



ORIGINAL RESEARCH PAPER

Ayurveda

ESTABLISHMENT OF INTEGRATIVE APPROACH FOR MANAGEMENT OF STHAULYA (OBESITY) AND DYSLIPIDEMIA

KEY WORDS: Dyslipidemia, Obesity, *Sthaulya*

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ABSTRACT

**Introduction:** In Ayurved the obesity is described under the heading of *Sthaulya*. Acharya Charak has included this one among eight despicable personalities. Many problems associated with obesity were known at that period also. The rising rates of Diabetes, Coronary and Cerebrovascular disease with the consequent health and financial burden for the population are the concern to it. Obesity and Hyperlipidemia being the most common problems in all age groups, there is a necessity to combat them with treatment mentioned in classics along with integration of allied therapies. The comprehensive treatment plan for *Atisthulata* would be generated which may encourage our understanding of prevention and management of conditions like obesity and dyslipidemia.

**Aim & Objective:** Establishment of integrative approach for management of *Sthaulya* (obesity) and dyslipidemia through Ayurved and other allied sciences.

**Materials & Methods:** The texts and *Samhitas* of Ayurved, related to topic, supportive texts of contemporary science were critically reviewed for understanding the core issues of obesity. Recent research papers and literature from internet was also studied extensively. Since obesity is emerging problem of India and globe and has no effective treatment by single intervention the efforts are done to find out integrative approach for the same.

**Observations & Results:** Over-obese is constantly indisposed and should be managed constantly by bulk reducing measures like *Guru* (heavy) and *Apatarpan* (non-saturating) therapy. *Guru-apatarpan* means the drugs having *Guru* property but is non-saturating nature. Four treatment modes are described by Charak i.e. i) Food and drinks that alleviating *Vata* and reducing *Kapha* and Fat ii) Enema - rough, hot and sharp (*Lekhan/Vaitaran Basti*) iii) Rough anointing - *Udvartan* iv) Drugs like *Guduchi*, *Devadaru*, *Musta*, *Triphala*. *Takrarishtha* and honey are recommended for over-obese individuals. *Agni*, *Dosha*, *Strotas*, diet and lifestyle modification are core issues to address in these cases.

**Conclusion:** Obesity can be treated with Ayurved regimen in all perspectives i.e. General/External Measures, Drugs/ Medicine, Diet/dietary habits and *Vihar*/Lifestyle, *Patthya-apattya* along with suggested *Pan* and *Anupan*.

INTRODUCTION:

Lifestyle disorders are increasing gradually due to change in standard of living. Obesity is one among them to grow its prevalence day by day. The rising rates of Diabetes, Coronary and Cerebrovascular disease with the consequent health and financial burden for the population are the concern to it. [1] Common pattern of Dyslipidemia characterized by higher triglycerides, lower High Density Lipoproteins (HDL) and increased small, dense Low Density Lipoproteins (LDL) particles is interceded by increasing Body Mass Index (BMI) levels. [2]

In Ayurved the obesity is described under the heading of *Sthaulya*. Acharya Charak has included this one among eight despicable personalities. The parameters described for assessment are more subjective. Charak not only described eight despicable personalities in 21<sup>st</sup> chapter of Sutrasthana but also given the eight defects of *Atisthulata* person. It can be said that *Atisthulata* was not recommended since ancient period as a sign of health. Many problems associated with obesity were known at that period also. The management of this despicable person is beautifully described by Charak and other compendia of Ayurved.

Obesity and Hyperlipidemia being the most common problems in adolescents as well as older age groups, there is a necessity to combat them with drugs mentioned in classics which may be useful to address the associated conditions of *Medodushti*. In this regard, an attempt has been made to critically review the Ayurved and other treatments for *Atisthulata* which may abet our understanding of prevention and management of conditions like obesity and dyslipidemia.

AIM & OBJECTIVES:

Establishment of integrative approach for management of *Sthaulya* (obesity) and dyslipidemia through Ayurved and other allied sciences.

MATERIALS & METHODS:

The texts and *Samhitas* of Ayurved, related to topic, supportive

texts of contemporary science were critically reviewed for understanding the core issues of obesity. Recent research papers and literature from internet was also studied extensively. Since obesity is emerging problem of India and globe and has no effective treatment by single intervention the efforts are done to find out integrative approach for the same.

OBSERVATIONS & RESULTS:

The word *Sthaulya* is derived from root "*Sthu*" with suffix "*Ach*" which stands for thick or solid or strong or big or bulky. Over-obese persons due to excessive increase of fat and muscles have pendulous buttocks, abdomen and breasts and Suffers from deficient metabolism and energy. [3] Term *Sthaulya* is found at many places in Charak Samhita like one of despicable personality (Su. 21/2), Disorder of *Sleshma Nanatmaja* (Su. 20/17), *Santarpana Nimitaja* (Su. 23/6), *Ati-brimhana-nimitaja* (Su. 22/24) and *Samsodhana Yogya* (Su. 16/16).

