



# A Review Article on the Management of Childhood Obesity in Ayurveda

Kumari U, Vyas PP, Singhal HK\* and Rai DK

PG Department of Kaumarbhritya, Dr. S.R. Rajasthan Ayurved University, India

\*Corresponding author: Harish Kumar Singhal, Assistant Professor, PG Department of Kaumarbhritya, DSRRAU, Jodhpur (raj.), Email: drharish\_md@yahoo.co.in

Review Article

Volume 5 Issue 1

Received Date: February 12, 2021

Published Date: March 26, 2021

DOI: 10.23880/jonam-16000301

## Abstract

Childhood Obesity is a serious medical condition that occurs when a child is having weight above the normal weight for his/her age and height. Numerous factors like sedentary lifestyle, improper dietary habits, day sleeping etc can worsen this disease. This disease does not only affect children's physical health but also disturb their academic performance and social life. In classical texts of Ayurveda, obesity is mentioned as *Sthaulya*. In Ayurveda, *Sthaulya* has been included in *medoroga* (accumulation of excess fat in body) and counted as *santarapanajanya vikara* and *rasapradoshaja vikara*. *Sthaulya* is a condition in which abnormal and excessive accumulation of *medodhatu* occurs in various body parts like abdomen hips etc. *Sthaulya* is mainly caused by continuous intake of *kapha* and *medo vardhak ahara* and *vihara viz. atiguru, atisnigdha, atisheeta, atinidra, atiaasana* etc. which vitiate *rasa dhatvagni, medodhatvagni, kaphadosha* and *vatadosha* consequently. Now this is the need of time to take effective steps to control obesity or *Sthaulya* along with improvement in general health. Ayurveda provides effective management of obesity.

**Keywords:** Childhood Obesity; *Sthaulya*; Lifestyle; Astauaninditiya purusha

## Introduction

In *Ayurveda*, *Brihatrayi* and *Laghutrayi* have described obesity as *sthaulya*. *Sthaulya* is a *medoroga* (a disorder of *meda dhatu*), *santarapanajanya vikara* [1] (an overnutritional disorder) and *rasanimiatja vikara* [2] (a disorder of lymph or plasma). *Acharya Kashyapa* has considered *sthaulya* as one of the *aprashasta (not appreciable) sharira* during explaining the anthropology [3]. *Acharya Sushruta* has considered it as *darun (typical) vyadhi* and has established relation of *sthaulya* and *karshya (emaciation)* with quality and production of *rasa dhatu*. *Bhela Samhita* has described it as *medovyapattijanya roga* [4]. *Acharya Charaka* has described *Sthaulya roga* among the *astanindita (not appreciable) purusha* [5], *santarapanajanya vikara, kapha nanatmaja diseases* [6] and *samsodhana yogya vyadhi* [7].

WHO defines childhood obesity as one of major public health problem of 21st century [8]. Obesity means excess

accumulation of fat in body [9]. In childhood period if child is significantly overweight for his or her age and height, he/she suffers from childhood obesity. The estimation of weight can be done with the help of BMI (body mass index). Weight is earliest parameter used for definition of obesity; weight appropriate for height is defined as body mass index (BMI) [10].

Obesity can occur too due to many reasons including diet habit, sedentary lifestyle, genetic factors, and sedentary lifestyle during pregnancy and use of certain medications. Prevalence of Obesity among children and adolescent is still too high that is children and adolescents aged 2-19 years the prevalence of obesity was 18.5% and affected about 13.7 million children and adolescents as observed in survey in 2017-2018 [11].

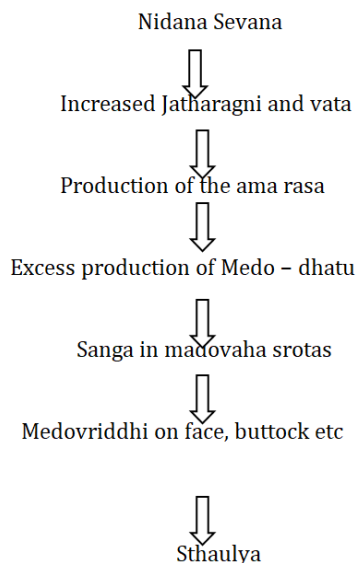
*Acharya Charaka* defined [12] *sthaulya* as "Owing to an excessive increase of fat and muscle tissue particularly

in the breast, buttock and abdomen become pendulous and strength thereof is rendered disproportionate with the physical growth.

### Etiopathogenesis

In Ayurveda, obesity begins with imbalance of doshas (especially Vata and Kapha), dhatus (especially rasa and meda), agni (digestive fire) and shrotas (microcirculatory channels). This gross imbalance further interferes with the formation of tissues or dhatus and leads to a tissue imbalance (as overweight). According to *Ayurveda* the main causes of *sthaulya* behind are intakes of *Madhura, Sheeta, Snigdha, Guru ahaara, atiahaara, Avyayama, Diwvaswapna, Beeja dosha* etc.

