for a number of chronic diseases, including diabetes, cardiovascular diseases, and cancer and while it was once an issue only in high-income countries, overweight and obesity have now dramatically risen in low- and middle-income countries¹.

Overweight and obesity are linked to more deaths worldwide than underweight. Globally there are more people who are obese than skinny – this occurs in every region except parts of sub-Saharan Africa and Asia. Obesity and overweight have in the last decade become a global problem - according to the World Health Organization (WHO) back in 2005 approximately 1.6 billion adults over the of age 15+ were overweight, at least 400 million adults were obese and at least 20 million children under the age of 5 years were overweight. More than half of the world's population will be overweight or obese by 2035 without significant action, according to the World Obesity Atlas 2023 published by the World Obesity Federation. The majority of the global population (51%, or over 4 billion people) will be living with either overweight or obesity by 2035 if current trends prevail. 1 in 4 people (nearly 2 billion) will have obesity. The scale of the obesity problem has a number of serious consequences for individuals and government health systems².

For adults, the WHO defines overweight and obesity as follows:

Overweight is a BMI greater than or equal to 25, and Obesity is a BMI greater than or equal to 30.

Body mass index (BMI) is a simple weight-for-height index commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m²)³.

In the context of Ayurveda, obesity is referred to as "Sthoulya" or "Medoroga" in Santarpanotha Vikara, signifying a condition resulting from excessive nourishment. In a state of balance, Kapha serves as the nurturing force for the body's tissues and governs the functioning of all organs. However, when Kapha becomes aggravated, its dense and heavy nature[Guru and Snigdha guna] leads to an abnormal accumulation in the Srotas[body's weaker channels], resulting in their Srotosanga[blockage]⁴.

In the case of obesity, Medovaha Srotas (channels responsible for fat metabolism) are affected, and the primary site of metabolic disturbances in an obese individual is the Medho dhatu. This condition primarily arises from the excessive consumption of Madhura (sweet) and Snigdha (oily) Ahara (food). When the body overproduces fat tissues, it leads to an increase in body weight⁵.

Nidanas of Sthoulya, or obesity in Ayurveda, can be categorized into four groups: Aharatmaka Nidana (diet-related factors), Viharatmaka Nidana (lifestyle-related factors), Manasika Nidana (psychological factors), and Anya Nidana (other miscellaneous factors)⁶

Ayurvedic management of any disease typically involves three key components: a) Nidana Parivarjana (avoiding causative factors), b) Shodana (purification or detoxification), and c) Shamana (balancing therapies). Acharya Charaka has advocated the use of "Guru Cha Atarpana", which entails providing appropriate nourishment. In the case of Santarpanotha Janya Sthoulya (obesity due to excessive nourishment), this approach focuses on controlled and balanced dietary practices to gradually address the condition and promote a healthier state⁷.

2. Case Study

A 39-year-old female patient apparently healthy presented herself at Purely Yours online consultation platform with concerns about weight gain persisting for the past 10 years after her two normal deliveries. The fat accumulation was mainly in the belly, flanks, thighs, and arms. She complained of experiencing fatigue even during minimal physical activity, heaviness in the body, continuous feelings of laziness, and pain in the lower back region. She also had constipation where she could pass stools once in 3 days associated with sour belching and heartburn. There was no family history of metabolic disorders. Considering the examinations, BMI (26.5 Kg/m²), and lab investigation findings, the patient was diagnosed as Overweight.

Table 1: Classification of Adults for Underweight, Overweight, And Obese According to BMI⁸

Sl No	Classification	BMI
1.	Severely underweight	BMI less than 16.5kg/m ²
2.	Underweight	BMI under 18.5kg/m ²
3.	Normal weight	BMI greater than or equal to 18.5 to 24.9kg/m ²
4.	Overweight	BMI greater than or equal to 25 to 29.9kg/m ²
5.	Obesity	BMI greater than or equal to 30kg/m ²
6.	Obesity class I	BMI 30 to 34.9kg/m ²
7.	Obesity class II	BMI 35 to 39.9kg/m ²

8.	Obesity class III	BMI greater than or equal to 40kg/m ²
----	-------------------	--

Past History

Her medical history indicated no prior diagnoses of hypertension, diabetes mellitus, bronchial asthma, hypothyroidism, or polycystic ovary syndrome (PCOS).

