ROLE OF AYURVEDA IN THE PREVENTION AND MANAGEMENT OF OBESITY

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ABSTRACT
The incidence of non communicable disease is increasing at a high rate in all over the world. Obesity is also a non communicable disease which becomes a very serious problem in the society. Due to the faulty life style and diet pattern the incidence of Obesity increasing day by day all over the world. Sedentary habits and lack of exercise are also the main reasons behind the increased incidence of Obesity. Obesity can leads to many health problems like Diabetes, Cardiovascular disease and Arthritis. Obesity reduces the average life expectancy and affects the quality of life. Hence, prevention of Obesity during its starting stage should be considered a priority for overcome the risk of Diabetes, Cardiovascular, Arthritis and other serious diseases. There are many drug, medicinal preparations, Yoga and Panchkarma described in the Ayurveda having wonderful preventive and curative effect on the Obesity.

Keywords: Non communicable disease, Obesity, Ayurveda.

INTRODUCTION
Today the incidence of Obesity is increasing at an alarming rate due to change in life style, faulty diet pattern and decrease interest in the exercise. Overweight and Obesity are the fifth leading risk of global deaths worldwide, Obesity has more than doubled since 1980. In 2008, more than 1.4 billion adults, 20 years and older, were overweight. Of these, 200 million men and nearly 300 million women were obese. In 2012 more than 40 million children under 5 year of age where overweight one considered a high-income country problem, Overweight and obesity are now rising in low and middle income countries, particularly in urban setting. Close to 30 million overweight child-
ren are leaving in developing and 10 million in developed countries.

At least 3.4 million adults die each year as a result of being overweight or obese. In addition, 44 of the Diabetes burden, 23 of ischemic heart disease burden and between 7-41 of certain Cancer burdens are attributable to overweight and obesity.

In India, the non communicable risk factor survey phase 2 was carried out in the year 2007-2008, in the states of Andhra Pradesh, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttarakhnd and Mizoram. The survey shows high prevalence of overweight in all age groups except in 15-24 year group. Overweight prevalence was higher among females than males and in urban areas than in rural areas. Low prevalence was recorded among lower level of education and in people whose occupation was connected with agriculture or manual work. In India, 1.3 percent males and 2.5 percent females aged more than 20 years were Obese in the year 2008.

As obesity is a key risk factor in natural history of other chronic and non communicable disease, the typical time sequence of emergency of chronic disease following the increased prevalence of Obesity is important in public health planning. The first adverse effect of Obesity to emerge in population in transition are hypertension, hyperlipidaemia and glucose intolerance, while coronary heart disease and the long term complication of Diabetes such as renal failure. Changes in diet pattern, life style and lack of physical exercise have increased the incidence of Obesity in the society. From the past time Ayurveda is known for serving the society. Prevention and cure of Ayurveda is exactly applicable on the Obesity There are many drugs, medicine preparation, Yoga, Pathya-Apathya are described in the text of Ayurveda which have good result in the prevention and cure of obesity.

**Material and methods**

Different Ayurvedic classical book, research paper and journals were referred to fulfill this part, it comprises of subsection dealing with prevention and management of Obesity in Ayurveda.

**Obesity**

Obesity may be defined as an abnormal growth of the adipose tissue due to an enlargement of fat cell size or increase in fat cell number or combination of both. Obesity is often expressed in term of body mass index (BMI) but can arise from other cause such at abnormal muscle development and fluid retention.

<table>
<thead>
<tr>
<th>BMI (kg/m²)</th>
<th>Classification</th>
<th>Risk of co morbidities</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.5 – 24.9</td>
<td>Normal range</td>
<td>Negligible</td>
</tr>
<tr>
<td>25.0-29.9</td>
<td>Overweight</td>
<td>Mildly increased</td>
</tr>
<tr>
<td>▶ 30.0</td>
<td>Obese</td>
<td>Moderate</td>
</tr>
<tr>
<td>30.0-39.9</td>
<td>Class 1</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1: Quantifying obesity with body mass index**

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Obesity can be correlated with *Sthoulya*. Achrya Charka described *Sthoulya* in eight despicable in *Sutrasthan* chapter-21. In the context of body, eight persons are despicable such as- over-tall, over-short, over-hairy, hairless, over-black, over-fair, over-obese and over-lean. The person is called as over-obese who, due to excessive increase of fats & muscles, has pendulous, abdomen & breasts & suffers from deficient metabolism & energy. [4]

**Eight defects of over-obese:**
Shortening of life-span, hampered movements, difficulty in sexual intercourse, debility, foul smell, over sweating, too much hunger & excessive thirst [4]

**Etiology of Obesity (*Sthoulya*)**

**Diet related** –
2. Intake of excessive food. [6]
4. Excessive use of *Maahesh Duds* and *Ghrita* etc. [8]
6. **Life style related** [10]
   1. Lack of exercise.
   2. *Devasavpan*.
   3. *Mathun nhi karna*.
   4. Excessive sleeping.
   5. Excessive happiness
7. **Other causes** [11]
   *Shahaja and kulaj*.

