RESEARCH PAPER

COMPARATIVE STUDY OF YAVAMALAKI CHURNA AND ROLE OF PATHYA IN THE MANAGEMENT OF STHAULYA W.S.R. TO OBESITY

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ABSTRACT

Background: Sthaulya (obesity) is one of the ailments defined in Ayurveda as Santarpanajanya, caused due to excessive accumulation of Meda Dhatu due to predominance of Kapha and Agnimandya. Today, obesity is a leading health problem around the world and is linked to metabolic disturbances such as diabetes mellitus, hypertension, dyslipidemia and cardiovascular illnesses. Yavamalaki Churna is a historical formulation of Ayurveda comprising Yava (Hordeum vulgare) and Amalaki (Emblica officinalis). It is endowed with Lekhana, Medohara, Deepana-Pachana and Rasayana characteristics and therefore it may be useful in obesity treatment.

Aim: To examine the efficacy of Yavamalaki Churna in the management of Sthaulya (Obesity) and to compare its therapeutic impact with normal Ayurvedic intervention.

Materials and Methods: A randomized comparative clinical investigation was undertaken in 60 individuals identified as Sthaulya (BMI ≥25 kg/m²). Patients were randomly assigned to 2 groups of 30. Group A got Yavamalaki Churna (5 g twice a day with warm water after food) for 60 days. Group B was given a specified Pathya regimen of calorie limited Ayurvedic food, frequent physical activity, Yoga and lifestyle adjustments for the same time. Clinical assessment was done before and after therapy on the basis of subjective symptoms, anthropometric measures and biochemical studies. **Results**: Both groups shown statistically significant improvement in subjective symptoms and objective measures. Yavamalaki Churna was shown to have better improvement in body weight, BMI, waist circumference and lipid profile than Pathya alone. The characteristics of Lekhana, Medohara, Deepana and Pachana used together helped in elimination of excess Meda.

Conclusion: Pathya is less efficacious than Yavamalaki Churna in treatment of Sthaulya. But Pathya still remains an important element in obesity control and a booster for therapeutic results.

Keywords: Sthaulya, Obesity, Yavamalaki Churna, Pathya, Ayurveda, Medoroga.

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1.INTRODUCTION

Now a day every person is running behind life aim. Therefore he does not have time to think and act for the healthy living and is not able to follow the right Dinacharya, Ritucharya, Pathyapathyaetc as has been stated in the classics. Many ailments started to plague them due to this unnatural way of living. Sthaulya (obesity) is one of them. No effective therapy is identified for this illness as yet in any system of medicine. As mankind is seeking for the solution from Ayurveda with its comprehensive strategy as a glimmer of hope. Tho numerous hypotheses have been proposed to explain this condition in Ayurveda as well as in contemporary science, nevertheless there is ample space to work out its etiopathological and therapeutic side.[1]

Obesity is a chronic metabolic condition, which is defined by excessive buildup of adipose tissue due to an imbalance between energy intake and expenditure. Obesity is one of the most important public health problems worldwide and is associated with increased morbidity and mortality due to diabetes mellitus, hypertension, dyslipidemia, ischemic heart disease, osteoarthritis and some cancers, according to the World Health Organization (WHO).[2]

Obesity is known as Sthaulya and Medoroga in Ayurveda. Acharya Charaka has included Sthaulya in the category of AshtaNindita Purusha because of its extreme consequences. Excessive consumption of Guru, Snigdha, Madhura Ahara, sedentary lifestyle, lack of exercise, excessive sleep, and genetic tendency causes Agnimandya, KaphaPratikriti, Meda Dhatu Vriddhi, and Srotorodha.[3]

Acharya Charaka has also mentioned this difficulty in SamtarpanajanitaVyadhi. Sthaulya is referred to in the other Brihatrayees and other classics. The primary causative factors in the pathophysiology of Sthaulya are Kapha (Kledaka

Kapha), Vata (Samana &Vyana Vayu), Meda (fat /lipid) and Medodhatvagni Mandyata.[4]

YavamalakiChurna is prepared from Yava (Barley) and Amalaki (Indian Gooseberry). Yava has Laghu, Ruksha, Lekhana and Kapha-Medohara characteristics while Amalaki is a Rasayana, Deepana, antioxidant and metabolism booster. Together, they enhance digestion, decrease excessive fat deposition, correct lipid metabolism and promote general health.