Because of consuming various above *nidana*, improper digestion of food takes place resulting in the formation of vitiated *rasa dhatu*. This vitiated *rasa dhatu* circulating throughout the body further produces excessive *medas* because of similar property of unctuousness of vitiated *Rasa Dhatu*, this in turn leads to too much of obesity [13]. This can be explained as follows



### Samprapti Ghataka

- Udhbhav sthan - amashaya
- Adhisthan – sarv sarira specially abdomen, buttock
- Dosha – tridosha specially kapha and vata
- Dushya – rasa, meda, mansa dhathus
- Srotas – medovaha
- Type of the Srotas dushti – sanga
- Agni – initially mandagni, later on tikshnagni
- Vyadhi svabhav – darun

### Clinical Features

Obese child becomes incapable of all activities due to excess and disproportionate collection of fat in certain body parts viz buttocks, breasts, face, waist etc. Breast, buttock, abdomen and waist become large in size, bulky and pendulous and strength thereof is rendered disproportionate with the physical growth. Chin of obese child appears like double chin. Anthropological parameters like weight, height, mid arm circumference are observed excess to their normal limits. Laziness, restricted body movements, lethargy on little physical work, increased sleep hours, excessive hunger are among other features of obesity. Obstruction of the channels /srotas by kapha and meda, further worsens the condition as remaining other dhatus do not receive sufficient nourishment resulting in poor strength and stamina of the body resulting in decreased performance in all activities like outdoor games, swimming, walking, exercise etc. Child may also be suffered from diabetes, fever, abscess, diseases of vata origin and such other diseases (as intensity of all diseases may be severe in 11prevailing condition of obstruction of medo dhatu). This results in declined immunity due to obstruction of channels (Srotas).

### Management of Childhood Obesity in Ayurveda

*Ayurveda* explains two main therapies for the treatment of *sthaulya* viz: *Shamshodhana & Samshamana with nidan-parivarjana*.

#### ➤ Samshamana Therapy

- This is main treatment for *sthaulya* is to alleviate *vata and kapha* and which can reduce fat. In this therapy we use the medicine.
- Administration of *bilvpapanchmula* [14] with honey, *takrarista and haritaki* [15] with honey etc.
- *Triphla, guggulu, gomutra, silajatu (mineral pitch), loharaja, rasanjana* [16] (best drug for obesity according to *acharyas*), *koradusaka, syamaka* etc.
- *Guduchi (tinospora cardifolia miers), musta (cyperus rotundus linn), haritaki (terminaliya chebula linn.), amalaka (emblica officinalis gaertn.)* Should be intake.
- Intake of *prasatika (setaria italicas beauv.), priyarigu(aglaia roxburghiana mig.), mudga(phaseolus mango linn.), kulattha (dolichos biflorus linn.), seeds of adhaki (cajanus cajan millsp.), patola(trichosanthes cucumerina linn.), vidanga (embelia ribes burm. F.)* [17]
- *Samshamana* includes some medication like *Amrutadi guggulu, Navak guggulu, Dashang guggulu* [18] etc.
- *Charaka* has given single *mahakashaya* of 10 drugs (*Lekhaniya mahakashaya*) [19] which is include in *medhohara* drugs, while *Sushruta* [20] have mentioned 8 and 10 *Ganas* respectively *varunadi gana, shalasaradi*

*gana, lodhradi gana, arkadi gana, mushkakadi gana, nyagrodhdi gana, tryushana gana, usgakadi gana.*

#### ➤ **Shamshodhana Therapy**

- Shamshodhana includes Panchkarma therapy.
- In obesity *langhana* therapy indicated. *Langhana* refers to the procedure which brings about lightness in the body *langhana* therapy includes *emesis, purgation, niruha basti, nasya* etc.
- Drugs are used in enema hot, sharp, ununctuous drugs use which is called *lekhaniya basti* [21].

#### ➤ **Nidan-parivarjana**

*The nidan-parivarjana is best way for reduce weight. So All cause which produce obesity should be avoided.*

#### ➤ **Ahara**

*Madhura, Sheeta* (Cold drinks and cold food), *Snigdha* (oily food), *Guru ahaara*(heavy food), *Atiahara* sought be avoided.

- *Avyayama* and *Diwvaswapna* after intake of food sought are avoided.
- Before meal drink water (lukewarm water) beneficial for obese person according to *Acharya sushruta* [22].
- After taking food sought not drink water within half hour due to its diluted digestive enzymes.
- Fiber rich fruits and food are beneficial for obese person e.g: *salad, papaya, apple, orange, soybeans, pulses, yava, wheat, mudga, koradusaka, syamaka* etc.

#### ➤ **Anupana**

*Luke warm water, honey water, triphala kwatha with honey, takra, cumin water and juice of agnimanth (clerodendrum phlomidis [23] linn. F) and alcoholic preparations that help to reduce fat, kapha like- cumin preparation, dasmularista etc that help to reduce fat and kapha.*

#### ➤ **Vihara**

- Healthy lifestyle is beneficial for all health problems. *Vyayama* offers relief in obese condition but children should not perform very tough exercise.
- Physical and mental exercises should be gradually increased.
- The dynamic series of *Asanas*. i.e. *Surya Namaskar* (Sun salutation) is the best way to burn calories and reduce weight in obesity and other way are running outdoor games, swimming

#### ➤ **Divaswapna**

Day time sleep increases *kapha dosha* also imbalances *agni* whichs increases *medha dhatu* or body fat [24]. Day time sleep, excessive sleep, stress should are avoided.

