

Fat or Fit - It's Your Choice: A Case Study on ObesityVeena S Kulkarni^{1*}, Raviraj S Kurabet² and Siddanagouda A Patil³¹Roga Nidana, SDMCA, Udupi, Karnataka, India.²Shareera Rachana, SDMCA, Udupi, Karnataka, India³PG studies in Shalya Tantra, Ayurveda Mahavidyalaya Hubli, Karnataka, India**Abstract**

Obesity is one among most prevalent diseases which is extending rapidly in most of the industrialized world. Children and adolescents also are becoming more Obese, indicating that the current trends will accelerate over time. Its association with Hypertension, Type 2 Diabetes, Dyslipidaemia, Degenerative Joint Disease and multiple health problems is well established. Thus, it is important for physicians to identify, evaluate, and treat patients for Obesity and associated co-morbid conditions. Sthoulya mentioned in Ayurvedic literature can be best analyzed through Obesity. The treatment principles which are mainly adopted now days are *Udvardana* and *Snehapana* followed by *Virechana* are showing good results. Hereby, presenting a case study of a male patient, aged about 34 years, weighing 138 kg with a BMI of 50. After 10days of management during hospitalization, patient had reduced 13 kg of weight.

Keywords : *Obesity, Sthoulya, Udvardana, Virechana***Greentree Group**

Received 30/11/16 Accepted 27/12/16 Published 10/01/17

INTRODUCTION

Nature has taught man how to be healthy for that science has discovered the laws of health. But, it is an irony of the fate that on this earth on one hand, Millions do not get enough food and roam in a skeletal form, mean time there are many more who, besides over consumption lead an inactive life to march towards an unfortunate death. Thus second categories of individuals are more prone to manifold serious disorders. Obesity is one such disease where sedentary life style and high calorie diet plays a great role leading to multiple disorders.

Obesity:

Obesity is a condition of an extra adipose tissue accumulation. It is often viewed as equivalent to increased body weight but this need not be the same case—lean but very muscular persons may be overweight by numerical standards devoid of having increased adiposity. Distribution of body weight is continuously done in populations, so that choice of a medically meaningful peculiarity between lean and obese is quite skewed. Thus Obesity is efficiently defined by assessing its association with morbidity or mortality¹.

Although not a direct measure of adiposity, the most widely used method to estimate Obesity is the Body Mass Index (BMI), which is equivalent to Weight/Height² (in kg/m²) Other methods to measure Obesity includes Anthropometry (Skin fold Thickness), Densitometry (Underwater Weighing), CT or MRI, and Electrical Impedance².

WHO classification of overweight:

Table 1 Obesity Classification³

| Classification | BMI (kg/m ²) | Associated health risk |
|-----------------|--------------------------|--|
| • Underweight | <18.5 | Low (but risk of other clinical problems increased) |
| • Normal | 18.5-24.9 | Average |
| • Over weight | ≥ 25 | |
| Pre obese | 25-29.9 | Increased |
| Obese class I | 30-34.9 | Moderately increased |
| Obese class II | 35-39.9 | Severely increased |
| Obese class III | ≥ 40 | Very severely increased |

Aetiology of Obesity

Accumulation of fat results from an incongruity between energy consumption and expenditure over and above that which can be remunerated for by hypothalamic regulation of basal metabolic rate (BMR). A small daily excess consumption of only 0.2-0.8 MJ (50-200 kcal; < 10% of intake) is capable of 2-20 kg of weight gain over a

time of 4-10 years. With the cumulative effects of subtle power in excess, body fat content shows 'tracking' with age, in a way that individuals are likely to uphold their level in the age-adjusted population distribution throughout their lives. Thus obese children are very likely to become obese adults. Weight tends to increase throughout adult life, as BMR and physical activity decrease.

Environmental causes

High energy diets- increased consumption of energy dense foods. Less regular eating patterns, shorter meals and increased snacking also contribute along with physical inactivity.

Other causes

1. Endocrine disease- Hypothyroidism, Cushing's Syndrome etc.
2. Drugs
 - Anticonvulsant- Phenytoin
 - β blockers- Atenolol
 - Corticosteroids- Dexamethasone
 - Insulin- all formulations.

Types of body fat distribution:

I. Pear type (Gynoid distribution):

Fat accumulates mainly around hips and thighs, characteristic of females

II. Apple type (Android distribution):

Fat storage mainly in the abdomen, found in both sexes.

Morbid effects of obesity:

These mainly includes conditions like type 2 Diabetes Mellitus, Dyslipidaemia, Hypertension, Coronary Heart Disease, Cerebrovascular Accident, Osteoarthritis, Gall Stones, Amenorrhoea, Irregular menses, Infertility.

CASE STUDY

A male patient, Benjamin Azee, 34 years old with OPD number OP-288606 got admitted in SDM Hospital of Ayurveda Udupi Karnataka, India on 12/07/2016 for the complaint of overweight and anxious for weight reduction. On examination his weight was 138kg and height 1.65m with BMI 50. Following treatment modalities had been planned along with daily monitoring of weight and abdominal girth.

