

Comparative Analysis of Ayurvedic and Contemporary Approaches in the Management of Sthaulya (Obesity)

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Abstract

Sthaulya (Obesity) is one of the fastest growing lifestyle disorders worldwide and is associated with various metabolic and cardiovascular complications. According to contemporary medicine, sthaulya (obesity) results from excessive accumulation of body fat due to imbalance between caloric intake and energy expenditure. Ayurveda describes a comparable condition under the concepts of Sthaulya and Medoroga, which arise due to derangement of Kapha Dosha, impairment of Agni, and abnormal accumulation of Meda Dhatu. Modern medicine primarily focuses on measurable outcomes such as reduction in body mass index and prevention of associated comorbidities through dietary control, pharmacotherapy, exercise, and bariatric surgery. Ayurveda, on the other hand, emphasizes correction of the root pathology through Nidana Parivarjana, Langhana, Lekhana, Shodhana, Shamana, herbal medications, Panchakarma procedures, and lifestyle regulation. This review critically analyzes Ayurvedic and contemporary concepts of sthaulya (obesity), including etiology, pathogenesis, clinical manifestations, complications, and management approaches. The article also explores the integrative potential of Ayurvedic formulations such as Lekhaniya Mahakashaya and Mushtadighan Vati in obesity management. Integrating the strengths of both systems may provide safer, sustainable, and holistic management strategies for obesity and related metabolic disorders.

Keywords: Sthaulya, Obesity, Medoroga, Ayurveda, Lekhana Karma, Integrative Medicine, Lifestyle Disorders

Introduction

Obesity has become a major public health challenge affecting both developed and developing nations. Sedentary lifestyle, consumption of calorie-dense foods, stress, reduced physical activity, and altered dietary habits have significantly increased its global prevalence. According to the World Health Organization (WHO), obesity contributes substantially to morbidity and mortality due to its association with diabetes mellitus, hypertension, dyslipidemia, cardiovascular disorders, osteoarthritis, and metabolic syndrome.

Modern medicine defines obesity as abnormal or excessive fat accumulation that impairs health. Body Mass Index (BMI) is commonly used for classification and assessment of obesity.

$BMI = \text{weight(kg)} / \text{height(m}^2\text{)}$

Ayurveda describes obesity under the terms Sthaulya and Medoroga. Acharya Charaka included Sthaulya among the Ashta Nindita Purusha due to its adverse effects on physical, psychological, and social wellbeing. The condition is predominantly caused by aggravation of Kapha Dosha, vitiation of Meda Dhatu, and impairment of Jatharagni and Medodhatvagni. Ayurveda approaches obesity not merely as excess body weight but as a systemic metabolic disorder involving disturbed digestion, tissue metabolism, and lifestyle imbalance.

Although modern anti-obesity therapies provide measurable short-term results, long-term sustainability and adverse effects remain concerns. Ayurvedic principles offer a holistic and individualized approach emphasizing prevention, detoxification, metabolic correction, and lifestyle regulation. Therefore, comparative evaluation of Ayurvedic and contemporary approaches may provide a broader understanding and improved management of obesity.

Materials and Methods

The present review article was prepared through detailed study of classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya. Contemporary medical literature related to obesity and lifestyle disorders was reviewed from standard textbooks, peer-reviewed journals, WHO reports, PubMed, Google Scholar, and ScienceDirect databases. Keywords used for literature search included “Ayurveda and obesity,” “Sthaulya,” “Medoroga,” “modern management of obesity,” “Lekhana Karma,” and “integrative obesity treatment.” Relevant review articles, clinical studies, meta-analyses, and evidence-based publications were included.

Ayurvedic Perspective of Sthaulya

Definition

Sthaulya (obesity) is explained as when there is an inordinate increase of Meda along with Mamsa dhatu: that eventually culminate into pendulous appearance of Sphika, Udara, Stana.

मेदोमांसातिवृद्धत्वाच्चलस्फिगुदरस्तनः।

अथोपचयोत्साहोरोऽतिस्थूलउच्यते।।(cha.su.21/9)

Sthaulya (obesity) is a well recognized disease from the samhita period. In Sutra Sthana Acharya Charaka has described Asthoninditha Purusha among which Sthaulya has been considered most emphasized.

It is described as Santarpanjanya Vikara, Medoprodoshaj vikaraby Acharya Charak and as Ras pradoshajavikara by Acharya Sushruta. The word “sthaulya” is derived from mula dhatu “sthu” with suffix “ach”pratyaya respectively which stands bulky or big or thick.

