



(RESEARCH ARTICLE)



## Ayurvedic intervention with *Pachana Aushadhi* and *Lekhan Basti* in Obesity: A case study

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### Abstract

In the 21st century, the prevalence of lifestyle disorders has surged, exacerbated by sedentary habits and increased stress, particularly in the aftermath of the COVID-19 pandemic. This has led to a substantial rise in cases of *Sthaulya*, affecting approximately one-third of the global population with overweight or obese. Obesity, a complex and multifaceted disease, has tripled in global prevalence since 1980, impacting diverse age groups, genders, and socio-economic strata. Although rates have plateaued in some developed nations, the consequences of obesity extend beyond physical appearance, causing both physical and mental harm and significantly affecting overall quality of life. Furthermore, obesity serves as a precursor to various secondary health conditions, including but not limited to diabetes, hypertension, ischemic heart disease, dyslipidemia, and more. *Ayurveda* classifies *Athisthaulya* as one of the eight undesirable conditions under *Ashtanindita purusha*. It arises from the vitiation of *Kapha dosha*, *Vata dosha*, and *Medo dhatu*, aligning with the contemporary understanding of obesity as a chronic metabolic disorder. *Ayurveda's* holistic approach, incorporating *Pachana chikitsa* and *Lekhana basti*, shows promise in managing *Sthaulya*.

This case study involves a 52-year-old female patient with a weight of 112 kg and a BMI of 41.1. Over 30 days, the patient underwent a comprehensive *Ayurvedic* management plan, including *Pachana aushadhi* for 7 days and *Lekhana basti* for 21 days. The outcome demonstrated a significant weight loss of 11 kg, reducing her weight to 101 kg. and achieving a BMI of 37.1 without complications. This case underscores the potential of *Ayurvedic* interventions in addressing the challenges of obesity.

**Keywords:** Obesity; *Sthaulya*; Udgharshan; *Lekhanbasti*; Pachan; Medoroga

### 1. Introduction

The *Charaka Samhita* identifies eight categories of undesirable conditions known as *Nindita purusha*, with *Athisthaulya* being one of them.[1] *Athisthaulya* can be associated with obesity, characterized by an excessive accumulation of fat in adipose tissues. Obesity, a chronic and widespread abnormal metabolic condition, impacts millions of individuals globally. Projections indicate that by the year 2030, approximately 1.12 billion adults will fall under the category of obesity, and 2.16 billion will be classified as overweight worldwide.[2]

In recent years, there has been a significant upswing in the prevalence of lifestyle disorders. With a population of 300 million, the adoption of unhealthy habits such as consuming junk food and alcohol has become a prevailing trend across all age groups. Factors such as a sedentary lifestyle due to remote work and the pervasive stress following the COVID-19 epidemic have contributed to a notable surge in *Sthaulya*, or obesity.[3] Obesity, characterized by a body mass index (BMI) equal to or greater than 30, is a pressing health concern.[4] In *Ayurveda*, obesity can be correlated with *Sthoulya* or *Medoroga* within the category of *Santarpana* Diseases.[5] It is considered a disorder of *Medovaha strotas dushti* caused by the intake of *Guru* (heavy), *Madhur* (sweet), and *Snigdha* (unctuous) *Aahar* (food).[6] *Ayurvedic* principles

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advocate three treatment approaches: *Nidan parivarjana* (elimination of causative factors), *Shaman* (pacification), and *Shodhan* (purification). According to *Acharya Vagbhata*, the line of treatment involves '*Guru cha Apatarpanam*', [7] and in this case, *Apatarpan chikitsa* is employed to address obesity by reducing the excessive accumulation of fat. Following a comprehensive assessment, including detailed history-taking and examination, it was observed that the aetiology and symptoms of the case closely resembled *Sthaulyata*, as outlined in Ayurvedic texts. In the context of *Sthaulya*, the excess intake of food leads to the accumulation of *Meda* (fat) within the body. This accumulated fat, in turn, results in *Margaavarana* (obstruction of channels), impeding the flow of nutrition to subsequent *Dhatu*s (tissues). This process causes the vitiation of *Vata*, which then travels through the *Kosha* (digestive tract), stimulating *Agni* (appetite). The heightened appetite prompts the individual to consume more food, leading to a further buildup of *Meda* (fat) in the body, ultimately culminating in the manifestation of *Sthaulya* (obesity). [8] Therefore, *Sthaulya* (Obesity) can be perceived as a condition arising from the obstruction caused by the excessive accumulation of fat due to an imbalanced nourishment process, rooted in *Medoja* (fat-based) factors.

