

A ROLE OF VIDANGADI YOGA IN MANAGEMENT IN STHAULYA W.S.R TO CHILDHOOD OBESITY

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ABSTRACT

Life style disorders are the emerging challenge in front of the health society. Obesity is one of the leading health issues in the children even in developing poor resource country like India. Unhealthy dietary habits, increased use of junk foods, cold drinks etc. are the etiological factors for the obesity among the Indian children. Overweight and obese children likely to stay obese in adulthood and cause a major risk for serious diet-related chronic disease including type 2 diabetes, cardiovascular disease, hypertension, stroke and certain forms of cancer. Increased prevalence and failure to conventional therapy drives the surge to develop new treatment modalities through Ayurveda is the requirement of time. According to Ayurveda it is mainly related to

Meda Dhatu and *Kapha Vata Dosha Vikruti*. *Medohara Vidangadi Yoga* mentioned in classical text of *Ayurveda* is selected as the trial drug in the study considering its *Vata Kaphahara* and *Medoghna* properties.

KEYWORDS: *Ayurveda*, Obesity, *Sthaulya*, *VidangadiYoga*.

INTRODUCTION

Obesity is disorder which is related to Life style. Our life style has been changed due to modernization and digitalization. Particular obesity in children is related with lake of outdoor game and exercise. And therefore Life style disorders are the emerging challenge in front of the health society. Particularly it is the burning health issue among the pediatric population.

Obesity is one of the leading health issues in the children even in developing poor resource country like India. And it is second leading cause of preventable deaths.^[1] The prevalence in India is alarmingly high in pediatric age group and continuously going on increasing. Unhealthy dietary habits, increased use of junk foods, cold drinks etc. are the etiological factors for the obesity among the Indian children. Childhood obesity affects both developed and developing countries of all socio-economic groups, irrespective of age, sex or ethnicity. Obesity in urban children in New Delhi has shown an increase from 16% in 2002 to about 24% in 2006-2007. Recent data show that the prevalence among adolescent children was 29% in private schools and 11.3% in government funded schools. The calculated global prevalence of overweight (including obesity) in children aged 5-17 y is 10%, and the prevalence varies from over. Recent trends in Indian population indicate arise in obesity both in children as well as adults.

Aims and Objectives

- Critical study on disease Sthaulya (obesity) in children from Ayurvedic and modern point of view.
- To evaluate the efficacy of Vidangadi Yoga on Sthaulya in children.
- To prevent the complication related to obesity

Disease Review

Samhitakala is considered as the golden era of *Ayurvedic* history owing to its systemic description of the disease. *Charaka* was the first to present a detailed description of *sthaulya*. He has included *Atisthula* as one among the *Ashta Nindita* Purusha (eight censurable physiques). He has described its causative factors mainly to be exogenous. Its hereditary nature, aetiopathogenesis prognosis and management have also been mentioned. *Sushruta* has elaborated the aetiopathogenesis based on an endogenous entity due to *Dhatvagni Mandya*. *Kashyapa* has cast light on *Sthaulya* while narrating *Medasvi Dhatri Chikitsa* and given emphasis to *Raktamokshana* (Bloodletting) in the management.

Obesity can be defined as “excessive deposition or distribution of adipose tissue or fat in the body. Park defined obesity as an abnormal growth of adipose tissue due to an enlargement of fat cell size (hypertrophic obesity) or an increase in fat cell number (hyperplastic obesity) or a combination of both.

According to Dorland “obesity is an increase in body weight beyond the limitation of skeletal and physical requirements as the result of excessive accumulation of body fat”.

Obesity is defined by most authorities as occurring when a person’s weight is at least 10% excess of the normal or required weight (Harrison’s Principle of internal medicine).

Obesity in adult is defined as body mass index (BMI) greater than 30kg/m².

Childhood obesity

Obesity in children is defined as at or above 95th percentile of BMI for age and gender.

To define obesity in children, the percentile distribution relative to gender and age in the centres for disease control and prevention (CDC) 2000 growth charts are now the preferred reference.

Drug Review

Vidangadi Churna (A.hr.su-14/24)”

AstangHridaya, a well-known practice based Ayurvedic documentation, from the later centuries, is the prime substratum for the drug selection of this study topic.

The study was planned as here in under.

A Single group pilot study: In this group *Vidangadi Churna* was given to the patient of *Sthaulya* with as below.

Vayavidanga^[2]

Latin Name- Embliaribes

Family: Myrsinaceae

Gana:

Charaka: Krumighna, Shirovirechan, Truptighna, Kusthaghn^[3]

Sushruta: Pipalyadi, Surasadi

Classical Name: *Vidanga*, *Chitratandul*, *Jantunasan*, *Vatari*, *Jantug*, *Krishnatandul*.

