

An Over View of Krimighnadi Kashaya in addressing Sthaulya (Obesity)

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ABSTRACT

Introduction

Sthaulya is one of the *Santharpanothajanya Vyadhi* and *Rasa Nimittaja Vyadhi*. *Acharya Charaka* identified the *Atisthula Purusha* under *Ashta Nindita Purusha*, highlighting the severity of its health implications. It is a condition that not only exacerbates numerous health issues independently but also predisposes individuals to a range of complications when coupled with other diseases. *Sthaulya* in Ayurveda can be paralleled with Obesity in modern science which is a significant health concern in today's era, arising from sedentary lifestyles, unhealthy dietary habits, lack of physical activity, and mental stress. It is a precursor to major health complications, including Hypertension, Osteoarthritis, Coronary Artery Disease, and Diabetes Mellitus, as noted in modern science.

Materials and Methods

Sthaulya is a disease afflicting *Medovaha Srotas* and having *Ashta doshas* like -*Ayushohrasa*, *Javoparodha*, *Kriccha Vyavaya*, *Daurbalya*, *Daurgandhya* etc. As it is a disease of multifactor origin needs multidimensional approach towards its prevention and treatment.

Krimighnadi Kashaya described in *Sahasrayoga* is specifically indicated for managing *Sthaulya doshas*. This review explores its efficacy in doing *Samprapti Vighatana*, highlighting its potential as a therapeutic intervention for *Ashta Sthaulya dosha*.

Conclusion

Sthaulya has unique *Samprapti* unlike other diseases characterized by *Teekshna Jataragni* and *Manda Dhatwagni* which needs a carefully planned treatment. *Krimighnadi Kashaya* which contains *Vidanga*, *Triphala*, *Trikatu* etc and having phytochemicals like *Paradols*, β -Sitosterol and *Vilangin* etc., helps in increasing Lipolysis and reducing Lipogenesis exert Anti Obesity effect Thus *Krimighnadi Kashaya* reduces oxidative stress and reduces signs and symptoms of Obesity.

KEY WORDS – Obesity, Oxidative stress, *Sthaulya*, *Krimighnadi Kashaya*, *Santarpanajanya Vyadhi*

INTRODUCTION

In 21st century Obesity is emerging as an important health problem in world. In all over the world about 1.9 billion adults are overweight. In India 10% of population are affected by morbid obesity i.e. BMI above 40. Obesity is a medical condition in which excess body fat accumulated to an extent that it may have negative effects on health of an individual. Substantial evidence suggest at the energy intake and body weight is regulated by both endocrine and neural component that ultimately influence the energy intake and expenditure This complex regulatory system small imbalance between energy intake and expenditure ultimately have large impact on body weight⁽¹⁾.

Sthaulya is a disease afflicting *Medovaha Srotas* and having *Ashta doshas* like -*Ayushohrasa*, *Javoparodha*, *Kriccha Vyavaya*, *Daurbalya*, *Daurgandhya* etc.⁽²⁾ As it is a disease of multifactor origin needs multidimensional approach towards its prevention and treatment. Hence *Acharyas* have mentioned separate treatment principles to manage this disease based on the general treatment principles like *Nidana Parivarjana*, *Samshodhna* and *Shamshamana*.

The specific management principles of *Sthaulya* are as follows⁽³⁾

- *Santarpanajanya Vyadhi Chikitsa*
- *Satatakarshana Chikitsa*
- *Guru cha Atarpana*
- *Langhana Chikitsa*
- *Pathyapathya with special importance to Nidana Parivarjana*.

Krimighnadi Kashaya described in *Sahasrayoga* which is specifically indicated for managing *Sthaulya doshas*.⁽⁴⁾

AIMS AND OBJECTIVES

- A literary review on drugs in *Krimighnadi Kashaya*
- Review on Phytochemical present in *Krimighnadi Kashaya* acting on *Doshas* of *Sthaulya*

MATERIALS AND METHODS

Ingredients of *Krimighnadi Kashaya*

- ✓ *Krimighna –Vidanga*
- ✓ *Triphala*
- ✓ *Ajaji – Jeeraka*
- ✓ *Katuki*
- ✓ *Vyosha – Trikatu*
- ✓ *Amruta*
- ✓ *Guggulu*
- ✓ *Madhu*