After initiating the treatment, the patient exhibited a positive response within a short period. This encouraging outcome prompted us to document the case comprehensively, to further its potential application in the treatment of similar cases.

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## 2. Patient information

### 2.1. Case Report

On May 10, 2023, a 52-year-old female patient presented at the *Kayachikitsa* outpatient department (OPD) with a medical history spanning 3-4 years of increased body weight, *Kshudra shwas* (dyspnea), *Daurbalya* (weakness), and *Sandhishool* (pain in both knee joints) persisting for the last 3 months. Additionally, she reported experiencing *Atitrushna* (excessive thirst), *Atikshudha* (excessive hunger), and *Swedabadh* (excessive sweating) over the past year.

Remarkably, the patient exhibited almost all of the eight symptoms of *Atisthula*, as elucidated by *Acharya Charak*. [9] This comprehensive set of symptoms leads to the diagnosis of *Sthaulya*.

### 2.2. Top of Form

#### 2.2.1. History of personal illness

The patient was normal 3 years ago, but gradually developed all the above symptoms which increased in 3 months. Thus, to overcome this she came to our hospital for treatment.

#### 2.2.2. History of other illnesses

The patient had no other major illnesses like DM, HTN, Hyperthyroidism, or PCOS.

#### 2.2.3. Family History - *Sthaulya*

#### 2.2.4. General Examination –

- Blood Pressure – 120/70 mm. hg.
- Pulse – 84/min.
- Temp – 98.8 F
- Respiration Rate – 18/min
- Height – 165 cm
- Weight – 112 kg
- Body mass index – 41.1
- Chest circumference – 114 cm
- Mid arm circumference – Rt - 33, Lt - 34 cm.
- Abdominal circumference – 117 cm.
- Waist – 114 cm
- Mid tibial circumference – Rt – 60 cm, Lt 57 cm.
- Hip circumference – 133 cm

#### 2.2.5. *Astavidha pariksha*

- *Nadi* (Pulse) – *Kapha* 17/min.

- *Mutra* (urine) – 3-4 times a day
- *Mala* (Stool) – *Asamyak* (unsatisfactory passage of stool)
- *Jeevha* (tongue) – *Saam* (white coated tongue)
- *Shabda* (sounds) – *Prakrut*
- *Sparsh* (touch) – *Anushna Sheeta* (afebrile)
- *Druk* (vision) – *Prakrut* (normal eye site)
- *Akriti* (body structure) – *Sthula* (Obese)

#### 2.2.6. Dashavidha Pariksha

- *Prakruti* (constitution) – *Vatakaphaja*
- *Vikruti* (imbalance) – *Medhodhatu dushti*
- *Saar* – *Rasa*
- *Samhana* (body compactness) – *Pravara*
- *Satmya* (adaptability) – *Madhyama*
- *Satva* (mental status) – *Madhyama*
- *Aaharshakti* (digestive power) – *Madhyama*
- *Praman* – *Adhik*
- *Vaya* (Age) – *Madhyama*
- *Vyayamshakti* (exercise capacity) – *Madhyama*

#### 2.2.7. Srotas Parikshan

- *Rasavaha*: *Hridaya Nadi Dashadhamanya- prakrut*
- *Medovaha*: *Vrukka* – *prakrut*, *Vapavahan* – *vrudhi*, *Sphika-stana-udar* – *lambanam*
- *Swedavaha*: *Meda Lomakupa* – *Asweda*