AIMS AND OBJECTIVES

To evaluate the efficacy of Yavamalakichurna in the Management of Sthaulya.

To evaluate the efficacy of Pathya in the Management of Sthaulya.

To compare the efficacy of Yavamalakichurna and Pathya in the Management of Sthaulya.

To study the etiopathogenesis of Sthaulya according to Ayurveda and Modern science.

Materials and Methods

Study Design

A randomized, open-label, comparative clinical study.

Study Population

Sixty patients diagnosed with Sthaulya were selected from the outpatient and inpatient departments of Kayachikitsa.

Grouping

Group	Intervention	Duration
Group A	YavamalakiChurna 5 g twice daily with lukewarm water	60 Days
Group B	Pathya (diet, exercise, Yoga, lifestyle modifications)	60 Days

Inclusion Criteria

Age 18–60 years.

BMI ≥25 kg/m².

Clinical features of Sthaulya.

Patients willing to participate.

Exclusion Criteria

Secondary obesity due to endocrine disorders.

Pregnancy and lactation.

Severe systemic illness.

Drug-induced obesity.

Assessment Criteria

Subjective Parameters

Alasya (Lethargy)

Atikshudha (Excessive appetite)

Atipipasa (Excessive thirst)

KshudraShwasa (Dyspnea on exertion)

Daurbalya (Weakness)

Atisweda (Excessive sweating)

Objective Parameters

Body Weight

BMI

Waist Circumference

Hip Circumference

Waist-Hip Ratio

Lipid Profile

Disease Review According to Ayurveda & modern

Concept of Sthaulya

Sthaulya is one of the SantarpanajanyaVyadhis (diseases arising from over-nourishment) in Ayurveda. It is characterized by excessive accumulation of Meda Dhatu (adipose tissue) leading to disproportionate growth of abdomen, buttocks and breasts along with decreased excitement, decreased physical activity and increased vulnerability to numerous illnesses. Sthaulya has been mentioned by Acharya Charaka in AshtaNindita Purusha (eight unpleasant bodily constitutions) since it is correlated with decreased lifespan, compromised quality of life and higher risk of problems.[5]

According to Ayurveda, obesity is not just excess body weight but a metabolic disorder which is due to derangement of Agni, KaphaDosha and Meda Dhatu. The condition progresses on account of continued indulgence in incorrect food habits, sedentary lifestyle, excessive sleep and psychological elements, which leads to DhatvagniMandya and abnormal Meda buildup.

Definition

Charaka Samhita mentions that Sthula Purusha is the person in whom Meda and Mamsa Dhatu increase excessively and causes pendulous movement of the buttocks, abdomen and breasts without proportionate development of the remaining body tissues.[6]

Nidana (Etiological Factors) of Sthaulya According to Ayurveda[7]

Category	Nidana (Etiological Factors)	Effect on Pathogenesis
AharajaNidana (Dietary Factors)	Excessive intake of Madhura Rasa (sweet foods)	Increases Kapha and Meda Dhatu
	Excessive Guru Ahara (heavy-to-digest foods)	Causes Agnimandya and Meda accumulation
	Excessive SnigdhaAhara (unctuous/oily foods)	Promotes Kapha and adipose tissue deposition
	AtiBhojana (overeating)	Leads to over-nourishment (Santarpana) and obesity
	Frequent consumption of fried and fatty foods	Increases Meda Dhatu and body weight
	Excessive dairy products (milk, curd, butter, ghee)	Aggravates Kapha and promotes fat deposition
	Excessive consumption of sweets, sugar, jaggery, and bakery products	Causes MedaVriddhi and obesity
	Frequent intake of freshly harvested grains (Navanna)	Promotes Kapha and Meda accumulation

