



RESEARCH ARTICLE

STHAULYA AS A SANTARPANOTTHA VYADHI: A COMPREHENSIVE REVIEW OF AYURVEDIC PATHOGENESIS AND MANAGEMENT

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Abstract

Sthaulya (obesity) is one of the major lifestyle disorders described in Ayurveda under the broad category of Santarpanottha Vyadhi, diseases arising from over-nourishment and excessive accumulation of bodily tissues. With rapid urbanization, sedentary lifestyle, altered dietary habits, and psychosocial stress, obesity has emerged as a global health challenge. Ayurveda offers a comprehensive understanding of Sthaulya through the concepts of Agnimandya, Kapha-Medo Dushti, Srotorodha, and Dhatu Vaishmya. Classical texts describe Sthaulya not merely as excessive body weight but as a pathological condition affecting physical, psychological, and metabolic functions. This review explores the Ayurvedic understanding of Sthaulya, its etiopathogenesis, clinical manifestations, complications, and management strategies. Emphasis is placed on Nidana Parivarjana, Ahara, Vihara, Shodhana, Shamana, and Rasayana approaches. The integrative understanding of Sthaulya provided by Ayurveda may contribute significantly to preventive and therapeutic strategies for obesity management.

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Introduction:-

Obesity has become a major public health concern worldwide owing to its association with diabetes mellitus, hypertension, cardiovascular diseases, dyslipidemia, and metabolic syndrome. According to the World Health Organization, obesity results from abnormal or excessive fat accumulation that presents a risk to health and has reached epidemic proportions globally.[1]

Ayurveda recognizes obesity as Sthaulya or Medoroga and considers it among the Ashta Nindita Purusha (eight undesirable bodily constitutions) described by Acharya Charaka.[2] Sthaulya develops due to excessive nourishment (Santarpana), leading to abnormal accumulation of Meda Dhatu and Kapha Dosha. Unlike the modern concept that primarily focuses on body mass index (BMI), Ayurveda evaluates obesity through qualitative and functional disturbances in Dosha, Dhatu, Agni, and Srotas. Understanding Sthaulya as a Santarpanottha Vyadhi provides a

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unique framework for prevention and management that extends beyond weight reduction and focuses on restoration of metabolic balance.

Materials and Methods:-

The present study is a narrative review based on classical Ayurvedic literature and contemporary scientific publications.

Sources of Ayurvedic Literature

Relevant references were collected from:

- Charaka Samhita
- Sushruta Samhita
- Ashtanga Hridaya
- Madhava Nidana
- Bhavaprakasha

Sources of Modern Literature

Electronic databases including PubMed, Scopus, Google Scholar, and ResearchGate were searched using keywords such as:

- Obesity
- Sthaulya
- Medoroga
- Santarpanottha Vyadhi
- Ayurvedic obesity management
- Meda Dhatu

Articles published in English and relevant Ayurvedic review studies were included. Information was critically analyzed and compiled under thematic headings.

Concept of Santarpanottha Vyadhi

Santarpana refers to excessive nourishment resulting from overconsumption of calorie-dense foods and reduced physical activity. Charaka categorized diseases into Santarpanottha and Apatarpanottha based on nutritional status.[3]Excessive intake of Guru, Snigdha, Madhura, Sheeta, and Picchila Ahara leads to Kapha and Meda predominance. Over time, these pathological changes impair metabolic functions and initiate disease processes.

Sthaulya is considered one of the most important manifestations of Santarpana because excessive nutrition directly promotes abnormal Meda accumulation.

Nidana (Etiological Factors) [2]

Acharya Charaka enumerated several causative factors responsible for Sthaulya.

Dietary Factors

- Excessive intake of Madhura Rasa dominant foods
- Frequent consumption of Guru and Snigdha Ahara
- Excessive intake of dairy products and sweets
- Overeating beyond digestive capacity
- Repeated eating without proper digestion of previous meals

Lifestyle Factors

- Lack of physical exercise (Avyayama)
- Excessive sleep, especially daytime sleep (Divaswapa)
- Sedentary habits
- Reduced occupational physical activity

Psychological Factors

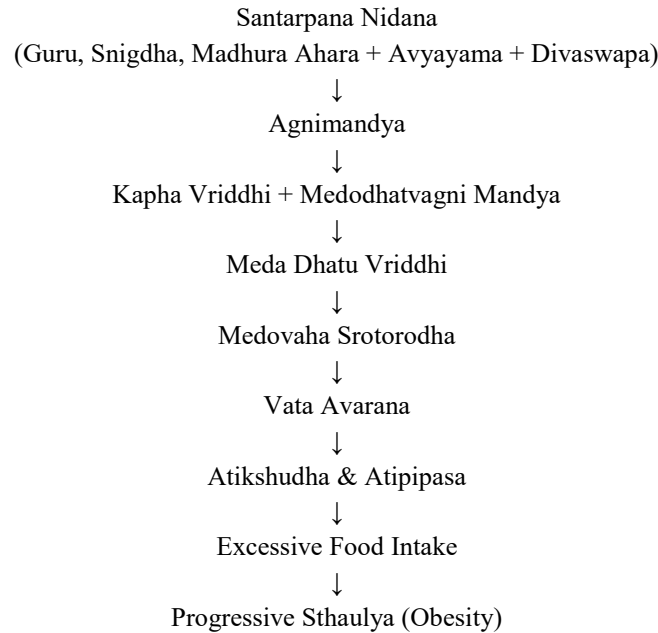
- Constant pleasure-seeking behavior
- Emotional overeating
- Lack of mental discipline

Genetic and Constitutional Factors

- Beeja Dosha
- Kapha Prakriti
- Familial predisposition

Ayurvedic Pathogenesis (Samprapti) [2,4]

The pathogenesis of Sthaulya begins with prolonged exposure to Santarpaka Nidana.