### 2.3. Hetu Sevana (Causal Factors Consumption)

#### 2.3.1. Aaharatmak (Dietary Factors)

*Atibhojan* (5-6 meals a day), *Guru Aaharsevan* (Excessive consumption of heavy food) such as frequent intake of non-vegetarian-food like mutton thrice a week, chicken twice a week, *Madhur aahar sevan* (sweet foods), *Sheeta Aaharsevan* (Excessive consumption of cold diet like Ice cream) *Snigdha aahar sevan* (Oily food like vada pav, kanda bhaji), *Gramya rasa sevana* (Usage of animal's meat soups), *Mahish Dugdha* (buffalo milk), *Dadhi* (curd) etc.

#### 2.3.2. Viharatmak (Lifestyle Factors)

*Avyayam* (Lack of Exercise), *Avyavaya*, *Divasvap* (Daytime Sleeping), *Sukha shaiyya* (Excessive Rest), *Snan sevan* (Frequent Bathing), *Gandhamalya sevana* (Exposure to strong fragrances), *Swapna prasangat* (excessive sleeping).

#### 2.3.3. Mansik (Psychological Factors)

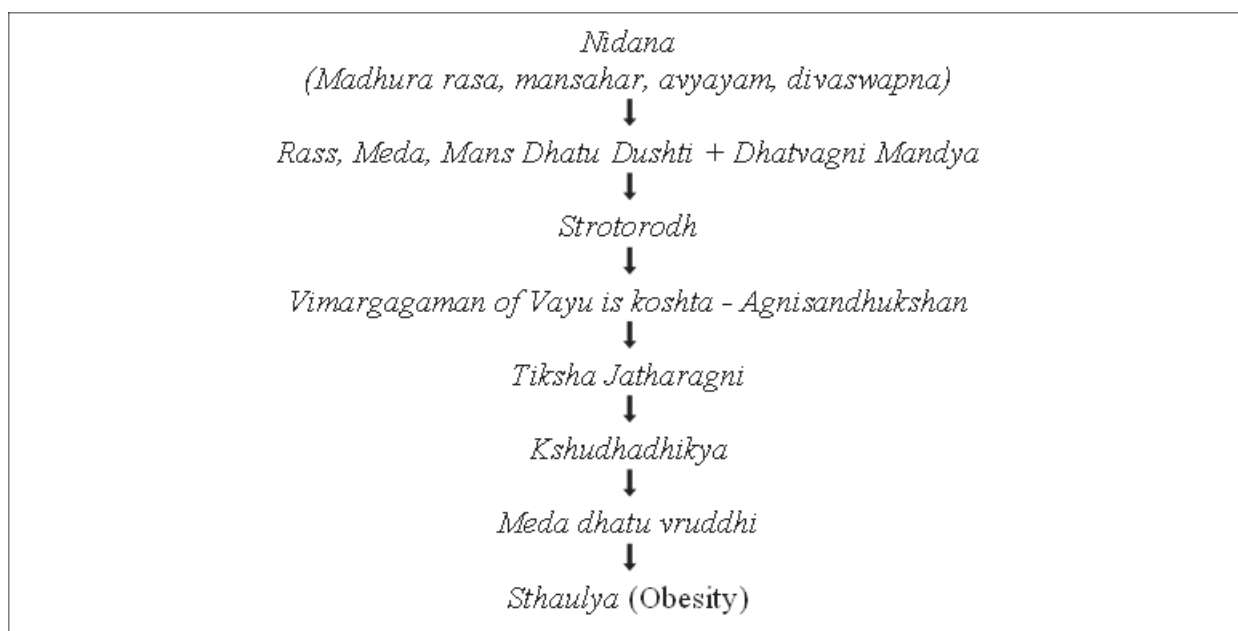
*Harshanityatvat* (Frequent Happiness), *Achintan* (Absence of Worry)

#### 2.3.4. Samprapti Ghatak (Pathogenic Factors)

The following factors play a major role in the *samprapti* of *Sthaulya*.