Surgical History

She had a history of cholecystectomy 2 years ago.

Menstrual history

Regular menstrual 30-day cycle with 5 days of bleeding, no dysmenorrhoea, or blood clots. She had a white discharge with itching and a foul smell for 6 months, no treatment was taken.

Obstetric history

P2, A0, L2, D0

P1 and P2- Normal vaginal delivery

History of Laboratory Investigations

Total blood count- Within the normal limit

Lipid profile report- Within the normal limit

Table 2: Personal History

Kshudha	Reduced
Ahara	Mixed, Non-veg thrice in a week [Chicken, mutton, and fish]. Intake of Madhura, Guru, and Snigda Ahara
Nidra	Sound sleep
Vihara	Avyayama, Chinta
Vyasana	Fond of bakery and junk food

Table 3: Dashavidha Pariksha

Prakruti	Kapha-Vata
Vikruti	Kapha and Vata
Dushya	Rasa, Mamsa, Meda
Sara	Madhyama
Samhanana	Madhyama
Satwa	Madhyama
Ahara shakti	Abhyavahara -Madhyama
	Jarana – Madhyama
Vyayama Shakti	Avara
Sathmya	Madhyama
Vaya	Madhyama
Pramana	Pravara

Table 4: Astavidha Pariksha

Nadi	Could not examine
Mala	Vikrita, constipated, once in 3-4 days, hard stools
Mutra	Prakrita 4-5 vegas/day and 1 vega /night
Jihva	Anupalipta
Shabda	Prakrita
Sparsha	Could not examine
Drik	Prakrita
Akruti	Sthoola

Table 5: General Physical Examination

Appearance	Bulky
Built	Well-built
Nourishment	Well-Nourished
Gait	Normal
Pallor	Absent
Icterus	Absent
Cyanosis	Absent
Clubbing	Absent
Oedema	Absent
Lymphadenopathy	Absent

Systemic examination- Not examined

Table 6: Anthropometric Measurements Before Treatment

Height	164.59cm
Weight	70kg
BMI	26.5 Kg/m ²
Chest Girth	94cm
Waist circumference	79cm
Hip Girth	93cm
Arm circumference	29cm

Based on the examinations conducted and the data presented in the tables mentioned above, the condition has been identified and diagnosed as Sthoulya[Overweight]. Considering patients Bala and Agni below-mentioned Shamana Oushadis were administered. Customized diet and Yoga were advised as the part of treatment. The assessment was done every month.

Flow chart-1 - Samprapti Of Sthoulya

Nidana Sevana



Kapha dosha vriddhi



Medo-dhatwaagnimandhya



Medo dhatu Vriddi in sphikk, Kati, Udara etc

Samprapti Ghataka

Dosha- Kapha-Vata

Dushya- Rasa, Mamsa, Meda

Srotas- Rasavaha, Mamsahava, Medovaha

Srotodusti- Sanga

Udhbhava Sthana- Amashaya

Vyakta sthana- Sarva shareera

Adhithana-Medo dhatu

Marga-Bahya

Agni-Mandagni

Sadhya-Asadhyata- Kricchra Sadhya

Treatment given

Table 7: Treatment Schedule Adapted- From 01/04/2023 to 20/07/2023

Days	Treatment	Observation
01/04/2023 to 01/05/2023	<ol style="list-style-type: none"> 1. Kanchanara guggulu-1-1-1 after food with lukewarm water 2. Chitrakadi vati-1-1-1 before food with lukewarm water 3. Arogyavardini vati-1-1-1 before food with lukewarm water 4. Given a customized diet chart 	<ul style="list-style-type: none"> • Appetite- Good • Bowel- Could pass once in 2 days, normal consistency • Micturition- Passed • Sleep- Sound • Observed 2 kg weight loss
2/05/2023 to 1/06/2023	<ol style="list-style-type: none"> 1. Live lean capsule-1-1-1 before food with lukewarm water 2. Kanchanara guggulu-1-1-1 after food with lukewarm water 3. Avipattikara churna -1-1-1 tsp before food with warm water 4. Given a customized diet chart 	<ul style="list-style-type: none"> • Appetite- Good • Bowel- Could pass daily, with normal consistency • Micturition- Passed • Sleep- Sound • Observed 3 kg weight loss • Feels lightness in the body • Sour belching and fatigue were reduced
2/06/2023 to 20/07/2023	<ol style="list-style-type: none"> 1. Live lean capsule-1-0-1 before food with lukewarm water 2. Lean life dip tea, as a tea replacement 1-0-1 3. Given a customized diet chart 	<ul style="list-style-type: none"> • Appetite- Good • Bowel- Could pass daily, with normal consistency • Micturition- Passed • Sleep- Sound • Sour belching and fatigue were absent