Nidana (Etiological Factors)

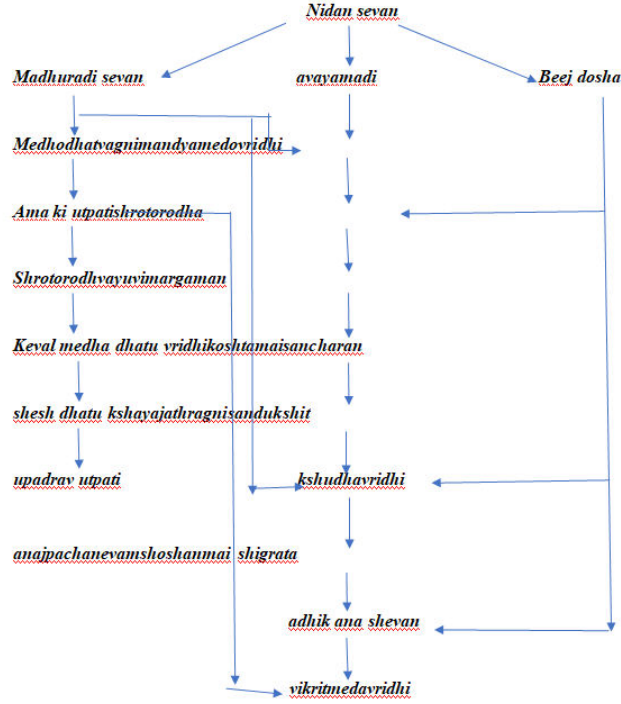
तदातिस्थौल्यमति संपूरणादगरुमधुरशीतस्निग्धोपयोगादव्यायामादव्यवायादिवास्वप्राद्धर्षनित्यत्वादचिन्तनाद्दीजस्वभावाच्चोपनयते। (च.सू 21/4)

- **Aharaj Nidan** - Overeating Shleshmaja Ahara .Excessive use of Guru, Madhura, Sheeta,, Snigdha ahara ,Adhyashan.
- **Viharaj Nidan-** Avyavaya,,Avyayama,,Divaswapna, Bhojanottaranidra, Asana Sukham

- **Manas Nidan** – Achintana, Nitya Harsha
- **Anya Nidan** - Beeja Dosha

Samprapti (Pathogenesis)

Continuous indulgence in causative factors aggravates Kapha Dosha and increases Meda Dhatu. Impairment of Agni leads to improper metabolism and excessive deposition of adipose tissue. Obstruction of channels (Srotorodha) further disturbs tissue nourishment and metabolic balance.



Important pathological events include:

- Agnimandya
- Kapha Vriddhi
- Meda Vriddhi
- Ama formation
- Srotorodha
- Vata aggravation causing excessive appetite

Lakshana (Clinical Features)

अतिस्थूलस्यतावदायुषोहासोजवोपरोधःकृच्छ्रव्यवायतादौर्बल्यंदौर्गन्ध्य
स्वेदाबाधःक्षुदतिमात्रंपिपासातियोगश्चेतिभवन्यष्टौदोषाः | (ch.su.21/4)

1) Ayusohṛasa (Diminution of life span)
2) Javoparodha (Lack of enthusiasm)
3) Krcha Vyavaya (Difficulty in sexual act)
4) Daurbalya (General debility)
5) Daurgandhya (Foul smelling of body)
6) Svedadhikya(Distressful sweating)

7) Kshudhatimatra (Excessive hunger)

8) Pipasatiyoga (Excessive thirst)

Modern Perspective of Obesity

Obesity is a condition in which excess body fat has accumulated to such an extent that it may have a negative effect on health. Obesity exists when body weight is 20% above ideal body weight. Now a day, obesity is defined at or greater than 30 Kg/m² BMI in western countries and greater than 25Kg/m² BMI in Asian Pacific region. As this study belongs to India (Asia), therefore we have opted for Asian Pacific Parameters.

BMI Classification

- Overweight 23.0-24.9 kg/m²
- Obesity (class I) 25-29.9 kg/m²
- Obesity (class II) 30.0-34.9 kg/m²
- Severe or morbid (class III) ≥ 35 kg/m²

Etiology :- The causes of obesity are distributed in main two groups:

1. **Exogenous:** Dietary Habits: overeating, drinking habits, fatty diets
Activity patterns: lack of exercise, lack of normal sleep etc.
2. **Endogenous:** Metabolic syndrome, Insulinoma, Hypothyroidism, Cushing's Syndrome, PCOS Psychological Factor, Eating disorders Brain disorders, Hyperphagia etc.