- *Dosha* – *Kapha* – *Kledaka*  
*Vata* – *Samana*, *Vyana*
- *Pitta* – *Pachak*
- *Dushya* – *Meda*, *Rasa Dhatu*
- *Srotas* – *Medovaha Srotas*
- *Srotodushiti* – *Margavrodha* – *Sanga*
- *Agni* – *Jatharagni*, *Rasa and Meda Dhatvagni*, *Parthiva*, *Apya*, *Bhutagni*
- *Udbhavasthana* – *Amashaya*
- *Roga Marga* – *Bahya*
- *Prasara* – *Rasayani*
- *Ama* – *Dhatvagni Mandyajanit Ama*, *Jatharagni Mandyanit Ama*.

- *Adhishthan* – Whole Body (Particularly *Vapavaha* and *Medodhara Kala*)



**Figure 1** Samprapti of Sthaulya

Table 1 represents the timeline of the occurrence of events in the present case study. It represents all the symptoms along with the previous treatment taken by the patient and the results obtained.

**Table 1** Timeline

December 2018	In 2018, the patient lost her job, leading to a sedentary lifestyle and weight gain.; being stressed about it she joined a gym.
May 2019	She started getting cramps while gyming thus she left and went for a nutrition course, there along with nutritional shakes some exertional dance exercise was started. Here she lost 4-5 kg. weight.
2020	In Jan 2020, she got a skin reaction of hypopigmentation on both her upper and lower extremities and consulted a dermatologist who suggested her to stop nutrition supplements. Thus she stopped that course and consulted a naturopath centre in badlapur, by then she had regained the lost weight.
2021	She was admitted to that naturopath foundation for 8 days from June 8 to June 15 and was discharged with 3 kg weight loss and medicinal tablets for further reduction of weight. Later she found no results thus the treatment was stopped on 20 July 2021.
2022	Being fed up with all the treatment patient didn't take any treatment from 20 July 2021 to 9 May 2023 and had a major weight gain of 12-13 kgs.
10 <sup>th</sup> May 2023	She visited the OPD of Kayachikitsa Department at Ayurved Mahavidyalaya, Sion, Mumbai with complaints of <i>Kshudra shwas</i> (dyspnea), <i>Daurbalya</i> (weakness), and <i>Sandhishool</i> (pain in both knee joints) persisting for the last 3 months. Additionally, she reported experiencing <i>Atitrushna</i> (excessive thirst), <i>Atikshudha</i> (excessive hunger), and <i>Swedabadh</i> (excessive sweating) over the past year.

All routine blood investigations, including

CBC – HB – 11.8 g/dl; RBC – 4.1/L; WBC – 9,500/mcL; Platelet – 199000/mcL; ESR – 14 mm/hr, SGOT – 16U/L; SGPT – 34U/L; Alkaline phosphatase – 45U/L; Sr Creatinine – 0.9; CRP – 1.0; Sr.Calcium – 10.1 mg/dl; Vit D3 – 51 nmol/L, were within normal limits.

- All eight symptoms of Sthaulya were graded as follows:
- No symptoms: -
- Mild symptom: +
- Moderate symptom: ++
- Severe: +++

### 2.3.5. Treatment Schedule :

The proposed treatment regimen consisted of:

**Table 2** Treatment Schedule

Day	Date	Chikitsa given
Day 1 – Day 30	4/11/2023 - 3/12/2023	<i>Koshna Siddhajala, Udgharshan, Shaman Kalpa</i>
Day 1 – Day 7	4/11/2023 - 10/11/2023	<i>Pachana aushadhi</i>
Day 8 and Day 9	11/11/2023 - 12/11/2023	<i>Swedan, Anuvasan basti</i>
Day 10 – Day 30	13/11/2023 - 3/12/2023	<i>Swedan, Lekhan basti</i>