Figure 1. Ayurvedic Pathogenesis of Sthaulya**Step 1: Agnimandya**

Excessive Guru and Snigdha Ahara weakens Jatharagni and Dhatvagni, resulting in incomplete metabolism.

Step 2: Kapha and Meda Vriddhi

Impaired metabolism promotes excessive formation of Meda Dhatu and aggravation of Kapha Dosha.

Step 3: Srotorodha

Accumulated Meda obstructs various channels (Srotas), impairing the transport and transformation of nutrients.

Step 4: Vata Prakopa

Due to obstruction by Meda, Vata becomes confined within the Kostha and stimulates excessive appetite.

Step 5: Progressive Fat Accumulation

Increased appetite encourages excessive food intake, leading to further Meda accumulation and perpetuation of the disease cycle.

Samprapti Ghataka

Component	Involvement
Dosha	Kapha dominant with Vata involvement
Dushya	Meda, Mamsa, Rasa
Agni	Jatharagni and Medodhatvagni Mandya
Srotas	Medovaha Srotas
Srotodushti	Sanga
Udbhava Sthana	Amashaya
Vyakta Sthana	Sarva Sharira
Roga Marga	Bahya

Clinical Features

Charaka described characteristic manifestations of Sthaulya including:[2]

- Excessive pendulous movement of buttocks, abdomen, and breasts
 - Increased body bulk
 - Excessive sweating
 - Increased appetite
 - Excessive thirst
 - Dyspnea on exertion
 - Reduced physical endurance
 - General weakness despite obesity
- These symptoms indicate metabolic inefficiency despite excessive nutritional reserves.

Complications of Sthaulya [2]

Ayurvedic texts describe several adverse consequences of obesity.

Daurbalya: Functional weakness despite excessive body mass.

Krichchhra Vyavaya: Impaired sexual performance.

Alpayu: Reduced lifespan.

Daurgandhya: Body odor due to excessive sweating.

Swedabadha: Abnormal sweating patterns.

Jvara and Associated Disorders: Predisposition to multiple chronic diseases.

Modern studies correlate obesity with: [5,6]

- Type 2 diabetes mellitus
- Hypertension
- Dyslipidemia
- Coronary artery disease
- Non-alcoholic fatty liver disease
- Obstructive sleep apnea
- Osteoarthritis

Principles of Management

Ayurvedic management aims not merely at weight reduction but at restoration of Dosha equilibrium and metabolic correction.

Nidana Parivarjana

Avoidance of causative factors remains the cornerstone of therapy.

This includes:

- Restriction of calorie-dense foods
- Avoidance of daytime sleep
- Promotion of regular exercise
- Stress management

Ahara Chikitsa

Foods possessing Laghu, Ruksha, Katu, Tikta, and Kashaya qualities are recommended.

Pathya Ahara

- Yava (barley)
- Kodrava
- Mudga
- Takra
- Kulattha
- Shyamaka

Apathya Ahara

- Excess sweets
- Refined carbohydrates
- Excess dairy products

- Fried foods
- Sugar-sweetened beverages

Vihara Chikitsa

Lifestyle correction plays a central role.

Recommended measures include:

- Daily exercise (Vyayama)
- Brisk walking
- Yoga
- Pranayama
- Avoidance of prolonged sitting

Shodhana Chikitsa [7]

Shodhana is particularly useful in Kapha-Meda dominant individuals.

Vamana: Removes aggravated Kapha from its principal site.

Virechana: Facilitates elimination of Pitta and metabolic toxins.

Lekhana Basti: Reduces Meda accumulation and corrects Vata imbalance.

Shamana Chikitsa

Several Ayurvedic formulations are traditionally employed.

Commonly Used Drugs [8]

- Triphala
- Guggulu
- Musta
- Chitraka
- Shunthi
- Haritaki
- Vidanga
- Loha preparations

Classical Formulations [9]

- Triphala Guggulu
- Navaka Guggulu
- Medohara Guggulu
- Arogyavardhini Vati
- Punarnavadi preparations

These medicines exhibit Deepana, Pachana, Lekhana, and Medohara actions.

