Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in
Multi modal treatment approach in management of Sthaulya (Obesity)

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Charaka has emphasized Sthaulya (obesity) in planning of treatment according to Sharira (Purusha Prakruti). Obesity is irreversible blessing from current machinery, vehicle friendly, foody life style. India is prime hub of Obesity due to genetic tendency and lifestyle. According to the WHO, World Health Statistics Report 2012, globally one in six adults is obese and nearly 2.8 million individuals die each year due to overweight or obesity, so present study is the need of the hour. Apakva Meda Dhatu along with Ama plays a key role in development of the disease and will lead to many lifestyle disorders (Santarpanottha Vyadhi). For effective management of this disease Multi-modal treatment approach is the need of time. Amapachana, Shodhana, Udvartana, Langhana, Lekhana, Pathya Ahara Vihara etc. treatment modalities are used in Sthaulya according to condition of patient and cause of the disease. Multi-modal approach in the management of Sthaulya (obesity) is much useful to treat patient successfully.

Key words: Sthaulya, Obesity, Amapachana, Shodhana, Langhana, Pathya.

A B S T R A C T

INTRODUCTION

While treating the patient physician has to know “Purushaprapakruti Sharirabheden” and for that purpose Sthaulya is mentioned under broad umbrella of Ashtau Nindita (eight undesirable conditions) by Charaka. The patient of Sthaulya shows very strange observable fact that their appetite is excessive and whatever they eat is quickly digested, which indicates hyper functioning of the Jatharaagni due to increase Vata in Kostha. Besides this, the patient suffers from fatigue (Daurabalya) laziness, may be due to under supply of energy, which may be due to hypo functioning of Dhatvagni. As a result of Medo Dhatvagni Mandhya immature improper Medo Dhatu produces, that will lead to vicious cycle of Sthaulya. According to the World Health Organization (WHO), obesity is one of the most common, yet among the most neglected, non communicable health problems in both developed and developing countries. According to the WHO World Health Statistics Report 2012, globally one in six adults is obese and nearly 2.8 million individuals die each year due to overweight or obesity. Obesity is stalwartly associated with other metabolic disorders including diabetes, hypertension, dyslipidaemia, cardiovascular disease and even some hormonal disturbances. The risk for these disorders appears to start from a body mass index (BMI) of about 21 kg/m². Obesity is generally classified as generalized obesity (GO) and abdominal obesity (AO). Individuals with obesity have higher rates of mortality and morbidity compared to non obese individuals. India, with 1.2 billion people is the second most heavily populated country in the world and is currently experiencing rapid epidemiological transition. Under nutrition due to poverty which...
dominated in the past, is being rapidly replaced by obesity associated with affluence.\cite{8} Industrialization and urbanization also contribute to increased prevalence of obesity. Studies from different parts of India have provided evidence of the rising prevalence of obesity now a days.\cite{9,10,11,12}

Obese adults, relative to those of normal weight, have a 3 times higher prevalence of type 2 diabetes. Morbidly obese adults (obesity class 3; BMI >40 kg/m²), compared with normal weight adults, fair much worse and have up to a 7 times higher prevalence of type 2 diabetes.\cite{13,14} Gradual weight gain leading to obesity also increases the risk for developing type 2 diabetes\cite{15} because for each 1 kilogram increase in weight there is an approximate 9% increase in the relative risk for diabetes.\cite{16}

The causes of overweight and obesity are characterised as a natural reaction to an unnatural situation. The wide and constant availability of foods, many of which are high in salt, sugar and fat, along with more sedentary work and transport patterns contribute greatly. The term ‘obesogenic environment’ has been coined to describe contexts in which weight gain is passively encouraged. The health and economic impact of this is considerable. Obesity is linked with physical and psychological ill-health and premature death. India is prime hub for Obesity and related diseases.

Thus, Sthaulya (Obesity) is burning issue for urban society and for treating the patient without any adverse effect, “A multimodal therapy” base on clinical condition of patient (Purusham Purusham Vikshaya) is needed. Multimodal approach itself is a tripod of Ahara (pathya), Vihara / Vyayama (exercise) and medicaments (Shodhana and Shamana).

**MATERIALS AND METHODS**

For this study, the basic and conceptual materials were collected from the Ayurvedic classics namely, Brihatrayee and Laghutrayee, other texts, literature in Modern science concerned with these principles, scientific journals, dissertations, research papers and from the patients.