		<ul style="list-style-type: none"> • Observed 4 kg weight loss • Feels lightness in the body • Feels energetic and healthy
--	--	---

Table 8: Asanas and Pranayama Advised-

Asanas /Pranayama	Duration
Nadi shodhana	1 minute
Kapalabhati	90-120 repetitions
Warm-up	Neck rotation, ankle rotation, torso rotation
Suryanamaskara	12 rounds
Standing posture asanas- Trikonasana, Virabhadrasana, Daiviyasana, Anjaneyasana	8-10 repetitions on each side
Sitting posture asana- Gomukasana, Ardhamatsyendriyasana, chakki chalanasana, Malasana	8-10 repetitions on each side Or 1-2 minutes
Supine position- Navakasana, Halasana	1 minute each
Prone position- Dhanurasana, Bhujangasana, Tiryak bhujangasana	1 minute each

3. Results

On the day of consultation that is, on April 1, 2023, the patient's weight was recorded as 70 kg. Remarkably, by the end of 3 and a half months that is July 20, 2023, the patient's weight had notably decreased to 61 kg. These results indicate a substantial weight reduction of 9 kg over the course of 3 and a half months by Ayurveda intervention with diet and lifestyle modifications.

Following the scheduled treatment, a comprehensive assessment of the patient was conducted, focusing particularly on anthropometric measurements. The specific changes observed before and after treatment have been meticulously documented in the table below:

Table 9: Assessment of Anthropometry Changes Before and After Treatment

Observation	Before treatment	After treatment
Height	164.59cm	164.59cm
Weight	70kg	61 kg
BMI	26.5 Kg/m ²	23.1kg/m ²
Chest Girth	94cm	91cm
Waist circumference	79cm	73cm
Hip Girth	93cm	87cm
Arm circumference	29cm	26cm

4. Discussion

Obesity is a multifaceted condition characterized by an excess of body fat. It extends beyond mere cosmetic considerations and constitutes a medical issue that heightens the likelihood of various other

illnesses and health complications. Among these are heart disease, diabetes, elevated blood pressure, increased cholesterol levels, liver disease, sleep apnea, and specific types of cancer.

In Ayurveda, Sthoulya has been described as obesity. Samprapthi in this case tells us that Aharaja, Viharaja, and Manasa factors cause Kapha dosha vridhi, resulting in srotorodha and Agnimandhya and Medo Dhatvagnimandhya. When there is Dhatvagnimandhya it causes a quantitative increase in respective Dhatu. This makes the excessive accumulation of Medo dhatu in Sphik, Kati, and Udara. Since Sthoulya is categorized as Santarpanjanyaavikara, its specific dietary regimen is Aptarpana. Based on the Hetus, which resulted in an increased predominance of Kapha Dosha and Vata Prakopa by Avrodhajanya Samprapti, the following treatment protocol was administered.

The patient had a history of Agnimandhya and the symptoms of Ama, Chitrakadi vati was administered for 1 month for Deepana and Pachana. It eliminates harmful toxins from the body, burns out excess fat, and promotes weight loss. Along with this, Kanchanara guggulu and Arogyavardini vati were administered for 1 month due to their Medohara and Anulomana actions. The bitter, astringent, and pungent taste of Guggulu helps in burning belly fat and from other areas of the body and also enhances the process of digestion. Kanchanara guggulu along with Arogyavardini minimizes fat accumulation. It also helps in managing constipation due to its laxative properties. It softens the stools and reduces excessive stickiness of the fecal matter thus preventing chronic constipation.

