



## Case Study

### CLINICAL EVALUATION OF *GUGGULU KALPA CHIKITSA* IN THE MANAGEMENT OF *STHAULYA* W.S.R. OBESITY- CASE REPORT

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#### ABSTRACT

Obesity is a medical condition in which excess body fat has accumulated to an extent that it may have a negative effect on health and when their body mass index (BMI) is over 30 kg/m<sup>2</sup>; the range 25–30 kg/m<sup>2</sup> is defined as overweight. This is an era where more than 50% of the human being suffered from this major ailment which actually causes various other diseases like diabetes, hypothyroidism, hypertension, cardiopulmonary diseases. Obesity not only affect the body of a person but it has also a major impact over mind, mostly patient suffered from obesity also suffered with depression because of cutoff and rejection from the society. In Ayurveda also person who is obese/ *Sthula* is considered under *Ninditya purusha* which generally means abnormal. Modern medicine has treatment for this but to a very limited extent and it is very costly also. In Ayurveda there is vast reference for *Sthaulya* and its treatment. Case studies were done on *Sthaulya roga* in which *Guggulu kalpa chikitsa* was done and results were evaluated. There was drastic reduction in weight of the patients along with the reduction in inches of abdominal, arm and thigh girth within a month.

**KEYWORDS:** Obesity, *Sthaulya*, *Kalpa chikitsa*, Diabetes, Hypertention.

#### INTRODUCTION

In this modern era, everyone is very much concern about his/her looks, body, colour. If a person is obese or fat it is considered as the stigma for his/her personality in the society. Obesity is state or medical condition in which body fat increases to an extent that causes disturbance and ill effects on the health of the person. This criteria of Obesity is considered on the basis of body mass index (BMI) which is calculated by dividing body weight by square of height in metres. Person whose BMI is more than 25 kg/m<sup>2</sup> considered as obese. There are further categories of obesity on the basis of BMI as:

BMI(kg/m <sup>2</sup> ) From upto	Categories
0 to 18.5	Underweight
18.5 to 25	Normal weight
25 to 30	Overweight
30 to 35	Class I obesity
35 to 40	Class II obesity
>40	Class III obesity

Obesity is most commonly caused by a combination of excessive food intake, lack of physical activity, and genetic susceptibility. A few cases are caused primarily by genes, endocrine disorders, medications, or mental disorder. The view that obese people eat little yet gain weight due to a slow metabolism is not medically supported. On average,

obese people have greater energy expenditure than their normal counterparts due to the energy required to maintain an increased body mass.

Excessive body weight is associated with various diseases and conditions, particularly cardiovascular diseases, diabetes mellitus type 2, obstructive sleep apnea, certain types of cancer, osteoarthritis, and asthma. As a result, obesity has been found to reduce life expectancy.

A sedentary lifestyle plays a significant role in obesity. Worldwide there has been a large shift towards less physically demanding work, and currently at least 30% of the world's population gets insufficient exercise. This is primarily due to increasing use of mechanized transportation and a greater prevalence of labor-saving technology in the home. In children, there appear to be declines in levels of physical activity due to less walking and physical education. World trends in active leisure time physical activity are less clear. The World Health Organization indicates people worldwide are taking up less active recreational pursuits, while a study from Finland found an increase and a study from the United States found leisure-time physical activity has not changed significantly. A 2011 review of physical activity in children found that it may not be a significant contributor.

In both children and adults, there is an association between television viewing time and the risk of obesity. A review found 63 of 73 studies (86%) showed an increased rate of childhood obesity with increased media exposure, with rates increasing proportionally to time spent watching television.

The treatment of obesity mainly includes diet and physical exercise. There are five drugs which can be used for treating obesity in modern medicine are orlistat, lorcaserin, liraglutide, phentermine-topiramate, and naltrexone-bupropion. The most effective treatment for obesity is bariatric surgery. The types of procedures include laparoscopic adjustable gastric banding, Roux-en-Y gastric bypass, vertical-sleeve gastrectomy, and biliopancreatic diversion but these surgeries are very costly and risky.