For multi-modal treatment approach Panchakarma procedures as well as internal medicaments are used. Trikatu, Kshara, Ushnododaka are used for Amapachana and Shleshma Chhedana. Narayana Taila and Tila Taila are used for Abhyanga purpose. Tila Taila is used for Sneha Pana and Abhyanga with Narayana Taila and Tila Taila, Svedana with Nirgundi / Erandapatra. Madanfala and Madhu are used for Vamana. Eranda Sneha and Trivruta are used for Virechana. Lodhara, Vacha, Haridra Churna are used for Udvartana. Niruha / Lekhana / Kshara Basti by Dashmoola, Gaumutra, Devdaru, Pathyadi Kvatha is performed. Internal medicaments like Arogyavardhini Vati, Triphala Guggulu, Varunadi Kvatha, Dashmoola Kvatha, Musta Churna, Vidanga Churna etc. are used.

**DISCUSSION**

Obesity is a chronic disease prevalent worldwide among the people who have sedentary life style and habit of eating too much. The incidence of childhood obesity is also a burning issue for world now days. While global prevalence of obesity continues to increase dramatically, treatment options remain less than optimal. In today’s era people have no time at all for their health. The aetiology of obesity is multi factorial; life style is changing drastically and become very fast and busy. Over use of fast-food, pizza and burger culture, vehicle friendly life-style, faulty dietary habits, lack of exercise, more mental work than physical, to use of medications that have weight gain as an undesirable side effect, over burden of work and mental stress lead to Obesity and Obesity induced other disorders. Generally people ignore obesity until it becomes mother of other diseases. Economic and political determinants of available foodstuffs and even social networks may also contribute to obesity.

Obesity promotes a cascade of secondary pathologies including Diabetes, Insulin resistance, Dyslipidemia, Inflammation, Thrombosis, Hypertension, coronary disease, Metabolic syndrome, and Obstructive Sleep Apnoea, lower backache, Osteoarthritis, Osteoporosis.\cite{18,19}

Atisthaulya (obesity) is considered as one of the eight disgraceful conditions as described by Acharya Charaka.\cite{20} A person in whom there is excessive accumulation of Meda (fat/adipose tissue) leading to flabbiness of hips, abdomen, and breast has been
categorized as Atisthula.\textsuperscript{[21]} Medas is body tissue predominant in Prithvi and Apa Mahabhuta similar structure to Kapha Dosha.\textsuperscript{[22]} Consumption of Guru (heavy to digest), Sheeta (cold), Snigdha (unctuous), Madhuraki Kaptha, Meda-mamsa Vardhaka drugs along with lack of exercise and sedentary life style result in excessive nourishment of Medas while other bodily elements (Dhatus) are poor of nourishment. Disproportionately increased Medas is responsible for several serious consequences reported in Charaka Samhita like Ayuhrasa (decrease of life span), Jaupardha (decrease in enthusiasm and activity), Krichhayayata (difficulty in sexual act), Daurbalya (decrease of strength), Daurgandhya (bad odour), Swedabaddha (excess perspiration) and Kshut Pipasadhiya (excessive hunger and thirst).\textsuperscript{[23]}

Due to non veg. food (Dravyasamanya) as a principle of “Samanyam Vruddhi Karanam” only production of Mamsa and Medo Dhatu occurs. Food like oily, sweet, milk products which have similar qualities like Medodhatu create excessive Medas in the body and activity like day sleep (Divaswapna) plays a key role in Sthaulya. In the patients of Sthaulya, Poshya Medo Dhatu deposits in micro channels (Aavrut Marga) and due to that less energy at the cellular level (Bhutagni-dhatvagni) create a condition of excessive hunger and thirst. Thus, a vicious cycle of excessive hunger - over eating - again hunger starts. 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.\textsuperscript{[24]} (urinary diseases including Diabetes) Successful management of obesity requires the understanding and acceptance of a new concept that identifies obesity as not only a simple disease but also a clinical syndrome. On the basis of the above mentioned facts of pathogenesis of Sthaulya, it can be said that the treatment plan, which have action on excessive hunger (Abhyavaharana Shakti), increases Dhatvaagni and Bhutagni and at the same time have Medohara, Kaphahara and Vatahara actions, may be suitable for its management.\textsuperscript{[25]}

Classification of patient base on clinical presentation (Purusham Purusham Vikshaya)

1. Patient with Obesity having symptoms of Shlesha Vruddhi
2. Patient with Obesity caused by drug therapy
3. Patient with Obesity having more prone features of Asta Dosha
4. Patient with central obesity (Rasa Nimitaja Sthaulya)
5. Patient with peripheral obesity (Medo Nimitaja Sthaulya)
6. Patient with Obesity with Santarpanotthavikara
   - Having symptoms of CVS
   - Having symptoms of DM (Apathyanimitaja)
   - Having symptoms of Dyslipidemia
   - Having symptoms of Hypothyroidism

For effective treatment tripod of Pathya, Vyayama (Yogasana) and Chikitsa Upakrama is essential.