Sanskrit Name: *Vidanga*

Hindi Name: *Vayabidaga*

Properties

Rasa: Katu, Kasaya

Guna: Katu

Virya: Ushna

Vipaka: Katu

Prabhava: Krimighna

Doshaghnata: Kapha-VataShamaka

Part used: Rhizome

Actions and Uses

Rogaghna: Vatavyadhi, Kapha Vata Janyavikara,

Karma: Vata Kaphashamaka, Kusthaghna, Dipana, Pachana,

Anulomana, Rasaynadravya, Medonasaka, Sirovirechan.

Properties and Uses

Sushruta described use of *Vidang* in the treatment of *Krimi, Kostha Meda, Shioroga.*

Bhavaprakasa mentioned it in *Shoola, Adyaman Udar Vikara Krimi* etc.

Chemical Composition

Emblaribes contains 2.5 stable oil colour agent, tannin, Embelin, resin, kshar. *Vidanga* is useful in diseases due to blood impurities and in disease caused by vitiation of Meda. It purifies blood by optimizing its Agni and is very useful in disorders of rasa Dhatu and oedema.

Shunthi^[4]

Latin Name: Zingier officinaleRosc

Family: Zingiberaceae

Gana:

Charaka: Truptighna, Dipaniya, Trishanigraha^[5]

Sushruta: Pipalyadi, Trikatu.

Classical Name: *Shunthi, Vishva, Vishvabheshaja, Shringavera, Mahaushadha, Nagara.*

Sanskrit Name: *Shunthi*

Hindi Name: *Shonth*

English Name: Ginger, Dry Zingiber

Properties

Rasa: Katu

Guna: Laghu, Snigdha

Virya: Ushna

Vipaka: Madhura

Doshaghnata: Kapha-VataShamaka

Part used: Rhizome

Actions and Uses

Rogaghnata: AmaVata, Vatavyadhi, KaphaVataJanyavikara, Shotha,

Agnimandhya.

Karma: Kapha-VataShamaka, Shothahara, Dipana, Pachana, Anulomana, Shoolahara, Srotorodhanivarana, AmaPachana.

Properties and Uses

Charaka described use of *Shunthi* in the treatment of haematuria, piles, dysentery and inflammation in the disease of stomach and to digest the Ama. *Sushruta* mentioned it in *Karnashoola*, *Kamla*, and *Gulma* etc. *Vagbhatta* also advised it in *Karnashoola*. *Vrinda* refers its use in *SannipataJvara*, *Agnimandya*, *Ajeerna*, *Amavata*, *Grahani*, *Hikka*, *Urustambha*, etc. *Shodhala* also mentioned it in *Grahani*, *AmaVata*, *Vrishchakavisha*, *Arsha* etc.

Chemical Composition

Zingiberofficinale contains 0.25 to 3% of a volatile oil possessing the aroma. The drug contains in addition resin and about 56% of starch. The crude fibre varies from 1.7% to 9% with an average of 4% the vitamins present in the green ginger are; Thiamine 0.06, riboflavin 0.03, niacin 0.06, and vitamin C 6.0 mg/100 gm. The carotene present in 40mg/100g. *Shunthi* is included under *DeepanaiyaMahakashaya* so by virtue of *Deepana Pachana* and *Rochanguna*, it modulates the Agni especially at the Dhatu level of metabolism. By its *Trishnanigrahan* property, it prevents voracious thirst in *Sthaulya*.

Amalaki^[6]

Latin name: *Embilicaofficinalis*

Family: *Euphorbiaceae*

Gana:

Charaka: Vayasthapana, Virechanopaga

Sushruta: Triphala, Parushakadi

Classical Name: *Amalaki, Dhatri, Amla, Amalaka*

Sanskrit: Amalaki

Hindi: Amla

English: Emblicamyrobalan

Properties

Rasa: Pancharasa(LavanaVarjita) AmlaPradhana

Guna: Guru, Ruksha, Sheeta

Virya: Sheeta

Vipaka: Madhura

Doshaghnata: Tridoshashamaka

Parts Used: Fruit

Actions and Uses

Rogaghnata: Prameha, Hridroga, Yakritroga, Kustha.

Karma: Dahaprashamana, Chakshushya, Keshya, Rechana, Deepana, Anulomana,

Vrishya, Rasayana.

Chemical Composition

It contains Gallic acid, tannic acid, sugars, albumin, cellulose and minerals. It is rich Source of Vitamin C which is 720mg and 921mg per 100gms of fruit pulp and juice Respectively. Other contents are as follows (per 100gms of fruit) : Moisture 81.20 mg, protein 0.5mg, fat 0.1mg, minerals 0.7 mg, phosphorus 0.02 mg, iron 1.2 mg, nicotinic acid 0.2 mg.