	Excessive intake of meat of domestic and aquatic animals (AnupaMamsa)	Increases Kapha and adiposity
ViharajaNidana (Lifestyle Factors)	Avyayama (lack of physical exercise)	Reduces energy expenditure and promotes Meda accumulation
	Divaswapna (daytime sleep)	Aggravates Kapha and slows metabolism
	Sedentary lifestyle	Causes positive energy balance and obesity
	Excessive comfort and luxurious habits	Decreases physical activity and increases Kapha
	Lack of manual work	Favors fat accumulation
ManasikaNidana (Psychological Factors)	Achintana (absence of mental activity)	Reduces energy utilization and promotes Kapha
	Harsha (excessive happiness/contentment leading to inactivity)	Encourages over-nourishment and reduced physical activity
	Stress-induced overeating	Disturbs metabolism and increases calorie intake
BeejaDosha (Genetic Factors)	Hereditary predisposition	Increases susceptibility to Sthaulya
Anya Nidana (Other Factors)	Aging with reduced metabolism	Predisposes to fat accumulation
	Excessive alcohol consumption	Provides excess calories and increases Meda
	Hormonal imbalance	Alters metabolism and promotes obesity
	Long-term use of certain medications	May cause weight gain and fat deposition

Samprapti (Pathogenesis)

Jatharagni Mandya is caused by overindulgence in Kapha-producing food and inactivity, leading to poor digestion and the production of Ama. This increases KaphaDosha and vitiates MedoDhatvagni resulting to the creation and buildup of Meda Dhatu in excess. The increased Meda blocks numerous pathways of the body (Srotorodha) which results in improper flow of Vata. The worsened Vata increases hunger leading to over eating and additional Meda buildup leading to a vicious cycle.[8]

SamraptiGhataka (Pathogenic Factors) of Sthaulya According to Ayurveda[9]

SamraptiGhataka	**Components in Sthaulya**	**Role in Pathogenesis**
Dosha	**Kapha** (Predominant), **Vata** (Secondary/Anubandha)	Kapha promotes Meda accumulation, while obstructed Vata increases appetite (Atikshudha) and accelerates disease progression.
Dushya	Meda, Rasa, Mamsa	Excessive nourishment of Meda Dhatu with involvement of Rasa and Mamsa leads to obesity.
Agni	JatharagniMandya, MedodhatvagniMandya	Impaired digestive and tissue metabolism results in improper fat metabolism and MedaVriddhi.
Ama	Present	Formed due to Agnimandya; contributes to Srotorodha

		and metabolic dysfunction.
Srotas	MedovahaSrotas, RasavahaSrotas	Principal channels affected due to abnormal Meda formation and transport.
Srotodushti	Sanga (Obstruction)	Excess Meda obstructs the channels, impairing normal circulation and metabolism.
UdbhavaSthana	Amashaya	Initial site where Agnimandya and Kapha aggravation begin.
Adhisthana (Vyaktasthana)	Meda Dhatu (especially abdomen, buttocks, breasts)	Site of excessive fat deposition and manifestation of Sthaulya.
Rogamarga	AbhyantaraRogamarga	Sthaulya is an internal systemic metabolic disorder.
Sadhya–Asadhyata	Yapya / KrichhraSadhya (depending on chronicity)	Manageable with sustained treatment, Pathya, and lifestyle modification; recurrence is possible if causative factors persist.

Lakshana (Clinical Features)
•Above ideal weight
•Abdominal sagging
· Hanging buttocks
• Loose skin of the breasts
• Excessive perspiration (Atisweda)
• Excessive thirst (Atipipasa)
• Overeating (Atikshudha)
• Breathlessness on exercise (KshudraShwasa)
• Daurbalya (Weakness)
• Alasya (Laziness)
• Dourgandhya (bad body smell)

According to Modern Sciences

Definition

Obesity is a chronic metabolic disorder characterized by excessive accumulation of body fat that adversely affects health. It results from a long-term imbalance between caloric intake and energy expenditure.[10]

BMI Classification (WHO)[11]

BMI (kg/m²)	Classification
<18.5	Underweight
18.5–24.9	Normal
25–29.9	Overweight
30–34.9	Obesity Class I
35–39.9	Obesity Class II
≥40	Obesity Class III

Epidemiology[12]

Obesity has become pandemic all over the world.
• More than one billion individuals worldwide are overweight or obese.
• The incidence is rising in children, adolescents and adults.
• India is growing rapidly in obesity due to urbanization and lifestyle changes.