<table>
<thead>
<tr>
<th>Aharavarga</th>
<th>Pathya</th>
<th>Apathya</th>
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<tbody>
<tr>
<td>Shukadhanya</td>
<td>Yava, Shyamaka, Venuyova, Kodrava, Nivar, Jurna</td>
<td>Godhuma, Navanna, Shali, Shashti</td>
</tr>
<tr>
<td>Shamidhanya</td>
<td>Mudga, Rajamsha, Kulattha, Chanaka, Masura, Adhaki</td>
<td>Masha</td>
</tr>
<tr>
<td>Shakavarga</td>
<td>Vruntoka, Patrashaka, Patola, Shigru</td>
<td>Kanda Shaka</td>
</tr>
<tr>
<td>Phala</td>
<td>Kapittha, Jamuna, Amalaka</td>
<td>Draksaha, Kharjura, Madhuraphala</td>
</tr>
<tr>
<td>Anya</td>
<td>Takra, Madhu, Ushnodaka, Tilaial, Sarshapa Tail</td>
<td>Dugdha, Ikshu, Navnita, Ghrita, Dadhi</td>
</tr>
<tr>
<td>Harita</td>
<td>Adraka, Lashuna</td>
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</tbody>
</table>

Some common food that should be avoided.
- Dairy products especially cheese cream, ice cream, yogurt.
Meat especially red meat, fried food, grilled food.
Avoid packaged foods, processed food and restaurant
Fried foods - pizza, hot dog, burger, doughnuts, Frenchfries.
Cold drinks

Most of the Pathya Varga Dravyas take longer time to digestion but give sense of satiety. Most of Dhanya Varga Dravyas have Katu, Kashaya Rasa and Ruksha Guna also have action on Medo Dhatu. Ushna Virya Dravyas like Mudaga, Kulattha, Vruntaka make Agni proper.

Pathya Apathya

<table>
<thead>
<tr>
<th>Shrama</th>
<th>Sheetal Jala Sevana</th>
</tr>
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<tbody>
<tr>
<td>Jagarana</td>
<td>Divaswapa (Day sleep)</td>
</tr>
<tr>
<td>Nityabhramana, Chankramana</td>
<td>Atishana (sedentary life style)</td>
</tr>
<tr>
<td>Yana Rohana</td>
<td>Sukhashaiya Sevana</td>
</tr>
<tr>
<td>Vyavaya</td>
<td>Avayama (lack of exercise)</td>
</tr>
</tbody>
</table>

Asana and Pranayama useful in treating the disease are;

- Suryanamaskara
- Pawannuktasana (Wind Liberating Pose)
- Utthanpadasana (Raised Leg Pose)
- Dvichakrikasan (Bicycling)
- Padvrittasan (Leg rotation)
- Naukasana (Boat Pose)
- Pranayama (breathing excursion) and Meditation

Day sleep, lack of exercise and sedentary lifestyle have strong impact on body fat tissue and on micro channels. Due to obstruction in micro channels vicious cycle of excessive hunger and excessive food intake happens. Obesity is a disorder of imbalance of food intake and consumption. Shrama, Chankramana, Vyavaya, cycling, different kind of Asanas, Pranayama is useful to burn calories, consumption and also to open up micro channels (Srotasa).

Chikitsta Upakrama in patients of Sthaulya based on clinical condition

1. In patient with Obesity having symptoms of Shleshma Vruddhi.

- 1st step: Shleshma Chedana by Trikatu, Pippali, Kshara with Ushnodaka
- 2nd step: If needed do Vamana Karma by Madanafala with Madhu
- 3rd step: Any outdoor sport play like badminton / cricket (follow diet strictly)
- 4th step: Udvangana by Lodhra, Vacha, Haridra Churna

2. Patient with Obesity caused by drug therapy.

- 1st step: Use Pippali or Sanjivani Vati with Ushnodaka (to nullify drug effect)
- 2nd step: Snehapana with Tila Taila, Abhyanga with Narayana Taila, Svedana with Nirgundi / Erandapatra.
- 3rd step: Virechana Karma by Erandasneha or Trivruta.
- 4th step: Any outdoor sport play like badminton / cricket (follow diet strictly)
- 5th step: Udvangana by Lodhra, Vacha, Haridra churna