In Ayurveda there is a vast reference of Obesity and it is known as *Sthaulya*. According to Acharya Charaka Atisthula purusha or obese person is considered as one of the *Ashthaninditya purusha* in Charaka samhita sutrasthana chapter 22. *Sthaulya* is one of the disease which comes under *Santarpana janya vyadhis* also. Acharya Susruta has mentioned in Sutrasthana chapter 15. Various signs and symptoms mentioned by Ayurveda Acharya are *Medomansa ativridhatvata*, *Chalaspika udarastana*, *Ayatha upachayo*, *Anautasaho*, *Kshudra shwasa*, *Pipasa*, *Atikshudha*, *Atinidra*, *Atisweda*, *Gatra daurgandhya*,

*Sarvakriyasu asamartha*, *Daurbalya*. Presence of more than 6 symptoms confirms the *Sthaulya roga*. Treatment mentioned in Ayurveda for obesity includes *Triphala*, *Shilajatu*, *Guggulu*, *Trikatu*, *Musta*, *Madhudaka*, *Ushana jala*, and many other medications, *Panchkarma* procedures like *Udavartana*, *Lekhan Basti*, *Shodhana* also helps in reducing the weight. *Kalpa chikitsa* is a holistic approach for the treatment of entire body, *Kalpa* means transformation and transmutation and *Chikitsa* refers to the treatment. So here *Kalpa chikitsa* refers to the treatment which transforms or changes the entire body into a better one, free from all the ailments and improves overall quality of life.

### Case Presentation

#### Case 1

A 51 years old female patient came to the Kayachikitsa OPD of AIIA on 29 august 2018 (UHID no:285482) with complaints of bilateral knee joint pain and backache and increase in weight since two years, she is a known case of Hypothyroidism since 5 months and taking Thyronorm 50 mcg daily in the morning. History of present illness: According to the patient she was asymptomatic 2 years back then she developed pain over both knee joints and pain over back and increase in weight. She also developed Hypothyroidism since 5 months back. Family history: not significant.

**Table 1: Examination of Patient**

General physical examination	Dashvidha Pariksha	Ashthavidha Pariksha	Systemic examination
<ul style="list-style-type: none"> <li>• Appetite: average</li> <li>• Bowel: regular</li> <li>• Bladder: normal</li> <li>• Sleep: normal</li> <li>• Weight: 80 kg</li> <li>• Height: 151 cm</li> <li>• BMI: 35.08 kg/m<sup>2</sup></li> <li>• Blood Pressure: 130/80 mmHg</li> <li>• Temperature: normal</li> <li>• Pulse rate: 80/min</li> <li>• Respiratory rate: 20/min</li> <li>• Pallor: absent</li> <li>• Pedal oedema: absent</li> <li>• Icterus: absent</li> <li>• Lymphadenopathy: absent</li> <li>• Clubbing: absent</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Prakriti: Pittakaphaj</i></li> <li>• <i>Vikriti: Vikritivishamsamveta</i></li> <li>• <i>Saara: Madhyam</i></li> <li>• <i>Samhanan: Madhyam</i></li> <li>• <i>Satmya: Madhyam</i></li> <li>• <i>Satva: Madhyam</i></li> <li>• <i>Aharshakti: Madhyam</i></li> <li>• <i>Vyayamashakti: Avara</i></li> <li>• <i>Pramana: Madhyam</i></li> <li>• <i>Vaya: Madhyam</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Nadi: Regular, Vatapittaj</i></li> <li>• <i>Mala: Samanya</i></li> <li>• <i>Mutra: Samanya</i></li> <li>• <i>Jihva: Samanya</i></li> <li>• <i>Shabda: Samanya</i></li> <li>• <i>Sparsha: Samanya</i></li> <li>• <i>Drika: Samanya</i></li> <li>• <i>Akriti: Sthula</i></li> </ul>	<ul style="list-style-type: none"> <li>• Cardio-vascular System: S<sub>1</sub>S<sub>2</sub> normal, no added sound.</li> <li>• Respiratory System: chest bilateral clear, no abnormality detected.</li> <li>• Gastro-intestinal System: no abnormality detected.</li> <li>• Locomotor System: <ul style="list-style-type: none"> <li>✓ Inspection= normal</li> <li>✓ Percussion=no abnormality detected</li> <li>✓ Palpation=tenderness, warmth, crepitus: absent</li> <li>✓ Range of movement=normal</li> </ul> </li> <li>• Nervous System: Patient was conscious, well oriented, no abnormality detected</li> </ul>

**Investigations:** Lipid profile, Thyroid profile, LFT, KFT.

All the investigations were done before starting the *Kalpa chikitsa* and at the end of the treatment.