*Atisthaulya* (obesity) is considered as one of the eight despicable conditions as described by *Acharya Charaka*. Over-obese persons have despicable features like shortening of life-span, foul smell, difficulty in sexual intercourse, debility, hampered movement, over-sweating, excessive hunger and excessive thirst. [4]

*Medas* is body tissue predominant in *Prithvi* and *Aap Mahabhutas* similar to *Kapha Dosha*. [5] It is characterized by *Snigdha* (unctuous), *Guru* (heavy), *Sthula* (fatty), *Pichchila* (slimy), *Mridu* (soft) and *Sandra* (dense) *Guna* (qualities). [6] *Sneha* (oleation), *Sweda* (production of sweat), *Drudhatva* (compactness) and *Asthipushti* (nourishment of bone) are the main functions of *Medodhatu*. [7] Consumption of *Guru*, *Sheeta* (cold), *Snigdha*, *Madhuradi Kaphavardhaka* (sweet & *Kapha* increasing) drugs along with lack of exercise and sedentary life style results in excessive nourishment of *Medas* while other bodily elements (*Dhatus*) are deprived of nourishment. Disproportionately increased *Medas* is accountable for several serious consequences reported in Charaka Samhita. [8] *Mandotsaham* (less activity referring to sedentary lifestyle), *Atisnigdham* (excessive intake of

fatty substances), *Atisthaulyam* (gross obesity) and *Mahashanam* (excessive eating) constitute for causation of *Prameha* [9] (urinary diseases including Diabetes) and these etiological factors may also initiate Dyslipidemia. Over-obese & over-lean are constantly indisposed and should be managed constantly by bulk reducing and bulk promoting measures respectively. Obese is more afflicted if some disease arises. Individuals having balanced proportion of muscles, compactness and firmness in organs not fall prey to prowess of disorders. Balanced musculature, tolerance for hunger, thirst, the sun, cold and exercise, balanced *Agni* & normal metabolism.

**Management of Shaulya:**

For reducing the bulk of the obese heavy and non-saturating therapy is indicated. *Guru-apatarpan* means the drugs having *Guru* Property but is non-saturating in nature. Four treatment modes are described by Charak i.e. i) Food and drinks that alleviating *Vata* and reducing *Kapha* and *Fat* ii) Enema - rough, hot and sharp (*Lekhan/Vaitaran Basti*) iii) Rough anointing - *Udvartan* iv) Drugs like *Guduchi*, *Devadaru*, *Musta*, *Triphala*. *Takrarishta* and honey are recommended for over-obese individuals. [10]

Some *Sthaulyahar* recipes described by Charak. [11]

- i) *Vidanga*, *Sunthi*, *Yavakshara* and ash powder of black iron (*Mandurbhasma*) + honey
- ii) Powder of barley + *Amalaka*
- iii) *Bilvadi panchamula* + honey (*Bruhat-panchamula*)
- iv) *Shilajatu* + juice of *Agnimantha*

In diet *Prashatika* (Foxtail millet), *Priyangu* (*Callicarpa macrophylla* B.N.), *Shyamaka* (*Echinochloa frumentacea* BN), *Yawaka* (small variety of barley), *Yava* (barley), *Jurnahva* (sorghum vulgare pers), *Kodrava* (*Paspalum scrobiculatum*), Green gram, *Kulattha*, *Makustha* *Ichakramudga* (*Mataki*), *Aadhaki* seed (*Tur*) + *Patola* & *Aamalaki* are exclusively specified for over obese person.[12]

Honey water is specified for *Pan* and *Anupan* (drinking) after meal. *Arishta* is also signified for *Pan* and *Anupan* after meal because of its *Meda*, *Mamsa* and *Kaphahara* properties. [13]

Lifestyle modification is integral part in treating over-obese individuals. Ayurved indicates *Prajagar* (*Ratrijagaran*), *Vyavaya* (sexual intercourse), *Vyayama* (physical exercise) and *Chintana* (mental work/exercise). These entities should be gradually increased. [14]

General recipes to reduce obesity: *Triphala Guggul*, *Medohar Guggul*, *Navak Guggul*, *Punarnava Mandur*, *Shilajatvadi Vati*, *Flatina*, *Fatgo*, *Decrin* etc. in tablet form. *Takrarishta* and old Honey (*Shuddha*) for *Pan* and *Anupan*.