Contemporary Evidence on Anti-Obesity Ayurvedic Formulations and Herbal Extracts

Triphala is one of the most extensively investigated Ayurvedic formulations for obesity management. Clinical studies and systematic reviews have demonstrated significant reductions in body weight, waist circumference, BMI, and body fat percentage. Its anti-obesity activity is attributed to improved lipid metabolism, antioxidant action, gut microbiota modulation, and enhancement of metabolic efficiency.[10–12]

Triphala Guggulu combines the Medohara action of Triphala with the lipid-lowering and Lekhana properties of Guggulu. Clinical evidence suggests beneficial effects on anthropometric parameters and metabolic markers among overweight and obese individuals.[10]

Navaka Guggulu is a classical Ayurvedic formulation widely prescribed for Medoroga and Sthaulya. Recent clinical studies and research protocols have reported significant reductions in body weight, BMI, and obesity-related symptoms due to its Deepana, Pachana, and Lekhana properties.[13]

Garcinia cambogia (Vrikshamla) has attracted considerable scientific interest because of hydroxycitric acid (HCA), which may suppress appetite, inhibit de novo lipogenesis, and improve lipid metabolism. Clinical studies indicate favorable effects on weight reduction and dyslipidemia.[14]

Guggulu (*Commiphora mukul*) contains biologically active guggulsterones that influence cholesterol metabolism, adipogenesis, and lipid homeostasis. Several studies have reported improvements in serum lipid profile and reduction in obesity-related metabolic disturbances following Guggulu administration.[15]

Amalaki (*Embolica officinalis*) exhibits antioxidant, anti-inflammatory, and hypolipidemic activities. It contributes to obesity management by improving insulin sensitivity, reducing oxidative stress, and correcting metabolic dysfunction.[14]

Trikatu (Pippali, Maricha, and Shunthi) promotes Agni, enhances thermogenesis, and improves bioavailability of therapeutic compounds. Experimental studies suggest its role in reducing fat accumulation and improving metabolic activity.[16]

Sphaeranthus indicus extract, particularly in combination with *Garcinia* species, has demonstrated promising anti-obesity activity in recent clinical investigations. Reported benefits include reductions in body weight, BMI, body fat percentage, and serum lipid levels.[16]

Proposed Mechanisms of Anti-Obesity Action

Drug/Formulation	Proposed Mechanism
Triphala	Gut microbiota modulation, antioxidant activity, lipid regulation
Triphala Guggulu	Lekhana, Medohara, lipid lowering
Guggulu	Guggulsterone-mediated lipid metabolism
Navaka Guggulu	Deepana, Pachana, Medohara activity
<i>Garcinia cambogia</i>	Appetite suppression, inhibition of lipogenesis
Amalaki	Antioxidant and hypolipidemic action
Trikatu	Thermogenesis and metabolic enhancement
<i>Sphaeranthus indicus</i>	Adipogenesis inhibition and lipid lowering

Yoga and Lifestyle-Based Management [17]

Yoga contributes significantly to obesity management through increased energy expenditure and neuroendocrine regulation.

Beneficial practices include:

- Surya Namaskara
- Trikonasana
- Bhujangasana
- Naukasana
- Pavanamuktasana
- Kapalabhati
- Bhastrika Pranayama

Regular yoga practice has demonstrated improvements in body composition, insulin sensitivity, and psychological well-being.

Preventive Perspective

Ayurveda emphasizes prevention through Dinacharya and Ritucharya. [18][19]

Important preventive measures include:

- Mindful eating
- Regular physical activity
- Adequate sleep
- Avoidance of overeating
- Seasonal purification therapies
- Maintenance of Agni

These measures align closely with modern recommendations for obesity prevention.

Discussion:-

Sthaulya is a multifactorial metabolic disorder resulting from prolonged Santarpana and unhealthy dietary and lifestyle practices. Ayurveda explains its pathogenesis through Agnimandya, Kapha-Meda Vriddhi, and Srotorodha, which together disturb normal metabolic processes. The concept of Medodhatvagni Mandya closely resembles altered lipid metabolism and energy imbalance described in contemporary medicine, while Srotorodha may be correlated with impaired metabolic and vascular functions. The Ayurvedic approach to Sthaulya emphasizes correction of the underlying pathology through Nidana Parivarjana, Ahara-Vihara modification, Shodhana, and Shamana therapies rather than focusing solely on weight reduction. Recent scientific studies have also demonstrated the anti-obesity potential of classical formulations such as Triphala, Triphala Guggulu, Navaka Guggulu, and Guggulu, as well as herbal agents including Garcinia cambogia, Amalaki, Trikatu, and Sphaeranthus indicus. Their beneficial effects on body weight, lipid metabolism, appetite regulation, and adipogenesis provide contemporary support for the Ayurvedic principles of Sthaulya management.

Conclusion:-

Sthaulya is a classic example of Santarpanotha Vyadhi resulting from excessive nourishment, sedentary lifestyle, and impaired metabolism. Ayurvedic pathogenesis highlights the pivotal roles of Agnimandya, Kapha-Medo Dushti, and Srotorodha in disease development. Management requires a comprehensive approach incorporating Nidana Parivarjana, Pathya Ahara, Vyayama, Yoga, Shodhana, and Shamana therapies. The Ayurvedic understanding of Sthaulya offers valuable insights for the prevention and management of obesity and its associated metabolic complications.

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