

# A randomised clinical trial to evaluate the effect of *Vyoshadi Saktu In Sthaulya* w.s.r to Obesity

## Research Article

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### Abstract

*Sthaulya* [Obesity] is one among the major disease of modern era In today's society majority of people are having sedentary life style, hectic schedule, which leads to various metabolic disorders and obesity. The most important cause of obesity is an energy imbalance between the calories expended which leads to the accumulation of fat. About 13% the world's adult population (11% men and 15% women in 2016). Obesity may be defined as an abnormal growth of adipose tissue resulting in more than 20% excess of expected body weight. Obesity is often expressed in terms of body mass index (BMI). *Atisthaulya* is considered as one of the *Ashtanindit purush* as described by *Acharya Charak*. Keeping in view, this burning problem of present era and its associated devastating diseases, it has been decided to do research on *sthaulya* with certain *Ayurvedic* classical remedies hence keeping these points in mind this topic is selected for study. Here the humble attempt had been made to provide better management of *sthaulya* by administering *Pathya Ahara*.

**Key Words:** *Sthaulya*, *Vyoshadi saktu*, BMI, Weight.

### Introduction

Obesity is a condition of accumulation of fat. In fat depots resulting in more than 20% excess of expected bodyweight. The body weight progressively increases and gradually the contour and configuration of the body is altered. Fat is uniformly deposited throughout the body, but in some cases may be distributed in head, neck, trunk and shoulder(1).

In today's society, we thrive on modern lifestyle, hectic schedule which leads to various metabolic disorders. The modernization and impact of western culture, the dietary habits and the lifestyle of individuals have been changed absolutely. The advancement of science and technology has added more comforts to life. Our majority of people are having irregular food habits with sedentary life style, these results in various metabolic disorders and obesity is one among them. Obesity affecting large number of population around the globe leading to serious health issues like coronary heart disease, hypertension, diabetes, respiratory illness, osteoarthritis, infertility etc.

Overweight and obesity are the fifth leading risk globe deaths. Worldwide obesity has more than tripled since 1975. In 2016 more than 1.9 billion adults, 18

years and older, were overweight. Of these over 650 million men and women were obese(2).

*Sthaulya-rog* is nearer clinical entity to obesity described by *Acharya Charaka*. *Sthaulya* is considered under *Santarpanotha janya vikara*(3), *Medo pradoshaja vikara*(4), *sleshmaja nanatmaja vyadhi*(5), *atibrumhana nimittaj vyadhi*(6), *bahu doshaja janita*(7) and one among *astonindita purusha*(8). Factors promoting *Sthaulya* are - excess intake of *Kapha pradhana ahara* (more intake of *kleda* and *Snidga ahara* among *Aharaparinamakara bhavas*), sedentary lifestyle (*sukha shayyasanam*), lack of mental stress (*harshanitya, achintya*) and decreased physical exercise (*Avyayama*) and it can also occur due to *Beeja dosha*(9).

*Acharyas* have explained *samprapti vighatana chikitsa* hence our mode of *chikitsa* is based on all these factors i.e *Medo-hara, Kaphahara and Vatashamana*. In order to maintain a healthy life *Swasthavritta palana* is desirable. *Swasthavritta* which includes *dinacharya, rutucharya, and pathya kalpanas*. *Pathya* is derived from the word *patha* means the path. Hence the drug has to be such that it shows significant action. These factors *vyoshadi saktu* mentioned under the context of *astoninditiya adhyaya* of *Charak samhita*(10).

### Materials and methods

#### Study design

Randomized clinical trial was adopted. In this clinical trial, 15 patients fulfilling the diagnostic criteria and inclusion criteria were selected.

Total number of the patients for study was 15.

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**Diagnostic criteria**

On the basis of BMI

**Inclusion criteria**

- The patient's age group between 18 to 60 years
- BMI in between 25-39.

**Exclusion criteria**

- Patients having BMI > 40 are excluded.
- Pregnant women and lactating mother.
- Diagnosed cases of endocrinal disorders and other systemic diseases.

The patient were treated with *Vyoshadi saktu*.

Sample size	: 15
Medicine	<i>Vyoshadi saktu</i>
Dosage	: 10gms <i>Vyoshadi dravyas</i> + 90gms <i>Yava saktu</i>
<i>Sahapan</i>	: 10gms <i>tila tail</i> + 10gms <i>gogruta</i> + 15gms <i>madhu</i>
<i>Aoushad sevan kala</i>	: <i>Pratam anna kaal</i> 30days
Duration	: After 30 days the treatment schedule follow up was done on 45 <sup>th</sup> day.
Total study duration	: 45 days.