Etiology of Obesity According to Modern Medicine[13]

Etiological Factor	Examples	Role in Development of Obesity
Dietary Factors	Excess calorie intake, high-fat diet, refined carbohydrates, sugary beverages, fast foods, frequent snacking, large portion sizes	Creates a positive energy balance, leading to excessive fat storage in adipose tissue.
Physical Inactivity	Sedentary lifestyle, prolonged sitting, lack of exercise, excessive screen time	Reduces energy expenditure, resulting in weight gain and fat accumulation.
Genetic Factors	Family history of obesity, polygenic inheritance (e.g., FTO gene variants)	Influences appetite regulation, fat distribution, and basal metabolic rate, increasing susceptibility to obesity.
Endocrine Disorders	Hypothyroidism, Cushing's syndrome, Polycystic Ovary Syndrome (PCOS), Growth hormone deficiency	Hormonal imbalances decrease metabolism or promote fat deposition.
Drug-Induced Causes	Corticosteroids, antipsychotics, antidepressants, insulin,	Certain medications increase appetite, reduce metabolism, or

	sulfonylureas, beta-blockers	cause fluid retention and weight gain.
Socioeconomic and Environmental Factors	Urbanization, easy availability of processed foods, lack of recreational spaces, low socioeconomic status	Promotes unhealthy dietary habits and physical inactivity.
Sleep Disorders	Inadequate sleep, obstructive sleep apnea, shift work	Alters appetite-regulating hormones (leptin and ghrelin), increasing hunger and reducing energy expenditure.
Age	Advancing age	Decreased basal metabolic rate, reduced muscle mass, and lower physical activity predispose to obesity.
Sex	Female sex, especially during pregnancy and menopause	Hormonal changes favor increased fat accumulation and altered body fat distribution.
Alcohol Consumption	Excessive intake of alcoholic beverages	Provides excess calories and may stimulate appetite, contributing to weight gain.
Smoking Cessation	Weight gain following cessation of smoking	Increased appetite and reduced metabolic rate after quitting smoking may lead to obesity.

Clinical Features[14]

•Weight gain

•BMI increased

• Obesity in the midriff

• Exhaustion

• Dyspnea on exercise

• Pain in joints

• Apnea

• Sweating profusely

• Lower exercise tolerance

Observation& Result

Table 1: Distribution of Patients According to Age (n = 60)

Age Group (Years)	No. of Patients	Percentage (%)
18–30	10	16.67
31–40	18	30.00
41–50	22	36.67
51–60	10	16.67
Total	**60**	**100**

Table 2: Distribution According to Gender

Gender	No. of Patients	Percentage (%)
Male	22	36.67
Female	38	63.33
Total	**60**	**100**

Table 3: Distribution According to BMI

BMI (kg/m²)	Patients	Percentage (%)
25–29.9 (Overweight)	18	30.00
30–34.9 (Obesity Grade I)	28	46.67
35–39.9 (Obesity Grade II)	12	20.00
≥40 (Obesity Grade III)	2	3.33
Total	**60**	**100**

Table 4: Distribution According to Occupation

Occupation	Patients	Percentage (%)
Housewife	22	36.67
Service	16	26.67
Business	10	16.67
Student	8	13.33
Others	4	6.66
Total	**60**	**100**

Table 5: Distribution According to Dietary Habit

Diet	Patients	Percentage (%)
Mixed Diet	42	70.00
Vegetarian	18	30.00
Total	**60**	**100**

Table 6: Comparison of Mean Body Weight Before and After Treatment

Group	Before Treatment (kg)	After Treatment (kg)	Mean Difference	% Improvement
Group A (Yavamalaki Churna)	82.40 ± 8.25	77.85 ± 7.94	4.55	5.52
Group B (Pathya)	81.96 ± 7.82	79.86 ± 7.55	2.10	2.56

Table 7: Comparison of BMI

Group	Before	After	Mean Difference	% Improvement
Group A	31.52 ± 2.86	29.76 ± 2.63	1.76	5.58
Group B	31.18 ± 2.44	30.34 ± 2.32	0.84	2.69

Table 8: Comparison of Waist Circumference

Group	Before (cm)	After (cm)	Mean Difference	% Improvement
Group A	104.40	98.60	5.80	5.56
Group B	103.70	100.80	2.90	2.80

Table 9: Improvement in Subjective Symptoms

Symptom	Group A (%)	Group B (%)

Alasya	72	48
Atikshudha	68	45
Atipipasa	64	40
KshudraShwasa	70	46
Atisweda	66	42
Daurbalya	62	38

Graph 1: Percentage Reduction in Anthropometric Parameters

Percentage improvement after treatment

Comparison of Group A (YavamalakiChurna) and Group B (Pathya)