Pathophysiology

Obesity results from chronic positive energy balance leading to adipose tissue expansion. Adipocytes release inflammatory cytokines and adipokines that contribute to insulin resistance, chronic inflammation, dyslipidemia, and metabolic syndrome.

Signs of obesity:

- Weight gain- more than 20% of normal body weight.
- Body mass index- >25 kg/meter square called obese
- Waist hip ratio –Waist hip ratio >0.88 in males and >0.80 in females known as Obese.
- Waist circumference- >90 cm in man and >80 cm in female.
- Skinfold around the axilla, below the breast and abdominal region

Symptoms of obesity:

- Breathlessness
- Increased sweating
- Snoring
- Back and joint pains
- Feeling tired even with routine activities
- Psychological problems such as low self esteem, low confidence level
- Menstrual disturbance and infertility.

Complications

Major complications include:

- Type 2 Diabetes Mellitus
- Hypertension

- Dyslipidemia
- Coronary artery disease
- Non-alcoholic fatty liver disease
- Sleep apnea
- Osteoarthritis
- Certain malignancies

Comparative Analysis of Ayurveda and Modern Medicine

Ayurvedic Concept	Modern correlation
Agnimandya	Metabolic dysfunction
Meda Vriddhi	Adipose tissue accumulation
Ama	Chronic inflammatory metabolites
Kapha Dushti	Altered lipid metabolism
Srotorodha	Metabolic and vascular obstruction
Lekhana Karma	lipolysis
Langhana	Caloric restriction
Vyayama	Physical exercise

Modern medicine primarily focuses on symptom reduction and evidence-based measurable outcomes, whereas Ayurveda emphasizes restoration of metabolic balance, digestive correction, and elimination of underlying pathology.

Treatment Approaches

Modern Management of Obesity

Lifestyle Modification

Dietary restriction

Physical exercise

Behavioral therapy

Pharmacotherapy

Common anti-obesity medications include:

- ✓ Orlistat
- ✓ Liraglutide
- ✓ Semaglutide

Appetite suppressants

These drugs mainly act by reducing fat absorption or appetite regulation.

Bariatric Surgery

Surgical procedures such as gastric bypass and sleeve gastrectomy are advised in severe obesity cases for long-term weight reduction and improvement of comorbidities.

Ayurvedic Management of Sthaulya

- Acc to Acharya Sushruta – Nidana Parivarjana

संक्षिप्तःकियायोगोनिदानपरिर्वजन् (SU.UT. 1/25)

Avoidance of causative dietary and lifestyle factors forms the primary line of treatment.

- Acharya Charaka has mentioned-
गुरूचापतर्पणचेष्टस्थूलानांकर्शनंप्रति।

वातघ्नान्यअन्नपानानिश्लेष्ममेदोहराणिच।।

रुक्षोष्णाबस्तयस्तीक्ष्ण रूक्षाण्युद्धर्तनानिच।।(च.सू 21/21)

Guru and Apatarpanadravyas are given for the management of Sthaulya. Guru Dravyastake long time in digestion hence maintain the power of Tikshnagni.

Apatarpana refer to low calorie, non-nourishing foods. Thus, aharadravyas which are difficult for digestion and having low in calories are recommended for Sthaulya (obesity).

- Acharya Vagbhatt has described Nittiya Langhan therapy for the individuals who are suffering from Sthaulya(obesity)

Ayurveda recommends:

Controlled diet

Fasting

Physical exercise

Metabolic correction therapies

Lekhana Karma helps in reduction of excessive Meda and correction of metabolic imbalance.

Panchakarma Therapy

Important Panchakarma procedures include:

- Virechana
- Udvartana
- Basti
- Rukshana therapies

These procedures aid in detoxification, channel cleansing, and metabolic correction.

Herbal Medicines

Lekhaniya Mahakashaya

Lekhaniya Mahakashaya described by Acharya Charaka possesses:

- Medohara action
- Kapha shamana effect
- Deepana-Pachana properties
- Lekhana action
- Srotoshodhana activity
- It helps in reducing adiposity and improving metabolic efficiency.