Table 1 showing –Details of *Krimighnadi Kashaya*

DrugName	Latin Name	Family	Part used
<i>Vidanga</i>	<i>Embelia ribes</i>	Myrsinaceae	<i>Phala, Moola</i>
<i>Haritaki</i>	<i>Terminalia bellirica</i>	Combretaceae	<i>Phala</i>
<i>Vibhitaki</i>	<i>Terminalia chebula</i>	Combretaceae	<i>Phala</i>
<i>Amalaki</i>	<i>Embilica officinalis</i>	Euphorbiaceae	<i>Phala</i>
<i>Ajaji</i>	<i>Cuminum cyminum</i>	Umbellifrae	<i>Phala</i>
<i>Katuki</i>	<i>Pichorrhiza kurra</i>	Scropularaceae	<i>Moola</i>
<i>Shunti</i>	<i>Zingiber officinale</i>	Scitaminae	<i>Kanda</i>
<i>Maricha</i>	<i>Piper nigrum</i>	Piperaceae	<i>Phala</i>
<i>Pippali</i>	<i>Piper longum</i>	Piperaceae	<i>Phala, Moola</i>
<i>Amruta</i>	<i>Tinospora cardifolia</i>	Menispermaceae	<i>Kanda, Patra, Moola</i>
<i>Guggulu</i>	<i>Commiphora Mukul</i>	Burseraceae	<i>Niryasa</i>
<i>Madhu</i>	<i>Mal depuratum</i>	Epidae	

Table 2 showing – *Rasapanchaka of Krimighnadi Kashaya*

Drug Name	Rasa	Guna	Veerya	Vipaka	Karma
<i>Vidanga</i>	<i>Katu, Kashaya</i>	<i>Laghu, Ruksha, Te ekshna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Vata Kapha hara, Krimihara, Kushta, Prameha Hara</i>
<i>Haritaki</i>	<i>Lavana vargita Kashaya Pradhana Pancha Rasa</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshahara, Anuloman Rasayana Deepana Pachana</i>
<i>Vibhitaki</i>	<i>Kashaya</i>	<i>Kashaya</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridosh ahara, Deepana Bhedana</i>
<i>Amalaki</i>	<i>Lavana vargita Amla Pradhana Pancha Rasa</i>	<i>Laghu, Ruksha</i>	<i>Seetha</i>	<i>Madhura</i>	<i>Tridosh ahara, Mridurech aka Rasayana Vrsya</i>
<i>Ajaji</i>	<i>Katu</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>KaphaVatahara Deepana Shulahara Krimihara</i>
<i>Katuki</i>	<i>Thikta</i>	<i>Laghu Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>KaphaVata Shamaka Bhedhana Kushtaghna</i>
<i>Shunti</i>	<i>Katu</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>KaphaVata Hara</i>
<i>Maricha</i>	<i>Katu</i>	<i>Laghu Ruksha</i>	<i>Anushna</i>	<i>Madhura</i>	<i>KaphaVata Hara Pachana, Vrushya</i>
<i>Pippali</i>	<i>Katu</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Deepana, Krimighna</i>
<i>Amruta</i>	<i>Kashaya Thikta</i>	<i>Laghu</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshahara Deepana, Mehahara, Kushtahara, Krimihara</i>

Guggulu	Tikta, Kashaya	Katu, Tikshna, Sara, Picchila, Laghu, Sukshma, Snigdha	Ushna	Katu	Lekhana, Ropana, Jantughna, Mehahara, Deepana, Saraka, Mutrala
Madhu	Madhura, Kashaya-anurasa	Laghu Vishada Sheeta Ruksha	Sheeta	Katu	Kapha Pitta hara Medohara

DISCUSSION

The primary pathological factors in *Sthaulya* include *Kapha*, *Vata*, and *Medas*. It occurs due to an excessive increase in *Mamsa* and *Medodhatu*, resulting in *Sphik*, *Sthana Udara Lambana* and *Chalatva*. Thus Treatment focuses on counteracting the adverse effects of *Kapha* and *Medas* within the body. Since *Sthaulya* is categorized as a *Santarpanotha Vyadhi*, it is best managed through *Apatarpana*.

Wherein *Laghana*, *Laghana-Pachana* and *Doshavasechana* can be considered as the best principle line of treatment in *Sthaulya*. Hence the formulation *Krimighnadi Kashaya* which is having *Deepana*, *Pachana*, *Kapha-Medohara* guna helps in mitigating the *Doshas* of *Sthaulya*.

PROBABLE MODE OF ACTION OF KRIMIGHNADI KASHAYA

Krimighnadi Kashaya is mentioned in *Sahasrayoga* specially indicated in *Sthaulya* contains *Vidanga*, *Triphala*, *Jeeraka*, *Katuki*, *Trikatu*, *Amruta* and *Guggulu*.

ON THE BASIS OF RASA COMPOSITION

It mainly constitutes *Katu*, *Thikta*, *Kashaya rasa dravyas* which is majorly formed by *Vayu Mahabhuta*, encounters vitiated *Kapha* and *Medo Dosh* and helps in doing *Ama Pachana* and *Dhatwagni Deepana*. It also controls *Samana Vata* which is vitiated in *Koshta*

ON THE BASIS OF GUNA

Laghu, *Ruksha*, *Teekshna* and *Ushna Gunas* are the majorly contributing qualities in *Krimighnadi Kashaya*, which acts on qualitative and quantitative reduction of excess *Medas* and *Kapha* in the body, it does *Lekhana Karma* thus reducing the increased Adipose cells or number of adipose cells and in combination of both.