**Pathogenesis of Obesity** [12]
Consumption of various *Nidan seven* such as *guru, Sheeta, Snigdha, Madhuradi Kapadhaka* along with lack of exercise and sedentary life style result in excessive nourishment of *medas* while other bodily element are deprived of nourishment resulting in *Sthoulya*.
Meda Dhatu Vrydhi  
\[ \rightarrow \]  
Vata ki Aativraydhi

Other Dhatu Shaya  
Vraydha Vata ka Kosth me Parvesh

\[ \rightarrow \]  
Jatharagani ki Aativeraydhi

Punh-Punh Aahar Seven Ki Icha and Ahar ka Shigr Pachana

\[ \rightarrow \]  
Regular Medadhatu Vrydhi

Formation of Aama Rasa Again

\[ \rightarrow \]  
Meda Dhatu Vrydhi

Shothyla Roga

### Symptoms [13]
1. *Ati Shevida* [Excessive Sweating]
2. *Sharamjanya Swasa* [Breathlessness on mild exertion]
3. *Aati Nindra* [Excessive sleep]
4. Karya Dorblyta [Difficulty to perform heavy work]
5. *Jadyatha* [Stuggishness]
6. *Aalapaayu* [Short life span]
7. *Aalapbala* [Decreased bony strength]
8. *Uathashahani* [Inertness]
9. *Sharir Durgandhta* [Foul odour of the body]
10. *Gadgadtava* [Unclear voice]
11. *Sudha vrydhi* [Excessive hunger]
12. *Ati Trishna* [Excessive thirst]

### Complication [14]
1. *Visarap* [Erysepellas]
2. *Bhangelher* [Fistula in Ano]
3. *Jwara* [fever]
4. *Aatisar* [Diarrhoea]
5. *Prameha* [Diabetes]
6. *Arsha* [Piles]
7. *Salipada* [Filariasis]
8. *Apachi* [Alands]
9. *Kaml* [Jaundice]

### Prevention- [15]
We can prevent Sthoulya by the preventive measures of the Ayurveda.
1. *Nidan parivargana*
2. Use of healthy food
3. Regular exercise
4. Chintan, Dhyana are also effective on obesity.

5. Rasanya
   - Guggulu Rasanya
   - Loha rasanya
   - Aamalki Rasanya

6. Yoga
   - Surya Namashkara
   - Myurasana
   - Shrshrasana
   - Halasana

Treatment of Obesity

Sanshaman therphy [Chiktsa]

Rasa/ Bhasama
- Parad Bhasama
- Trimurti Rasa
- Vadaraagni Rasa

Pathya-Apathya

Pathya Aahar
- Purana shaali-Chawal, Munga, Yuva, Kon-do, Chana, Bajara, Maaaka, Masoor, Par-wal, Shijan, Takra, Aaval, Kati, Ka-shya Rasavale dravya, Gugglu, Bhojan k purav Jaal Pina etc.

Apathye Aahar-
- Gahu, Naye Shali dhanya, Chawal, Aalu, 
- Dudh, Kheer, Dahi, Mash, Anda, Guda, 
- Bhojan k baad Adhik jala pina etc.

Pathye Vihar-
- Chinta, ratri, jagran, Langhan karna, Paed-al chalna, Duph seven, Vyaam karna etc.

Apathya Vihar-
- Sheetal Jaal se snana karna, Devasayana, 
- Sukhpurvak sada Aaramdyak bister par reh-na etc.
Some studies which shows the effect of Ayurvedic drugs in treatment of obesity:
[17]

1. **Mustak:** The tubers of Mustak are commonly known as Nut Grass, Cyperine is the active ingredient, working as a hypotensive agent, anti-inflammatory & diuretics, as well as reducing fat in body. It helps clearing the blocked channels. An experimental study was performed on Rats shows Cyperus Rotundus stopped weight gain & in vitro, stimulated lipolysis in 3T3F442 adipocytes.

2. **Kutki:** The root of Kutki is the source of Scrophulariaceae, is the active ingredient. Kutki improves gallbladder secretions, yhus aiding in the digestion & metabolism of fats. In a study of hyperlipaemic mice on a high diet, daily doses of water extract of Kutki significantly reduced total cholesterol, triglycerides, & LDL levels after 12 weeks.

3. **Gurmer:** The anti-obesity effects of the leaves of Gurmar were investigated in Wister rats fed with high fat diets. The saponins-rich aqueous exact administered to Wister rats, suppressed increases in body weight, organs weight, & plasma lipids. Gurmer can be used to treat obesity as well as alter lipid & glucose metabolism.

4. **Palash:** the phytochemical analysis showed that major chemical constituents of Palash were sterols, polyphenols, flavonoids, ascorbic acid and saponins are useful in treatment of obesity. phytosterols have beneficial effect on hyperlipidaemia, and polyphenols, flavonoids have potentials antioxidant properties.

5. **Apamarga:** The seeds of Apamarga have shown to reduce blood glucose levels & stimulate the production of thyroid hormones in animal models. Both these actions would help combat obesity & promote weight loss.

**DISCUSSION**

Due to faulty diet pattern, lack of physical exercise the incidence of obesity is increasing all over the world. Obesity is the very common risk factor for the cardiovascular disease and Diabetic Balance diet plan and lifestyle can play a good role in the prevention and cure of obesity. In the text of Ayurveda Pathya Aahar-Vihara, Yoga, Rasayana, Dincharya, Ritucharya are described which have good role in the prevention and managements of obesity. Different studies have been showed that drugs have effective role in obesity. If someone adopt the diet pattern, lifestyle according to the Ayurveda it can be helpful in the decrease the incidence of obesity. In text of Ayurveda there are number of drugs, formulation are described which have very effective result on the Obesity as mentioned above in details.

**CONCLUSION**

It seems that we need to reassess entire lifestyle if we want to prevent and manage obesity. In Ayurveda Ahara, Vihara, Dincharya, Ritucharya, Yoga, Rasayana are described which have good role in prevention & cure of the obesity. The prevention and management of obesity can be done successfully in Ayurveda. Moreover Ayur-
vedic treatments are safe & affordable by everyone.

REFERENCES


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