

HOLISTIC APPROACH IN THE PREVENTION AND MANAGEMENT OF CHILDHOOD OBESITY

Upreti Diksha^{*1}, Pandey Reena² and Verma Keerti³

¹M.D. Scholar, Dept. of Kaumarbhritya Rishikul Campus, U.A.U, Haridwar (Uttarakhand).

²Professor, Dept. of Kaumarbhritya Rishikul Campus, U.A.U, Haridwar (Uttarakhand).

³HOD & Professor Dept. of Kaumarbhritya Rishikul Campus, U.A.U, Haridwar (Uttarakhand).

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*Corresponding Author

Upreti Diksha

M.D. Scholar, Dept. of
Kaumarbhritya Rishikul
Campus, U.A.U, Haridwar
(Uttarakhand).

ABSTRACT

It cannot be denied that childhood obesity is on the rise. Childhood obesity is a burden in developed and developing countries. Worldwide in the year 2000, the international obesity task force declared about 10% of children aged 5-17 (about 155 million) were overweight out of which 2 to 3% (30 to 45 million) were obese. Globally, over two billion children and adults suffer from health problems related to being overweight or obese. The term overweight refers to excess body weight for a particular height whereas the term obesity is used to define excess body fat. Obesity recognized as multi-factorial metabolic disorder in conventional system of medicine that may appear as

consequences of high calorie diet, sedentary habits and in a person who have genetic susceptibility. Obesity increases the likelihood of various diseases and conditions, particularly cardiovascular diseases, type 2 diabetes, osteoarthritis and depression. ayurveda is the science of life deals with the preventive and curative aspect. Obesity is described as - medoroga or sthoulya roga in ayurveda. Obesity is a santarpanoth (over nutritional disease) disorder. The collection of imbalances of doshas, imbalance of agni (digestive fire) and shrotas interferes with the formation of tissue or dhatu and leads to a tissue imbalance that we experience as excess weight. In charaka special intervention are included in obesity therapy in the purpose to cut down excess fat to correct the irregular metabolism. In ayurveda potential interventions are rasayan therapy, panchkarma therapy, sansaman chikitsa and yoga to achieve the goal. Through ayurveda, we will success to reduce the burden of obesity at the childhood age, and we will see the world full of physically and mentally healthy people.

KEYWORDS: Childhood obesity, Yoga, Rasayan and Panchkarma therapy.

INTRODUCTION

In the era of urbanisation, obesity has emerged as a serious health issue of both developed and developing nations. Today's overweight and obese children will turn tomorrow's obese adults, destined to suffer from all the future health problems and bear costs related with obesity.

Obesity is the foundation stone of many metabolic syndrome. It occupying major share in the spectrum of health, disease and management. Charaka has described obesity as a disease of the fat tissue (Medoroga) leading to hugeness (sthoulyam).

The prevalence of obesity is higher in urban areas than in rural populations of India, due to a steady erosion of the holistic way of life in the cities as well as the sedentary and overeating habit over consumption of calories and reduced physical activity is the root cause of obesity. Obesity is a condition with excess amount of body fat. There is an increase in the number and size of adipocytes. A child whose weight for age is between 110% and 120% of the standard weight is known as overweight, while that more than 120% of the standard weight is obese¹. Ideal body weight is calculate as-

$$\text{IBW (Kg)} = 22.5 \times \text{height (m)}^{[2]}$$

A child is classified as underweight, overweight, or obese on the basis of IBW.

Grading of nutritional status according to IBW

Body weight	Condition
Less than IBW by 18%	Underweight
More than by 10%	overweight
More than IBW by 20%	obesity

In Ayurveda, The term Sthula derived from the root "sthula brimhane " with an addition of ac pratyaya. Which stand probably is thick or solid or strong." It means a person in whom excessive and abnormal increase of Meda along with Mamsa Dhatu in the body, which results into pendulous appearance of Sphika, Udara, and Stana. Obesity is due to Vata & Kapha dosha vaishamy. Acharya Charaka has described Ashta Nindita Purusha and emphasized in detail about two pathological conditions viz Atisthula and Atikarshya. Atisthulapurusha is worst among them, due to its complicated pathogenesis, variable

complication and treatment. It is described under the caption of Santarpanottha Vikara (Disease caused by over nourishment. Vagbhatta has mentioned three types of Sthaulya while describing the efficacy of Langhana therapy (AH.Su.14/12-14)

1. **Hina Sthaulya:** Mild degree of overweight.
2. **Madhyama Sthaulya:** Moderate degree of overweight
3. **Ati Sthaulya:** Excessive state of overweight.

The multidimensional process of biological transformations in the body are controlled and regulated by AGNI. Hence Agni (Dhatwagni) is disturbed in Obesity. BMR is regulated by this Agni.^[2]

Epidemiology-India has the second highest number of obese children in the world after china. Indian data regarding current trends in childhood obesity are emerging. In the past two decades, the number of overweight children and adolescents has doubled. Around 15 per cent of children aged 6 to 19 and nearly 11 per cent of preschool children are considered as obese.^[3] India, the estimates vary between 30 and 65 per cent of adults and children being obese or having abdominal obesity have been reported in a survey.^[4]

In a recent study conducted among 24,000 school children in south India showed that the proportion of overweight children increased from 4.94 per cent of the total students in 2003 to 6.57 per cent in 2005 demonstrating the time trend of this rapidly growing epidemic. Socio-economic trends in childhood obesity in India are also emerging. A study from northern India reported a childhood obesity prevalence of 5.59 per cent in the higher socio-economic strata when compared to 0.42 per cent in the lower socio-economic strata.^[5]