### Treatment

**Table 2: Medohar guggulu or Navak guggulu was given for Kalpa chikitsa**

Days	Dose	Frequency	Date
1	2 tablets	Twice in a day before meal	31/08/2018
2	2 tablets	Twice in a day before meal	1/09/2018
3	3 tablets	Twice in a day before meal	2/09/2018
4	3 tablets	Twice in a day before meal	3/09/2018
5	4 tablets	Twice in a day before meal	4/09/2018
6	4 tablets	Twice in a day before meal	5/09/2018
7	5 tablets	Twice in a day before meal	6/09/2018
8	5 tablets	Twice in a day before meal	7/09/2018
9	6 tablets	Twice in a day before meal	8/09/2018
10	6 tablets	Twice in a day before meal	9/09/2018
11	5 tablets	Twice in a day before meal	10/09/2018
12	5 tablet	Twice in a day before meal	11/09/2018
13	4 tablet	Twice in a day before meal	12/09/2018
14	4 tablet	Twice in a day before meal	13/09/2018
15	3 tablet	Twice in a day before meal	14/09/2018
16	3 tablet	Twice in a day before meal	15/09/2018
17	2 tablet	Twice in a day before meal	16/09/2018
18	2 tablet	Twice in a day before meal	17/09/2018
19	1 tablet	Twice in a day before meal	18/09/2018
20	1 tablet	Twice in a day before meal	19/09/2018
21	1 tablet	Twice in a day before meal	20/09/2018
22	1 tablet	Twice in a day before meal	21/09/2018

Restricted diet: Milk only. (3 litres per day)

### Panchkarma procedures

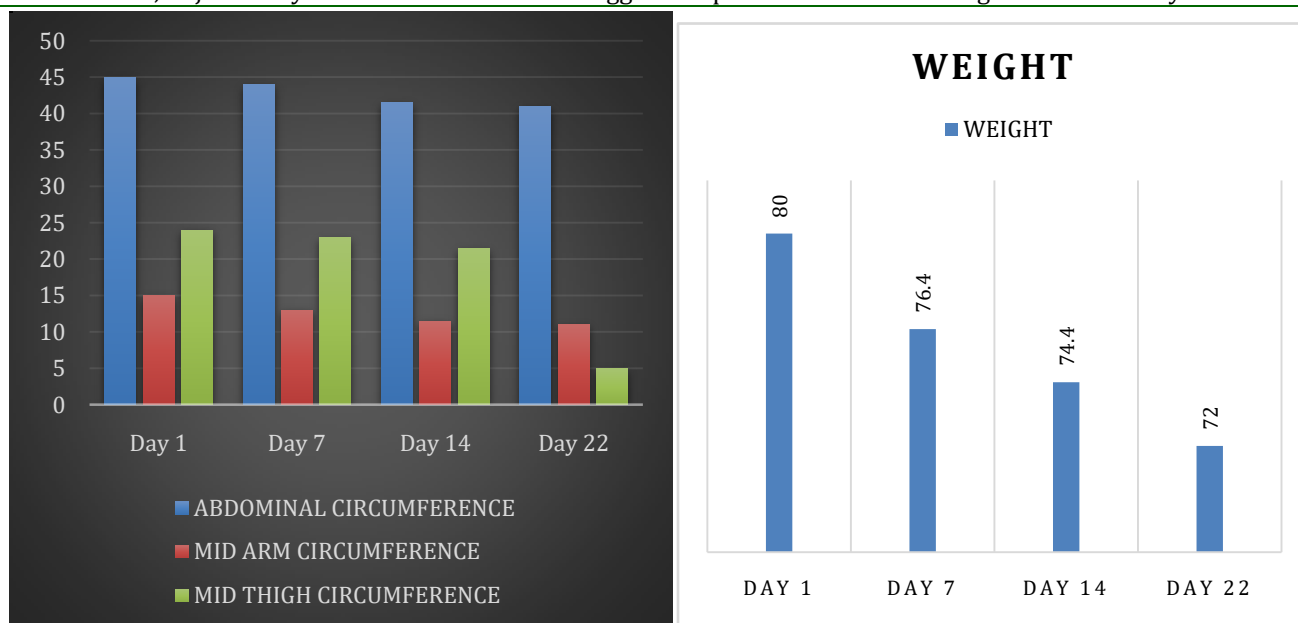
1) *Udavartana* with powder made up of mixture of *Triphala churna*, Gram flour (*Besan*), Barley flour for 10 days.

2) *Janu Basti* with *Sahacharadi tail* and *Erand tail* for 10 days.