Live lean capsule was administered for 2 and a half months. It is a proprietary organic Ayurveda formulation with Amlavetasa and Daruharidra as the ingredients. It assists in controlling hunger pangs, promoting a sense of satisfaction and fulfillment. Amlavetasa helps to regulate the metabolism while Daruharidra efficiently reduces the Kapha. The two herbs work synergistically to potentially aid in managing excess weight gain. Daruharidra is used to manage obesity due to its Ushna or Hot potency and Lekhana [Fat scraping] actions. It is a rich source of Berberine –an alkaloid used to treat many ailments. Berberine has been shown to lower blood sugar, cause weight loss, and improve heart health. It mainly helps in normalizing the metabolism by stimulating Agni or digestive fire and inhibits the growth of fat cells in the body at the molecular level. Amlavetasa Fruit, commonly known as Garcinia is a fruit widely recognized for its benefits in aiding weight loss. It has Ushna Veerya that acts as Medohara or helps in stimulating fat metabolism. It is mild rechaka[purgative] thus helping in the expulsion of toxins through the excretory route and bringing a sense of lightness to the body. Due to its Amla rasa, and Ushna & Teekshna guna, it helps in balancing Vata as well as Kapha dosha. It contains hydroxy-citric acid or HCA and blocks an enzyme called citrate lyase which the body uses to make fat. It improves cholesterol levels by lowering triglycerides and LDL (bad cholesterol) and raising HDL (good cholesterol). It increases exercise endurance and decreases appetite.

Lean life dip tea is administered for 1 month. It has Vrikshamla, Green tea, and Green coffee as the components. Vrikshamla, along with Green tea and Green coffee, has an abundance of antioxidants that help accelerate metabolism, which in turn aids in burning calories faster. The Ushna, and Rooksha guna of Vrikshamla make it a very convenient choice for managing Vata and Kapha imbalance. Also, the Amla rasa of Vrikshamla makes it cardioprotective, by managing the serum lipid levels.

Significant changes were observed after treatment, and the patient was advised to continue the live lean capsule and lean life dip tea for a month and was asked to continue the diet and Yoga regularly and was asked for follow-up.

Yoga and Pranayama have helped her to reduce stress levels and increase body flexibility and energy levels. Various postures, especially forward bending, twisting, and backward bending, help reduce fat near the abdomen, hips, and other areas.

5. Conclusion

Taking into account the signs and symptoms, Sthoulya was managed through Shamana oushadis and implementation of Vishista Nidana Parivarjana, involving dietary modifications (Ahara), lifestyle adjustments (Vihara), and medication (Aushada), exhibited significant progress in reducing the patient's weight. Classical Ayurveda medicines with Proprietary medicines like Organic Live lean capsules and Lean life organic brew were found to be effective in managing overweight

6. Declaration of Competing Interest

Authors (Dr Swathi Ramamurthy and Dr Arpitha C Rao) are currently employed with Herbal Chakra Pvt Ltd. The results of the research were not affected by sponsors/influencers.

7. References

1. https://www.who.int/health-topics/obesity#tab=tab_1 - Cited on 10/09/2023
2. [http://www.indiaenvironmentportal.org.in/content/474617/world-obesity-atlas-2023/#:~:text=1%20in%204%20people%20\(nearly%202%20billion\)%20will%20have%20obesity.-](http://www.indiaenvironmentportal.org.in/content/474617/world-obesity-atlas-2023/#:~:text=1%20in%204%20people%20(nearly%202%20billion)%20will%20have%20obesity.-) Cited on 10/09/2023
3. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.- Cited on 10/09/2023
4. Prachi Mishra Et Al: “Role of Ayurveda in the Management of Obesity (Sthoulya)” International Ayurvedic Medical Journal. http://www.iamj.in/posts/images/upload/244_247.pdf
5. Bhagwan das R.K Sharma, “Charaka Samhita”. 1st ed. Varanasi: Choukambha Sanskrit series; 2009, Vol-1, Santarpaniya Adhyaya, Chapter 23, Verse 3. p.395
6. Bhagwan das R.K Sharma, “Charaka Samhita”.1st ed. Varanasi: Choukambha Sanskrit Series; 2009, Vol-1, Astouninditiya Adhyaya, Chapter 21, Verse 4. p.375
7. Bhagwan das R.K Sharma, “Charaka Samhitha”. 1st ed. Varanasi: Choukambha Sanskrit Series; 2009, vol-1, Astouninditiya Adhyaya, Chapter 21, Verse 20. p.378.
8. www.ncbi.nlm.gov Connor B. Weir; Arif Jan-BMI. Classification percentile & cut-off points.