**DISCUSSION:**

Ayurveda affirms equilibrium state of *Dosha*, *Agni*, *Dhatu* and *Malas* in our body as a sign of health. Obesity according to it begins with imbalance of *Doshas*, imbalance of *Agni*, imbalance of the *Malas* and imbalance of *Strotas* (microcirculatory channels). This collection of imbalances then interferes with the formation of tissues or *Dhatus* and leads to a tissue imbalance that we experience as excess weight. Out of seven *Dhatus* *Meda* is most affected in over-obese cases where it is accumulated all over the body due to weakness of *Medo-dhatvagni*.

*Agni* can be loosely translated as fire for understanding purpose. Actually it signifies something much more than just fire and includes the idea of a precise and powerful functioning intelligence. *Agni* has remarkable transformative qualities for ingested material in body. All the food we take in must be transformed into that which can be made useful by the body (nutrients). That which is not needed is *Mala* (waste).

The nutrients or most refined products of our *Agni* are used to create the *Dhatus* (body's tissues). Seven *Dhatus* are formed sequentially as *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja* and *Shukra*. Creation of *Dhatus* is an ongoing complex process. The key word is sequential, if at any stage there is an imbalance in

ongoing process then it will disrupts the whole sequence of tissue formation. The weakness or vitiation of *Medo-dhatvagni* results in disproportion of *Meda* in body leading to obesity and dyslipidemia. *Strotas* or channels play a big role in body as they carry the information required to properly form the tissues step by step. If blockages occur in the *Strotas* due to toxins (*Ama*), an imbalance starts. According to Ayurveda to maintain balance and health, strong *Agni* and clear *Strotas* are essential.

*Vayu* again is an important entity in the body as it regulates all body mechanism through *Doshas*. When its passage is obstructed with fat, *Vayu* moves abundantly in belly which stimulates digestion and absorbs food. Person digests food quickly and desires excess intake of food. Delay in taking food may be afflicted with some severe disorders. *Agni* and *Vayu* burn the obese like the forest-fire burning the forest which escort the severe disorders and thus destroy life shortly.

**CAUSES OF OBESITY:** - Cause of weight gains according to Ayurved is cyclical. It begins with balance reducing choices in diet and lifestyle that weaken the *Agni* (digestive fire). In turns increases toxins, clogging the *Strotas* (communication channels). Thereby disrupting the formation of *Dhatus* (tissues), the poorly formed *Dhatu* increases *Meda dhatu*. *Meda dhatu* imbalance further does disproportion of *Kapha Dosha*. This in turn increases accumulation of toxins (*Ama*) Leads to imbalance in *Meda dhatu*.

Accumulation of *Ama* in *Strotas* causes imbalance in naturally flowing *Vata* energy. Restricted or imbalanced *Vata* energy ends up in increasing *Agni* leading to an increase in appetite and thirst. This leads in turn to an increase in *Kapha Dosha* and *Meda dhatu* and whole cycle starts again.

**Management:**

The causes of obesity or dyslipidemia are cyclical as mentioned above. Breaking this cycle would help it out for prevention and management of it. First and foremost *Vaidya* determines the *Prakruti* (unique nature of the individual) and the *Vikruti* (nature of imbalance). Addressing a few core issues like strengthening digestion (balance *Agni*), removing *Ama*, improving dietary habits and adjusting inappropriate daily routines and lowering stress are the part and parcel of treatment.

Core issues to address in treatment of over-obese can be summarized as follows:

SN	Core issue	Measures
1	<i>Prakruti</i>	<i>Prakruti</i> and <i>Vikruti</i> of individual
2	<i>Agni</i>	Strengthening digestion, Removal of <i>Aama</i>
3	<i>Diet</i>	Improving dietary habits, Drinking habits
4	<i>Lifestyle</i>	Adjusting inappropriate daily routine, Lowering stress

The extensive review of Ayurved literature related to obesity management reveals that a single treatment cannot be effective for it. Charak also clarified that Over-obese and over-lean are constantly indisposed and should be constantly managed. Only medicine or dietary and other measures can't work alone. There is need of integration of various treatment modes to break pathological cycle of *Dosha*, *Dhatu*, *Mala* and *Agni*. The treatment modality aspects for *Shaulya* described by Charak and Ayurved compendia can be categorized as follows:

Treatment Plan According to Charak/Ayurved			
General/External Measures	Drugs/Medicine	Diet	Vihar/Lifestyle
<ul style="list-style-type: none"> <li>• <i>Vatakar/Kapha Medahar</i></li> <li>• Diet/ drinks</li> <li>• Enema</li> <li>• <i>Udvartan</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Guduchi</i></li> <li>• <i>Takrarishta</i></li> <li>• <i>Vidanga</i></li> <li>• <i>Shilajatu</i></li> <li>• <i>Bruhat-panchamula</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Yawaka</i></li> <li>• <i>Jurnahva</i></li> <li>• <i>Kodrava</i></li> <li>• <i>Green gram</i></li> <li>• <i>Kulattha</i></li> <li>• <i>Makustha</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Prajagar</i></li> <li>• <i>Vyavaya</i></li> <li>• <i>Vyayama</i></li> <li>• <i>Chintana</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>Pan/ Anupan</i> = Honey + Water &amp; <i>Arishta</i></li> </ul>			

Apart from treatment described in Ayurved compendia certain guidelines can be framed to support the principles of treatment for obesity keeping in mind the present day's lifestyle. The food and drink habits are far changed due to innovations in this field. Some lifestyle guidelines can be enumerated as follows.

- i) Hydration with warm water: warm water is natural detoxifier which mops up impurities from over-taxed digestive system. Sweeping away molecules left behind from partially digested food thereby enviably swift metabolic rate.
- ii) Replace of sugar drinks with warm water: Calories are more in sweet drinks that can be reduced by replacing them with warm water. Cold drinks may lead to freezing of muscles and blood vessels in GIT and vitiate digestive fire resulting in sluggish digestion. While warm water relaxes the muscles and dilates the blood vessels of GIT and reflexly regulates the assimilation and absorption of meal contents.
- iii) Hot water + honey + lime juice: Drinking of 1 cup of hot water with 1 teaspoon honey and 10 drops of lime juice can be a good substitute for eating and will help to melt the fat whenever feel hungry.
- iv) Mindful eating: According to BMJ (British Medical Journal) people who eat quickly are 3 times more likely to be overweight. While eating the activities like zoning out, watching TV, talking, driving and multi-tasking may undermine the digestive process and counteract the effort to lose weight. When Food is eaten mindfully Brain sees, tastes, smell and feels and sends signals to the stomach to release enzymes and juices to digest the food. Hence over-obese person should eat food mindfully.
- v) Avoidance of *Tamasic* foods: Leftovers, processed, canned foods, fast food or food with additives and colourings should be avoided. Similarly ice cold water, drinks, cold foods and fried foods, heavy foods, overeating or eating and heavy foods in large quantities should be avoided.

Ayurved has given prime importance to diet and its habits. It is said as "*Maha-bhaishaja*" in Ayurved which means many diseases can be prevented and treated by taking proper diet on proper time. Keeping in mind this dimension of Ayurved the *Patthya* (thing to follow) can be determined for over-obese individuals. Few of '*Patthya*' can be enumerated as follows.

- i) Eating sequence: Initially carbohydrates or sweet taste food should be eaten then salty, sour, pungent and bitter foods should be preferred and finally one can eat astringent food.
- ii) Fresh and warm food: freshly cooked and warm food prepared from fresh and seasonal vegetables should be preferred. The seasonal fruit and sweets should be choice for eating. All types of sweets are not good for health in each season. In Indian culture the festivals and recommended sweets are prepared by keeping in mind the *Desh* (geographical conditions) and *Rutu* (season). The *Agni* is core object to focus while taking into consideration the diet and its habits.
- iii) Eat only when hungry: This habit is good for maintaining balance of *Agni*.
- iv) *Pranayama*: *Bhasrika* is a very powerful *Pranayama*, it strengthens the heart and a lung similarly improves the digestion and calms the mind. Right Nostril breathing (*Surya bhedi*) will also be helpful for improving digestion as it acts on autonomous nervous system. [15]
- v) *Yogasana*: The *Yogasana* like Palm Tree pose, Triangle Pose, Fish, Camel, Cobra and Cow poses, *Paschimotanasana*, *Ardha-matsyendrasana* and Sun salutation are good for over-obese person.

After the critical review of literature of *Sthaulya* and obesity it can be said that obesity is difficult condition to treat by single intervention. Multidimensional treatment approach to this problem is necessary to achieve remarkable improvement for reduction of obesity. So integration of various treatments is recommended for the same.

#### CONCLUSION:

Obesity (*Sthaulya*) is one among eight despicable persons described in Ayurved. The causes are mainly exogenous and hereditary component. Vitiating of *Agni* i.e. disturbed digestion

and metabolism is important factor in obesity. Obstruction of Channels, *Ama* and *Mala* are other factors of disequilibrium for over-obese persons. Obesity can be treated with Ayurved regimen in all perspectives i.e. General/External Measures, Drugs/Medicine, Diet/dietary habits and *Vihar*/Lifestyle, *Patthya-apattya* along with suggested *Pan* and *Anupan*. Multidimensional treatment approach to this problem is necessary to achieve remarkable improvement for reduction of obesity and dyslipidemia.

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