### Discussion and Conclusion

Ayurveda is a science which deals about the life. There are three causes described in Ayurveda that is *asatmyaindiyaartha*, *prgyaapradha* and *parinam*. In simple language we can say it's as *aharjnya*, *viharjnya* and *Kalaja* causes, Health and diseases depend upon above these. If we use them in adequate quantity and quality, we shall be healthy. Obesity is a lifestyle disorder and have numerous treatment options in modern system of medicine but they reduce the patients' weight partially in sometime. Beside in Ayurveda we can treat them on Ayurvedic principles which is not only reduce weight but also maintain it forever.

In classical texts of *Ayurveda* Obesity is mentioned as *Sthaulya*. *Sthaulya* has been included by *asthtauninditiya purusha*, *medoroga* (excess fat accumulates in body), *santarapanajanya vikara* and *rasapradoshaja vikara*. *Sthaulya* is abnormal and excess accumulation of *medadhatu* in various body parts. Obesity means having too much body fat.

*In modern system of medicine, treatment for obesity is however available but has limitations. Clinical study of childhood obesity is the need of time for protection from various health hazards caused by the obesity.* So children and parents prefer Ayurvedic management. *Ayurveda* explain two main therapies for the treatment of *Sthaulya* viz: *Shamshodhana* & *Samshamana* with *nidanprivarjana*.

### References

1. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Adhyaya* 23: 436.
2. Shastri AD (2017) 1<sup>st</sup> (Edn.), Vol-1, *Sushruta Samhita* of Sushruta, *sutrasthana* sthan Chapter 15, verse 32-33. Varanasi: Chaukhambha Sanskrit Sansthan, pp: 81.
3. Samhita K, Tanta VJ, Sharma PH (2018) *Vidhyotini Hindi commentary*, published by Chaukhambha Sanskrit Series, Varanasi, chapter 28 pp: 80.
4. Krishnamurthy KH (2000) *Bhela samhita* English commentary by chaukhambha visvabharati Varanasi (India) Editor Prof. priya vrat Sharma.
5. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Adhyaya* 21: 407.
6. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Adhyaya* 20: 404.

7. Sharma RK (2011) *Charak samhita* English commentary based on Cakrapani datta's *ayurveda dipika* by chokhamba Sanskrit studies vol. XCIV in *sutrasthana* capter 21.
8. (1946) World Health Organization constitution of the World Health Organization as adopted by the international health conference, New York by the representatives of 61 states.
9. Gupta P (2020) PG Textbook of pediatrics 2<sup>nd</sup> (Edn.), The Health Science Publisher New Delhi/London/Philadelphia/Panama chapter 4.
10. Gupte S (2020) The short text book of pediatrics 12<sup>th</sup> (Edn.), The Health Science Publisher New Delhi/London/ Philadelphia/Panama chapter 4, pp: 75.
11. <https://www.cdc.gov/obesity>
12. Sharma RK (2011) *Charak samhita* English commentary based on Cakrapani datta's *ayurveda dipika* by chokhamba Sanskrit studies vol. XCIV in *sutrasthana* capter 2, pp: 18-19.
13. Murthy SKR (2010) *Susruta samhita* English commentary by chokhamba orientalia, *sutrasthana* capter 15, pp: 107
14. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Ashtonindityam Adhyaya* 21: 415.
15. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Santarpaniyam-Adhyaya* 23: 437.
16. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, langhanbranghniya-Adhyaya* 22: 427.
17. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Adhyaya* 21: 415.
18. Sankara Misra BSBP (2001) *Bhavaprakasa* with *Vidyotini* hindi commentary by Chaukhambha Sanskrit Sansthan Varanasi 221001, Shouly Adhikar chapter 39, pp: 30.
19. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan* 4: 72.
20. Murthy SKR (2010) *Susruta samhita* English commentary by chokhamba orientalia, *sutrasthana* capter 38.
21. Shastri AD (2017) 1<sup>st</sup> (Edn.), Vol-1, *Sushruta Samhita of Sushruta, sutrasthana sthan* Chapter 15, verse 32-33. Varanasi: Chaukhambha Sanskrit Sansthan, pp: 82.
22. Shastri AD (2017) 1<sup>st</sup> (Edn.), Vol-1, *Sushruta Samhita of Sushruta, sutrasthana sthan* Chapter 46/444, verse 32-33. Varanasi: Chaukhambha Sanskrit Sansthan, pp: 281.
23. Sharma AP (2009) *Dravya guna* second part, Chowkhmbha Bharti academy Varanasi.
24. Shastri K, Chaturvedi G (2011) *Charak Samhita, Vidhyotini* hindi commentary, Published By Chaukhamba Bharti Academy, Varanasi, *Sutra Sthan, Ashtonindityam Adhyaya* 21/44, pp: 419.