3. Patient with Obesity having more prone features of Asta Dosa.

- 1st step: Use Trikatu or Sanjivani Voti with Ushnodaka
- 2nd step: Snehapana with Tila Taila, Abhyanga with Narayana Taila, Svedana with Nirgundi / Erandapatra.
- 3rd step: Virechana Karma by Eranda Sneha or Trivruta.
- 4th step: Any outdoor sport play like badminton / cricket (follow diet strictly), Bhashrika, Bhramari, Suryabhedanam Pranayama, cycling, Suryanamaskara.
- 5th step: Udvangana by Lodhra, Vacha, Haridra Churna

4. Patient with central obesity (Rasa Nimitaja Sthaulya).
1. 1st step: Treatment of Ajirna - Use Trikatu or Sanjivani Vati, Eranda Bhrusta Haritaki Churna with Ushnodaka.

2. 2nd step: Snehapana with Tila Taila, Abhyanga with Narayana Taila, Svedana with Nirgundi / Erandapatra.

3. 3rd step: Vamana Karma by Madanafala with Madhu and Virechana Karma by Erandasneha or Trivruta.

4. 4th step: Any outdoor sport play like badminton / cricket (follow diet strictly), Bhastrika, Bhramari, Suryabhedanam Pranayama, cycling, Suryanamaskara (minimum 1 round), Vajrasana, Pavanamuktasana, Paschimotanasana.

5. 5th step: Udvartana by Lodhra, Vacha, Haridra Churna


5. Patient with peripheral obesity (Medo Nimitaja Sthaulya).

1. 1st step: Use Trikatu, Sunthi, Chitrakadi Vati or Sanjivani Vati along with Eranda Bhrusta Haritaki Churna with Ushnodaka.

2. 2nd step: Snehapana with Tila Taila, Abhyanga with Narayana Taila, Svedana with Nirgundi / Erandapatra.

3. 3rd step: Vamana Karma by Madanafala with Madhu and Virechana Karma by Eranda Sneha or Trivruta

4. 4th step: Basti Karma - Niruha / Lekhana / Kshara Basti by Dashmoolu, Gaumutra, Devdaru, Pathyadi.

5. 5th step: Any outdoor sport play like badminton / cricket (follow diet strictly), Bhastrika, Bhramari, Suryabhedanam Pranayama, cycling, Suryanamaskara (minimum 2 round), Vajrasana, Pavanamuktasana, Paschimotanasana.

6. 6th step: Udvartana by Lodhra, Vacha, Haridra Churna


8. 8th step: Use Asava-Arista like Lohasava, Kumari Asava, maximum use of Madhu + Udaka

6. Patient with Obesity with SantarpanotthaVikara

1. 1st step: Use Trikatu, Sunthi, Chitrakadi Vati or Sanjivani Vati along with Eranda Bhrusta Haritaki Churna with Ushnodaka

2. 2nd step: Snehapana with Tila Taila, Abhyanga with Narayana Taila, Svedana with Nirgundi / Erandapatra.

3. 3rd step: Vamana Karma by Madanafala with Madhu and Virechana Karma by Eranda Sneha or Trivruta

4. 4th step: Basti Karma - Niruha / Lekhana / Kshara Basti by Dashmoolu, Gaumutra, Devdaru, Pathyadi.

5. 5th step: Any outdoor sport play like badminton / cricket (follow diet strictly), Bhastrika, Bhramari, Suryabhedanam Pranayama, cycling, Suryanamaskara (minimum 2 round), Vajrasana, Pavanamuktasana, Paschimotanasana.

6. 6th step: Udvartana by Lodhra, Vacha, Haridra Churna


8. 8th step: Use Asava-Arista like Lohasava, Kumari Asava, maximum use of Madhu + Udaka


8. Having symptoms of DM (Apathya nimitaja): Use Chitrakadi Vati, Trimada Churna, Mamejava
Ghanvati, Meshshrungi Churna, Jambubija Ghanvati.


CONCLUSION

Obesity is irreversible blessing from current machinery, vehicle friendly, junk foodie, sedentary lifestyle. India is prime hub of Obesity due to genetic tendency and lifestyle. Charaka has emphasized Sthaulya (obesity) in planning of treatment according to Sharira (Purusha Prakruti). Apakva Meda Dhatu along with Ama and Rasa Dhatu play key role in development of the disease and will lead to many lifestyle disorders (Santarpanottha Vyadhi). For effective management of the disease Multi-modal treatment approach in the form of Pathya (diet), Vyayama (exercise) and Upkrama (therapy) is the need of time.

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Source of Support: Nil, Conflict of Interest: None declared.