- **Siddha jala** – A decoction prepared by boiling equal quantities of *Trifala*, *Musta*, and *Vidanga* with water until it reduces to half.
- **Udvardana** - Application of a powder mixture consisting of *Triphala*, *Musta*, *Sarshap*, and *Yava* on alternate days.
- **Shaman Kalpa** – Administration of *Trishila guggulu*, a combination of *Triphala* (375 mg), *Shilajeet* (125 mg), and *Guggul* (500 mg), at a dosage of 1 gm three times daily after meals with lukewarm water. **[Paradkar HS, Trishila Guggul]**
- **Pachak Aushadi** – Administration of *Aampachak vati* and *Chitrakadi vati*, both at a dosage of 500 mg three times daily before meals, for the initial 7 days.
- **Swedan** – Application of *Peti swed*.
- **Anuvasan basti** – Administration of 120 ml of *Til Tel* for 2 days.
- **Lekhan basti** – Administration of approximately 840 ml for 21 days. **[ingredients shown in Table 3]**

**Table 3** *Lekhan basti* ingredients [10]

Sr. No.	Dravya	Matra
1	<i>Trifala kwath</i>	16 Pala – 240 ml
2	<i>Gomutra</i>	3 Pala – 120 ml
3	<i>Saindhav</i>	1 Aksha – 10g
4	<i>Honey</i>	4 Pala – 160 ml
5	<i>Yavakshar</i>	3 Karsha – 30 gm
6	<i>Til Tel</i>	6 Pala – 240 ml
7	<i>Ushakadi gana (Shilajit, Kasis bhasma, Hingu, Vacha, Tutha)</i>	2 Pala – each 80 mg

### 3. Observation and Results

Following a 30-day treatment regimen, notable improvements were observed in the signs and symptoms of *Sthaulya*. Clinical examination indicated enhancements in both subjective and objective parameters, reflecting the effectiveness of the treatment. **[as shown in Table 5]**

**Table 4** Subjective Assessment

Lakshanas	0 day	7 <sup>th</sup> Day	15 <sup>th</sup> day	30 <sup>th</sup> day
Kshudrashwas	+++	++	+	-
Angagauravta	+++	+	+	+
Trushna, Atikshudha	++	+	+	-
Daurbalya	+++	++	+	-
B/L Knee joint pain	+++	++	+	+
Swedabad	+++	++	-	-

**Table 5** Objective Assessment

Observation	Before Treatment	After Treatment
Weight	112.8 kg	101.3 kg
Body Mass Index	41.1	37.1
Chest Circumference	114 cm.	108 cm
Abdominal Circumference	117 cm	102 cm
Mid Arm Circumference	Rt hand 33 cm, Lt hand 34 cm	Rt hand 29 cm, Lt hand 30 cm
Mid-Thigh Circumference	Rt leg 60 cm, Lt leg 57 cm	Rt leg 56 cm, Lt leg 53 cm
Waist Circumference	114 cm	109 cm
Hip Circumference	133 cm	129 cm

#### 4. Results

Upon initial consultation, the patient presented with a weight of 112 kg, which subsequently decreased to 101 kg throughout 6 follow-up sessions. This represents a significant reduction of 11 kg in weight within 30 days, accompanied by observable fat reduction.

The patient's Body Mass Index (BMI) decreased from 41.1 to 37.1, indicating a substantial improvement in body composition and weight management.

Anthropometric measurements revealed a reduction in circumference, as detailed in Table 6.

#### 5. Discussion

**Table 6** Mode of action of all ingredients of *Basti*

Sr no	Dravya	Mode of Action
1.	<i>Trifala kwath</i> [11]	<i>Anuloman, Rechan, Bhedan, Lekhan</i>
2.	<i>Gomutra</i> [12]	<i>Lekhan, Bhendan by tikshna, ushna, kaphaavataghna guna</i>
3.	<i>Saindhav</i> [13]	<i>Deepan, Pachan, Ruchikar, Chedan</i>
4.	<i>Madhu</i> [14]	<i>Retension, Lekhana and Pachana.</i>
5.	<i>Yavakshar</i> [15]	<i>Deepan, Pachana, Lekhana</i>
6.	<i>Til tel</i> [16]	<i>Strotoshuddhikar, and Vatashamak, Fat soluble and thus easily absorbed from colon.</i>
7.	<i>Ushakadi gana</i> [17]	<i>Lekhan, Bhedan, Pachana.</i>

*Lekhan basti*, categorized as a type of *Niruha basti*, utilizes *Lekhan dravya* to dislodge accumulations of *Meda*, *Kapha*, and *Kleda*. This formulation, characterized by its *Tikshna Guna* (sharpness), primarily targets body wasting (*Apatarpana*).