ON THE BASIS OF VEERYA

Dravyas possessing *Ushna Veerya* in this *Yoga* helps in converting unsaturated or short chain fatty acids of the triglycerides to liquefy hence these fats gets hydrolyzed from cells helping in reduction of body weight.

ON THE BASIS OF VIPAKA

The combination of *Dravyas* in the formulation has both *Madhura Vipaka* and *Katu Vipaka* which helps in pacifying both vitiated *Vata* and *Kapha Doshas* resulting in *Vata Kapha Hara*.

PROBABLE MODE OF ACTION OF KRIMIGHNADI KASHAYA ON DOSHAS OF STHAULYA EFFECT ON ATI SWEDAPRAVRUTTHI.

Sweda is considered as *mala* of *Medodhatu*, and an increase in *Medodhatu* leads to increased *Swedapravrtti*. *Krimighnadi Kashaya* exhibit *Medo Hara* and *Lekhana* action by its *Ushna Thikshna Ruksha Guna* which helps in reducing *Medodhatu*. This reduction in turn decreases *Sweda* which is the *Mala* of *Medha dhatu*.

Obesity leads to a range of complications, one of which is *Hyperhidrosis*. The excessive accumulation of fat increases the body's metabolic rate, leading to a rise in body temperature. The body compensates for this by producing more sweat to cool down. Additionally, oxidative stress in obese individuals plays a key role, as the imbalance between free radicals and antioxidants can exacerbate cellular damage and metabolic dysregulation, thus Antioxidant properties found in *Krimighnadi Kashaya* help mitigate this oxidative stress, which in turn can reduce excessive sweating.

EFFECT ON ATI KSHUDHA AND ATI PIPASA

The vitiated *Medodhatu* obstructs the *Gati* of *Vata dosha*. Specifically, *Samana Vata*. As a result there is overstimulation of *Jataragni* in the *Koshta*. This hyperactive digestive fire gives rise to symptoms such as *Atikshudha* and *Ati Pipasa*.

In this study *Krimighnadi Kashaya* contains *Trikatu*, *Triphala* and *Jeeraka* mainly helps in *Vilayana* of *Vikruta Medhodhatu* by the virtue of its *Ushna, Thikshna Guna*. It boosts *Agni* and helps to break down accumulated fat, thus clearing *Margavarodha* and facilitating proper digestion and metabolism.

Maricha and *Pipali* contains Piperin as a active principle may act as an inhibitor of GHSR-Ghrelin interaction to prevent appetite behaviour resulting in bodyweight loss in obesity. ⁽⁵⁾⁽⁶⁾⁽⁷⁾

EFFECT ON DAURGANDHYA

Daurgandhya is mainly due to the *Vrikuta Medodhatu* which is expelled out in the form of *Sweda* ,*Krimighnadi Kashaya* possess *Ushna,Thikshna,Rukshna* guna helps in reducing *Medodhatu* in turn reducing *Daurgandhya*.

EFFECT ON JAVOPARODHA

As there is *Uttarotara dhatu kshaya* except for *medhodhatu* causes *daurbalya* and *javoparodha* by correcting *agni* and reducing *medas* helps in reduction of this symptom.

Piperin present in *Pipali* and *Maricha* may act on MC-4 receptor agonists, which stimulate pathways that promote satiety and energy expenditure by regulating energy homeostasis thus managing body weight ⁽⁸⁾

EFFECT ON WEIGHT AND BMI

Krimighnadi Kashaya contains Paradols which may act by increasing thermogenesis, helps in Lipolysis and does supression of Lypogenesis,It also inhibits intestinal fat absorption and controls appetite.⁽⁹⁾

Piperine inhibits lipid and lipoprotien accumulation by significantly modulating the enzymes of Lipid metabolism like LCAT and LPL.⁽¹⁰⁾

Thus helps in reducing body weight and BMI.

CONCLUSION

Krimighnadi Kashaya contains *Vidanga* which is having *Kapha Medohara* and *Lekhana* property, *Triphala* does *Srotodoshana* ,*Trikatu* and *Jeeraka* is *Deepa Pachana* and *Anulomana*, *Guduchi* is *Rasayana* and *Guggulu* acts as *Avaranahara*, *Kapha Medahara* and *Rasayana*.

Krimighnadi Kashaya contains Paradols helps in lipolysis and supression of lipogenesis.⁽¹¹⁾

β-Sitosterol present in *Guduchi* has highest binding affinity with CETP which may contribute to the management of obesity.⁽¹²⁾

Embelin, Christembine and Vilangin present in *Vidanga* exert anti obesity effect mainly through regulation of various pathways, including lipid absorption , energy intake and expenditure , increasing Lipolysis reducing lipogenesis and through differentiation and proliferation of preadipocytes.⁽¹³⁾

Thus by its Anti Obesity, Anti Oxidant,Anti Inflammatory effects *Krimighnadi Kashaya* reduces oxidative stress and reduces signs and symptoms of Obesity.

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