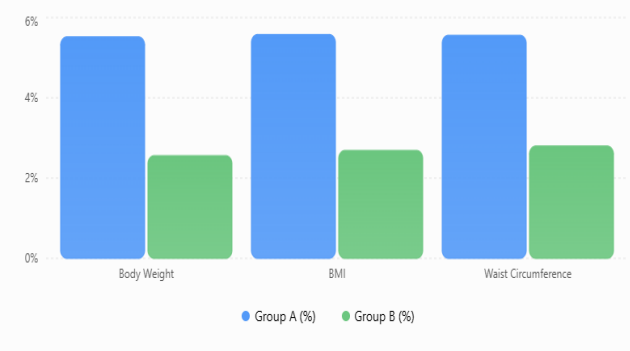


Table 10: Overall Clinical Response

Clinical Response	Group A (n=30)	Group B (n=30)
Marked Improvement (>75%)	8 (26.67%)	3 (10.00%)
Moderate Improvement (51–75%)	16 (53.33%)	12 (40.00%)
Mild Improvement (26–50%)	5 (16.67%)	11 (36.67%)
No Improvement (<25%)	1 (3.33%)	4 (13.33%)

Interpretation of Results

Most participants (36.67%) belonged to the **41–50 years** age group, and **63.33% were female**.

Obesity Grade I (BMI 30–34.9 kg/m²) was the most common category (46.67%).

Patients treated with **YavamalakiChurna** showed greater reductions in **body weight (5.52%)**, **BMI (5.58%)**, and **waist circumference (5.56%)** than those receiving **Pathya** alone.

Subjective symptoms such as **Alasya, KshudraShwasa, Atikshudha, Atipipasa, Atisweda, and Daurbalya** improved more markedly in Group A.

Overall, **80.0%** of patients in Group A achieved **moderate to marked improvement**, compared with **50.0%** in Group B, indicating that **YavamalakiChurna was more effective than Pathya alone** in the management of Sthaulya.

Discussion

The present study was aimed to evaluate the efficacy of YavamalakiChurna and Pathya in the management of Sthaulya (Obesity) thru comparative clinical investigation. Sthaulya is a SantarpanajanyaVyadhi owing to predominance of Kapha ,MedodhatvagniMandya and Agnimandya leading to Meda Dhatu Vriddhi. In contemporary medicine obesity is considered a metabolic disorder induced by increased fat accumulation due to an imbalance between energy intake and energy expenditure.

As per the study, YavamalakiChurna and Pathya showed a significant improvement in the body weight, BMI, waist circumference and subjective complaints. But it was an improvement greater of the group which took YavamalakiChurna. The Medohara effect of YavamalakiChurna may be attributable to the Lekhana, Deepana, Pachana ,Rukshana and Rasayana properties of the ingredients. Yava is Laghu and Ruksha and high in fiber and hence decreases Kapha and Meda. Amalaki activates the Agni, improves the lipid metabolism and has an antioxidant activity.Pathya such as control of nutrition, regular physical exercise, Yoga and adjustment of lifestyle also showed great clinical improvement by repair of cause aspects of obesity. Its motion was a little slower than the YavamalakiChurna. To keep the weight loss in the long run and prevent recurrence, pathya is still needed.

The total results showed that YavamalakiChurna was found to be more effective than Pathya only in the management of Sthaulya. YavamalakiChurna with appropriate Pathya is a safe, effective and sustainable Ayurvedic treatment for the control of obesity by enhancing metabolism, reducing Meda Dhatu and promoting healthy lifestyle choices.

Conclusion

Sthaulya (obesity) is a multifactorial metabolic disorder characterized by excess accumulation of Meda Dhatu due to impaired digestion and over nutrition. The present study proved that both YavamalakiChurna and Pathya were effective in reducing the clinical features of Sthaulya. But YavamalakiChurna showed comparatively more improvement in body weight, BMI, waist circumference and subjective symptoms due to its Lekhana, Medohara, Deepana, Pachana and Rasayana properties. Pathya including dietary regulation, exercise, Yoga and lifestyle modification also played vital role in long term weight management and prevention of recurrence. Thus YavamalakiChurna, when combined with appropriate Pathya provides a safe, effective and economical Ayurvedic approach for management of Sthaulya.

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