Pharmacological Actions

Fresh fruit is diuretic and laxative. Fruit is also carminative and stomachic. Dried fruit is sour and astringent.

Yavaka Kshar^[7]

(Mixture of Potassium Salts).

यवक्षारो लघु स्निग्धो दीपनः पाचनः परम् ।

गुल्मप्लीहामयहरः कफहा वातनाशनः ॥ (Rasa Tarangini 13/6-8)

Group-KsharaVerga

Synonyms-Yavaka Kshar, Yavapatya, Yavasukaj, Yavagraj, Yavasuka, Sukraj etc.

Sanskrit -YavakaKshara

Hindi - Jaukhar

English -Mixture of Potassium Salts

Properties

Rasa -Katu

Guna -Sara, Laghu

Virya -Ushna,

Actions and Uses

Rogaghnata-Vata kaphanasaka, Grahniroga, Anaha, Arsa, Udar, Hridaroga, etc.

Karma -Deepan, Pachan, Mutral, SwedapravartakActonKosthagata Vayu.

Pharmacological Actions

Yavaka Kshar having laghu, Snigdha, deepan, Pachan Kaphanasak properties and its evacuate the KosthagataVayu.

Kala Lauha Bhasma^[8] (Lauha - Bhasma) Dhaka

लौहं रुक्षं सुमधुरमलं पाकतश्चाथ तिक्तं

वीर्यं शीतं गुरु च तुवरं लेखनश्चातिनेत्र्यम् ।

स्थौल्यं विह्वलयत्यलं दलयति श्लेष्मामयान सर्वथा ..(Rasa --Tarangini 20/83)

Properties

Rasa - Tikta, Madhur, Kasaya

Guna - Sara, Guru, Ruksha

Virya – Sheeta

Actions and Uses

Rogagnata- Tridoshasak, Medoroga, sotha, Pliha roga, kamla, Rakatajroga Kaphajroga, Jara vyadhi Gulma, Udara rogaprameha, Grahani etc.

Karma - Lekhan, Ayusya, Vayastambhka, Yogvahi, KosthaSodhak, actas Rasayan (srestharasyan) etc.

Java^[9] (Yava)

वातकरः कफपित्तघ्नो मेदप्रमेहपीनसश्वासकासोरुस्तम्भकंठामयत्वग्रोगघ्नश्च । (द्य, नि। ६/७८)

Latin Name - *Hordeumvulgare*

Family - Gramineae

Hindi - Java

English - Barley

Properties

Rasa -Katu

Guna -Madhur, Kasaya, Tikta

Virya -Sheeta

Vipak -Katu

Chemical Composition

It contains Carbohydrate 69.3%, Protein 11.5%, Minerals 1.5%, except calcium, Iron Vit C.

Actions and Uses

Rogagnata- Meda, Prameha, Pinasa, Swasa Kasa, Urustambha Ama nasak Kupachan (Indigestion), Jwara, Atisara, Mutrakrichha, and used in Pradahayuktavikara.

Karma - In all ailments it is used as Yavamanda.

Dose & Duration: According to young's formula

Anupan: *KoshnaJala*

Dravya	Rasa	Guna	Virya	Vipaka	Prabhava	Karma
Vayavidang	Katu	Laghu Ruksha	Ushna	Madhura	Krimighna Deepan Anuloman	KV↓
Shunthi	Katu	Laghu Snigdha	Ushna	Madhura	Deepana	VK↓
Yavakshar	Katu	Laghu Snigdha	Ushna	Katu	Deepana	KV↓
Kala Lauha Bhasma	Tikta Kasaya	Ruksha Guru	Sheeta	Madhura	Rasayan Lekhan	VPK↓
JavakaSaktu	Katu	Kasaya Tikta	Sheeta	Katu	Medaghna	KP↓
Amalki	Pancha- Rasa	Guru Ruksh Sheeta	Sheeta	Madhura	Rasayana	VPK↓

DISCUSSION AND CONCLUSION

Drugs of *MedoharaVidangadiYoga* having *Dipana* and *RukshaGuna* helpful to reduce the *MedaDhatu* and consequently helpful to control the symptoms of childhood obesity. Some evidence based medicinal data of the content of *VidangadiYoga* shows direct action on lipids and fats accumulated in adipose tissue. Drug was found safe to use in children as no adverse reaction were noted throughout the study period as well as in follow up period. Hence, *Vidangadiyoga* is significantly effective in the management of *sthaulyain* children.

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