Day 1 to day 3:

1. *Nitya Virechana* with *Gandharva Hastadi Eranda Taila 20ml + Triphala Kwath 200ml + Saindhava Lavana 2 pinch* was given at 6am.
2. *Kolakulathadi Udvartana* afternoon.
3. Barley Ganji diet in morning, afternoon and night.

On 3rd day Tablet *Agnitundi Vati* 1/BD and Tab *Chitrakadi Vati* 1/ BD was administered for *Deepana* and *Pachana*.

Day 4 to day 7:

1. *Snehapana* with *Guggulu Tiktaka Ghrita* in *Aarohana Krama* was followed i.e., 50ml, 100ml, 150ml, 150ml on day 4,5,6,7 respectively at 6am.
2. Barley Ganji diet.

Day 8 to day 9:

1. *Sarvanga Abhyanga* with *Mahanarayana Taila* followed by *Bashpasweda* was done for 2 days.
2. Diet: Morning- NeerDosa, Afternoon- Barley Ganji, Night- Khichdi

Day 10:

1. *Sarvanga Abhyanga* with *Mahanarayana Taila* followed by *Bashpasweda*.
2. *Virechana Karma* with *Trivrut Leha* 60gm + *Draksha Kashaya* 250ml was given at 9.30am.
3. 20 *Virechana Vegas* were observed.

OBSERVATION

Table2 Weight reduction in 10 days

| Sl No | Day | Weight in Kg | Abdominal girth in cm |
|-------|-----|--------------|-----------------------|
| 1 | 1 | 138 | 132 |
| 2 | 2 | 137 | 132 |
| 3 | 3 | 137 | 131 |
| 4 | 4 | 134 | 129 |

| | | | |
|----|----|-----|-----|
| 5 | 5 | 132 | 128 |
| 6 | 6 | 130 | 128 |
| 7 | 7 | 129 | 127 |
| 8 | 8 | 129 | 126 |
| 9 | 9 | 129 | 126 |
| 10 | 10 | 125 | 124 |

Total 13kg of weight reduction was observed in 10days.

DISCUSSION

As per present scenario is concerned Obesity is well known to cause multiple health hazards. Hence care must be taken to reduce weight and to prevent from future systemic illness like Hypertension, Diabetes Mellitus etc.

The treatment protocol which had been planned is one of the best, easiest, cost effective and most convenient to the patients as it needs only 10 days of hospitalization. Analysis of mode of action of *Nitya Virechana*, *Udvardana* and classical *Virechana* needs to be discussed. *Stholuya* is one of the *Rasa Pradoshaja Vikara* as mentioned by *Acharya Sushruta*⁴ and *Medaja Vikara* according to *Acharya Charaka*⁵. *Agnimandya* at the level of *Dhatus* i.e., *Rasa* and *Medas* should be corrected. The concept of *Udvardana* as mentioned by *Acharya Vagbhata* is said to be *Kaphahara* and *MedaPravilayana*⁶ holds good in mobilisation of fat which is excreted

out through *Nityavirechana*. By these two procedures and internal medicines *Deepana* and *Pachana* can be attained at both *Jatharagni* and *Dhatwagni* level. *Snehapana* is helpful in dissolving *Medo Dhatu* which can be further eliminated through *Virechana Karma*.

CONCLUSION

In patients of Obesity *Udvardana* and *Virechana* are more beneficial in weight reduction within short duration. Thus serves the purpose.

REFERENCES

1. Kasper, Braunwald, Fauci, Hauser, Longo, Jameson et.a,Harrison's Principles of Internal Medicine, Volume II , 19th edition, McGraw-Hill Medical. Chapter 415, 415e-1, P-2392
2. Kasper, Braunwald, Fauci, Hauser, Longo, Jameson et.a,Harrison's Principles of Internal Medicine, Volume II , 19th edition, McGraw-Hill Medical. Chapter 415, 415e-1, P-2392,
3. Kasper, Braunwald, Fauci, Hauser, Longo, Jameson et.a,Harrison's Principles of Internal Medicine, Volume II , 19th edition, McGraw-Hill Medical. Chapter 416, P-2393
4. Sushruta, Sushruta Samhita, Sri Dalhanacharya commentary, edited by Vaidya Yadavji Trikamji Acharya; publication Choukhamba Sanskrit Sansthan prakashan; Varanasi; UP; 2012; Pp:824; Page No:73
5. Agnivesha , Charaka Samhita, Ayurveda Deepika commentary, edited by Vaidya Yadavji Trimkamji Acharya publication Choukhamba Vishwa Surbharati prakashan Varanasi; UP; 2013; Pp:738; Page No:116
6. Vagbhata, Astanga Hridaya, Arunadatta and Hemadri commentary edited by Pt. Hari Sadasiva Sastri Paradekara Bishak

Acharaya, publication Choukhamba Sanskrit Sansthan prakashan Varanasi; UP; 2016; Pp:956; Page No: 28