### Results and Observations:

Table 3

Body measurements	Day 1	Day 7	Day 14	Day 22
Mid arm circumference (biceps)	15 inches each arm	13 inches each arm	11.5 inches each arm	11 inches each arm
Mid thigh circumference	24 inches each thigh	23 inches each thigh	21.5 inches each thigh	21.2 inches each thigh
Neck circumference	14 inches	14 inches	12.5 inches	12 inches
Abdominal girth (over umbilicus)	45 inches	44 inches	41.5 inches	41 inches
Weight (in kgs)	80 kgs	76.4 kgs	74.4 kgs	72 kgs
BMI(in kg/m <sup>2</sup> )	35.08	33.5	32.6	31.5



## Discussion

Obesity or *Sthaulya* is a major metabolic disorder in modern era, it is also considered as the main life style disorder and the frequency of its occurrence is increasing day by day in children also among with adults. Every 2 in 4 person suffers from this disorder, this not only affects the body but also leads the person to various mental disorders like depression, anxiety, mood disorder. There are various treatments and therapies mentioned by modern medicine but very costly and can't be afforded by every individual. In Ayurveda there is detail description of this disorder. *Kalpa chikitsa* is one of the boon given by Ayurveda. *Kalpa chikitsa* mainly describes as the treatment which transforms the whole body into a better one free from all the ailments. In this case study *Medohar guggulu* or *Navak guggulu* is used for the *Kalpa chikitsa* in a known case of obesity. In *Chakradutta samhita navaka guggulu* is mentioned under *Sthaulya chikitsa*, contents of *Navaka guggulu* are *Trikatu* (*Pippali, Sunthi, Maricha*), *Triphala* (*Haritaki, Vibhitaka, Amalaki*), *Trimada* (*Chitraka, Musta, Vidanga*) and *Guggulu* in equal quantity. All these drugs are *Katu, Tikta rasa pradhana, Laghu* and *Rukshna* in *Guna, Ushna veerya* and *Katu* in *Vipaka* which helps to remove obstruction from the channels reduces *Kapha* and *Meda* and *Ama* which is responsible for the accumulation of fat in the body improves digestion. Method of administration of the drug is based on the *Kalpa* therapy in which dose of drug is increases upto a particular dose than it should be tapered to the starting dose in a period of time and in that time a particular diet should be administered. Various *Kalpa chikitsa* are mentioned in Ayurveda for the treatment of different chronic ailments for example *Pippali kalpa* also known as *Vardhmana pippali kalpa* for the treatment of *Udar roga* and *Vata* disorders, *Bhallatak kalpa* to prevent the ageing process and to promote longevity according to Acharya Charaka, in *Arsa roga* according to Acharya Susruta and according to Acharya Vagbhata after taking *Bhallataka Kalpa* Agni improves and individual gets free from *Prameha, Krimi, Kustha, Arsa Roga* and *Medo Roga*. *Eranda kalpa* in joint disorders. *Haritaki kalpa* in *udar roga*. In the case study mentioned here *Navak guggulu kalpa* was given for 22 days in increasing dose upto 6 tablets and then the dose was tapered upto 1 tablet. The dose of the *Guggulu* was treated on the basis of Basal metabolic rate i.e., BMI as:

**Table 4**

Category. no	BMI (basal metabolic rate)	Grades of obesity	Starting dose
1	25-30 kg/m <sup>2</sup>	Obese	1 tablet twice a day before meal with luke warm water.
2	30-34 kg/m <sup>2</sup>	Grade I	1 tablet thrice a day before meal with luke warm water.
3	34-40 kg/m <sup>2</sup>	Grade II	2 tablet twice a day before meal with luke warm water.
4	>40 kg/m <sup>2</sup>	Grade III	2 tablet thrice a day before meal with luke warm water.

On the basis of BMI, this patient came under category no 3 or grade II obesity where the starting dose is 2 tablets. So the drug was administered accordingly. Along with oral medications *Panchkarma* procedures i.e., *Udavartana* with *Triphala churna*+gram flour+barley flour was done for 10 days, because *Udavartna (Ruksha)* is also considered as *Kapha medo nashak*. *Janu basti* with *Sahacharadi* tail and *Erand* tail was also given for 10 days as the patient was suffering from knee joint pain because *Janu basti* helps in calming the *Vata dosha* which is responsible for the pain and stiffness over the joint.

After the whole course of treatment results were analysed, the weight of the patient got reduced from 80kgs to 72kgs in 22 days along with the reduction in the abdominal, thighs, mid arm circumferences. There is no change in the liver function test mainly ALP and serum creatine kinase which indicates that there is no reduction in the muscle mass, only the fat got reduced.

#### CONCLUSION

The patient was diagnosed with obesity or *Sthaulya roga* on the basis of examination and the treatment was planned according to the disease and on the basis of *Kalpa chikitsa*. After the course of treatment there were noticeable changes in the patient's weight and inches of body circumference. This single case report gives an initiation for a pilot or group study which helps in establishing the protocol for the *Guggulu kalpa chikitsa* in *Sthaulya roga* or obesity.

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