Factors behind obesity- Due to westernization and globalization, today diets and food habits have changed dramatically all over the world. Indigenous food habits are losing their importance due to the sensitivity to delicious taste by taste buds and this has been one of the leading consequences of today's health and weight problems. Looking at the contributory factors of childhood obesity, the factors of obesity are similar across the globe and among many individual. Factors such as unhealthy food pattern involving eating and drinking of sugary beverages, soft drinks, frequent snacking, skipping meals etc. It is reported that every additional hour of television and mobile games played by children per day raises the risk and prevalence of obesity by 2per cent .Studies have also suggested that lack of sleep or disturbed sleep could also lead to a risk of obesity among children and adolescences. Late bedtimes are

found to be associated with adiposity and risk of obesity, independent of sleep duration among school children and adolescent of age 8-17 years. Disturbed sleep among 14 to 18 years of adolescence increases BMI level as compared to adolescence having normal sleep and lack of physical activity is another major factor in childhood obesity. Lack of engagement of children in physical activity leads them to increased chances of obesity.^[6]

Prevention of Obesity - The Ayurvedic approach is the perfect answer to overweight because Ayurveda does not recommend any weight losing pills or fast weight loss programs. Bio-purificatory and pacificatory measures are important tools of Ayurvedic therapeutics. Beside this, it advocates dietary restriction, moderate exercise, practice of Yogasanas and Pranayama and certain effective medications in the management of this disease. Early breastfeeding shows reduce risk of obesity in children. The main treatment for obesity consists of dieting and physical exercise. Diet programs may produce weight loss over the short term, but maintaining this weight loss is frequently difficult and often requires making exercise and a lower food energy diet a permanent part of a person's lifestyle.

In the short-term low carbohydrate diets appear better than low fat diets for weight loss. In the long term; however, all types of low-carbohydrate and low-fat.^[7]

Management - The basic principles of treatment of Sthaulya (Obesity) as described in Ayurvedic classics are Nidanaparivarjana, Apatarpanachikitsa and Samana & Shodhanchikitsa are used in the management of obesity.

Acharya Charaka has mentioned Lekhaniya dashemani Dravyas-a group of 10 drugs, these drugs principally performs the Lekhana Karma of excess and abnormal Meda such as- Mustaka, Kushtha, Haridra, Vacha, Atievisha, Katu rohini, Chitraka, Chirabilva, Daruharidra, Haimvati Vacha ; causing weight reduction as well as relief in other signs and symptoms.

Role of basti – according to Ayurveda, the ingredient of Basti reach up to the small intestine and get absorbed through the gut wall ,are distributed in the body and thus exert systemic effect. Ruksha and lekhan basti and triphaladhya tail basti has positive impact on controlling obesity.

Udvartan- due to increased friction to all parts of the body, the increased meda is depleted and the increased ushma /heat generated during udvartana digested the ama thus corrected the agnimandhya which causes obesity.^[8]

Dhupa- Malyanila dhupa and Lepa- Haritakyadi angaraga lepa, deha daurgandhyanhar udravartan, haritakyadi pralepa.

Ruksh bast, shilaiyadi udvartana dhupa are some of important Ayurveda intervention and drugs used for treating obesity since ancient times and are still very effective in the present time. Lekhan drugs are taken during early morning in empty stomach and before meals to guard against obesity.

In Ayurveda, due importance has been given to the concept of Pathya and Apathya. Acharya Charka has defined Pathya as such type of food article, drug and regimen which are helpful in maintain the healthy state of body and mind. Whereas, Apathya means all those articles which effects body and mind of a person in unhealthy way.

Prescriptions to reduce overweight

1. The diets and drinks, which alleviate vitiated Vata and Kapha dosha are found suitable to reduce fat.
2. Vasti karma (therapeutic decoction based emema) with drugs that is sharp, ununctuous and hot.
3. Administration of Takrarishta and pure honey are found effective.
4. Intake of Vidanga (*Embelia ribs*), Nagara (*Zingiber officinale*), Yavakshara (a preparation of barley containing sodium and potassium bicarbonate), powder of black iron along with honey and powder of Yava (*Hardeum vulgare*) and Amalaki (*Embelica officinalis*).
5. Encourage to take Shilajatu with juice of Agnimantha (*Clerodendrum phlomidis*) for obese.
6. The Ayurvedic method to treat obesity is to go on a heavy and non-nourishing diet and drugs. For example, honey. Due to their heaviness, it minimize the force of the aggravated power of digestion and due to their non-nourishing nature, they help reduce the fat.^[9]

Yoga- Another unique and indigenous technique of ancient India which is now gaining attention of the health professionals and is accepted worldwide also is Yoga. Yoga is a uniquely robust technique of healthy living it is a five thousand year old Ancient Indian frame of knowledge. Yoga works on all aspects of obesity or excess weight (physical, emotional and mental).^[10]

Aasna's:- Do Aasna's like Suryanamaskar – 12 to 24 daily.

Sarvangasan, Halasan, Mayurasan, Shirshyasan, Dhanurasan, Shalbasan, Padmasan, Chakrasan etc.

Pranayama like – Bhrastrika, Kapalbhathi etc, are use full for obesity .pranayama techniques increase the lung capacity and help burning fats.

CONCLUSION

It is rightfully said that “prevention is better than cure”. To control childhood obesity, the prevention should start by care takers at an early, so that the problem of obesity in childhood does not occur and a child may not turn into an obese adult Ayurveda had laid an emphasis on holistic solutions that allows people to lose excess weight and keep it off by specific dietary and life style measures.as the obesity is lifestyle disorder so we have to added some good habits in childe daily routine like physical activity (aasan ,pranayama yoga)healthy food early sleep habits and should avoid excess use of mobile , watching TV, junk food. In panchkarma basti and udvartan both are safe and can be used for treating childhood obesity.

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