Mushtadighan Vati

Mushtadighan Vati contains drugs having:

- Deepana-Pachana activity
- Kapha-Meda hara properties
- Appetite regulation
- Agni correction
- Digestive enhancement
- Its ingredients may help in improving metabolism and preventing further accumulation of Meda Dhatu.

Lifestyle Regulation

Ayurveda strongly advocates:

- Dinacharya
- Regular Vyayama
- Yoga
- Meditation
- Proper sleep regulation

Yoga practices beneficial in obesity include:

- Surya Namaskar
- Kapalabhati
- Pawanmuktasana
- Bhujangasana
- Ustrasana

Integrative Approach

An integrative strategy combining modern evidence-based interventions with Ayurvedic therapies may provide sustainable obesity management. Modern medicine offers rapid measurable results, while Ayurveda provides individualized long-term correction of metabolic imbalance and lifestyle modification.

Integration may include:

- Caloric restriction with Ayurvedic dietary principles
- Exercise combined with Yoga
- Panchakarma along with behavioral therapy
- Herbal medications with modern monitoring parameters
- Such an approach may improve patient compliance, safety, and long-term outcomes.

Discussion

Obesity is a multifactorial metabolic disorder requiring comprehensive management. Modern medicine views obesity primarily through metabolic, hormonal, and inflammatory mechanisms, whereas Ayurveda interprets it as a disorder involving Kapha Dosha, Meda Dhatu, and impaired Agni.

The Ayurvedic concept of Agnimandya closely resembles reduced metabolic efficiency observed in obesity and metabolic syndrome. Similarly, Ama may be correlated with inflammatory metabolites and oxidative stress. Lekhana Karma can be interpreted as metabolic correction and fat reduction.

Modern therapies including GLP-1 agonists and bariatric surgery show significant short-term weight reduction; however, recurrence, adverse effects, and sustainability remain concerns. Ayurvedic therapies emphasize constitutional assessment, detoxification, digestive correction, and lifestyle regulation, thereby offering holistic management.

Herbal formulations such as Lekhaniya Mahakashaya and Mushtadighan Vati possess promising anti-obesity potential due to their Deepana, Pachana, Lekhana, and Medohara properties. Further scientific validation through high-quality clinical trials and pharmacological studies is required to establish their therapeutic efficacy and mechanism of action.

Conclusion

Sthaulya described in Ayurveda closely resembles obesity described in modern medicine. Both systems acknowledge the important role of diet, lifestyle, and metabolic imbalance in disease manifestation.

Modern medicine provides rapid and measurable interventions, whereas Ayurveda offers individualized, preventive, and holistic management strategies.

Ayurvedic principles such as Langhana, Lekhana, Panchakarma, and lifestyle regulation may provide sustainable long-term benefits in obesity management. Integration of contemporary and Ayurvedic approaches could offer safer and more comprehensive therapeutic options for obesity and associated lifestyle disorders. Further evidence-based clinical research is necessary to validate Ayurvedic interventions scientifically and establish standardized integrative treatment protocols.

References

1. Charaka Samhita, Vidyotini comm. Vol. 1 by Pt. K. N. Shastri and G.N. Chaturvedi, Chaukhamba Bharti Academy, Varanasi, Revised edition 221001.
2. Charaka Samhita, Eng translation, Vol.I, , R.K. Sharma and bhagwandas, Chaukhambha Sanskrit Series office, Varanasi, Reprint, 2011.
3. Ashtanga Hridya. English translation, Vol.I KR.Srikantha Murthy. Chaukhamba Krishnadas Academy, Varanasi, 2 edition.
4. Ashtanga Hridya with Nirmala Hindi commentaries edited by Dr. Brahmanand
5. . Sushruta Samhita comm. By Ambika Dutta Shastri, Chaukhambha, Varanasi, 2014,9.
6. Sushruta Samhita, Eng. Translation, Vol. I, P.V.Sharma, Chaukhambha
7. <https://data.worldobesity.org/country/india-95>
8. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
9. API-Textbook of Medicine, 9/E,2 volsyash pal Munjal.
10. Kayachikitsa- Ram Raksha Pathak
11. Introduction to kayachikitsa- Dwarkanath C.3rdChaukhamba Orientalia, Varanasi
12. API medicine editor in Chief, G.S. Sainani, 8th edition, 2014.
13. Davidsons principle and practice of medicine, Edition 20th.
14. Essential of medical pharmacology, K.D.Tripathi,5th edition.