*Udvartana* [18] involves the application of herbal powders across the body, facilitating the breakdown and elimination of fat.

*Koshna Siddha Jalpana* [19] refers to the consumption of warm water infused with *Kledaghna* and *Lekhana Dravya*, aiding in the combustion of excess fats and promoting *Pachana* (digestion).

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*Shaman aushadi*

*Trishila guggul* [20] composed of *Triphala*, *Shilajit*, and *guggul*, has demonstrated efficacy in reducing fat accumulation and consequently aiding in weight loss.

*Chitrakadi vati* [21] renowned for its *Laghu*, *Tikshna*, and *Ruksha Gunas*, along with its *Katu* and *Tikta Rasa*, enhances *Agni* (digestive power) by alleviating aggravated *Kapha*. Its *Usna Virya* and *Tikshna*, *Snigdha Guna* (properties) counteract *Vata dosha*, further promoting digestion.

*Aamapchaka vati*, formulated with *Sunth*, *Ativisha*, and *Musta*, exhibits *Dipana* and *Pachana* properties. These attributes contribute to increasing *Agni* (digestive power) and facilitating the digestion of undigested food (*Ama*). [22]

According to Ayurveda, the patient was diagnosed with *Sthaulya* characterized by an imbalance of *Kapha* and *Vata doshas*, as well as impairment of the *Medovaha srotas* and disturbances in the *Rasa*, *Mansa*, and *Meda dhatus*. The patient's sedentary lifestyle, consumption of heavy, sweet, and oily foods, along with lack of exercise and poor dietary habits contributed to this condition.

Clinically, the patient presented with increased body weight (*Sphik stan udar lambanam*), fatigue, and bilateral knee joint pain. Following the principles of *Santarpana samprapti* the treatment approach primarily focused on *Apatarpan chikitsa* aiming at reducing excess body fat. This included therapies such as *Lekhan basti* and *udvartana*, along with *Shaman* and *lekhan* medicines. Significant improvements were observed, prompting the patient to continue the prescribed treatment regimen along with *Siddha jalapana* and *Udvartana*. A follow-up appointment was recommended to monitor progress and make further adjustments as needed.

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## 6. Conclusion

In conclusion, the lifestyle disorder *Sthaulya*, or obesity, is effectively managed through a combination of lifestyle modifications, internal medications, and Panchakarma therapies in Ayurveda. Recognized as a *Santarpanjanya roga*, *Sthaulya* necessitates the *Apatarpana* approach, focusing on the reduction and elimination of excess adipose tissue. Lifestyle modifications entail *Nidan parivarjana*, avoiding factors that aggravate *Rasa dhatu*, *Meda dhatu*, and *Kapha dosha*. Internal medications target the reduction of *Kleda*, or excessive moisture, within the body. Panchakarma treatments involve procedures akin to *Apatarpana* to facilitate weight loss.

In the presented case study, interventions such as *Sarvanga Udvartana* (herbal powder massage), *Bashpa swedan* (herbal steam therapy), *Lekhan basti* (medicated enema for scraping off excess fat), *Shaman aushadi* (medicinal therapy for balancing doshas), along with dietary modifications were employed. These interventions resulted in significant weight reduction for the patient, demonstrating effective management of the eight *Mahadosh* associated with obesity.

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## Compliance with ethical standards

*Disclosure of conflict of interest*

No conflict of interest to be disclosed.

*Statement of informed consent*

The authors certify that they have obtained the patient's consent, for reporting her case along with the images and other clinical information in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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