**Intervention****Contents of vyoshadi saktu**

SR. No	Sanskrit Name	Botanical Name	Family and Parts used
1	<i>Shunti</i>	<i>Zinger Officinale</i> Rosc.	Zingiberaceae ( <i>kanda</i> )
2	<i>Pippali</i>	<i>Piper Longum</i> Linn.	Piperaceae ( <i>phala</i> )
3	<i>Maricha</i>	<i>Piper Nigrum</i> Linn.	Piperaceae ( <i>phala</i> )
4	<i>Vidanga</i>	<i>Embelia ribes</i> Burm.f.	Myrsinaceae ( <i>phala</i> )
5	<i>Shigru</i>	<i>Moringa Caeoleifera</i> Lam.	Moringaceae ( <i>patra</i> )
6	<i>Haritaki</i>	<i>Terminalia Chebula</i> Retz	Combretaceae ( <i>phala</i> )
7	<i>Bibitaki</i>	<i>Terminalia Bellerica</i> Roxb.	Combretaceae ( <i>phala</i> )
8	<i>Amalaki</i>	<i>Emblica Officinalis</i> Gaertn	Euphorbiaceae ( <i>phala</i> )
9	<i>Katurohini</i>	<i>Picrorhiza Kurroa</i> Royle	Scrophulariaceae ( <i>moola</i> )
10	<i>Bruhati</i>	<i>Solanum Indicum</i> Linn.	Solanaceae ( <i>phala</i> )
11	<i>Kantakari</i>	<i>Solanum Surattense</i> Burm.f.	Solanaceae ( <i>phala</i> )
12	<i>Haridra</i>	<i>Circuma Longa</i> Linn.	Zingiberaceae ( <i>kanda</i> )
13	<i>Daruharidra</i>	<i>Berberis Aristata</i> D.C.	Berberidaceae ( <i>kanda</i> )
14	<i>Paatha</i>	<i>Cissampelos Pareira</i> Linn.	Menispermaceae ( <i>patra</i> )
15	<i>Atasi</i>	<i>Linumusi Tatissinum</i> Linn.	Linaceae ( <i>beeja</i> )
16	<i>Shaliparni</i>	<i>Desmodium Gangeticum</i> Dc	Leguminosae ( <i>patra</i> )
17	<i>Hingu</i>	<i>Ferula Narthex</i> Boiss.	Umbelliferae ( <i>niryasa</i> )
18	<i>Patturshaka</i>	<i>Costus Speciosus</i> (Koenig) Sm	Zingiberaceae ( <i>moola</i> )
19	<i>Ajamoda</i>	<i>Carumrox burghi Anum</i> Dc	Umbelliferae ( <i>beeja</i> )
20	<i>Dhanyak</i>	<i>Corindrum Sativum</i> Linn.	Umbelliferae ( <i>beeja</i> )
21	<i>Chitrakmool</i>	<i>Plumbago Zeylanica</i> Linn.	Plumbaginaceae ( <i>moola</i> )
22	<i>Jirak</i>	<i>Cuminum Cuminum</i> Linn.	Umbelliferae ( <i>beeja</i> )
23	<i>Hapusha</i>	<i>Juniperus Commnis</i> Linn.	Coniferae ( <i>phala</i> )
24	<i>Sourvachalavan</i>	<i>Black salt</i>	<i>lavan</i>

Above mentioned each medicine taken 200gms

**Preparation of vyoshadi saktu**

*Yava* was taken and cleaned properly then roasted in a vessel until its appearance changes in colour white to golden brown, and then it was powdered in flour mill.

10 gms of *Vyoshadi dravyas* + 90gms *yava Saktu* + 10gms *tila taila* + 10gms *gogruta* + 15gms of *Madhu*.

**Assessment criteria**

- Objective parameters
- Weight
- BMI

**Observations**

Among 15 patients, 73% of the patients were females while 13% were male. 33% patients belong to

age group of 26-33 years, 27% of patients in the age of 42-50 years, 20% of patients were age group of 34 – 41 years rest 20% belongs to the age group of 18-25 years. About 87% patients were married and rest were unmarried. About 47% patients were from 3 *annakala* (3 times meals a day) and 47% patients were from 4 *annakala* (4 times meals a day), and rest 6% from 5 *annakala* (5times meals a day). 73% patients were having mixed diet pattern, rest 27% vegetarian. 80% of patients were not having the habit of doing *vyayam* and rest 20% were having the habit of doing *vyayam*. 33% of patients were having the height in the range of 1.42-1.50 meters, 47% where having height in the range of 1.51-1.60 meters, 13% of patients were having the height in the range of 1.61-1.70 meters, rest 7% were having 1.71-1.80 meters. 33% of patients were having

the weight range 84-90kgs, 27% patients were having weight range 63-69kgs, 20% of patients were having 72-76kgs, rest 20% were having weight range 77-83kgs. 73.33% patients were having BMI in the range of 30-34.99kg/m<sup>2</sup>, 26.66% patients were having the BMI in the range of 25-29.99kg/m<sup>2</sup>.

**Table1: Effect of medicines on weight**

Weight	Mean Weight (kg/m <sup>2</sup> )		Mean Diff.	% Relief	Paired “t” test				
	BT	AT			SD	SE	“t”	P	Significance
	76.353	70.313	6.040	7.910	0.85840	0.22164	21.630	<0.001	HS

From the above table it can be seen that there is a statistically significant difference (-17.025) (p< 0.005) this shows the significant on weight.

**Table2: Effect of medicines on BMI**

BMI	Mean BMI (kg/m <sup>2</sup> )		Mean Diff.	% Relief	Paired “t” test				
	BT	AT			SD	SE	“t”	P	Significance
	31.507	28.991	2.515	7.984	0.45046	0.11631	21.630	<0.001	HS

From the above table it can be seen that there is a statistically significant difference (-14.620) (p<0.005) this showed significant reduction on BMI.

## Discussion

The present work aimed to discuss about the *Ahara* with the view of *Ayurveda* in *sthaulya* and let the people understand that lifestyle and diet are much important as medicine. Lifestyle and diet are much important in disease management and gaining good health.

*Vyoshadi saktu* contents *Jeeraka, shunti, pippali, maricha, hingu, souvarchala, lavana, Vidanga, Shigru, Hareetaki, Amalaki, Vibitaki, Katurohini, Brihati, Kantakari, Haridra, Daruharidra, patha, Atasi, Shaliparni, Hingu, Ajamoda, Dhanyaka, Chitrakamoola, hapusha, yava saktu, tila tail, gruth, madhu*. Majority of these drugs *katu tikta kashaya rasa* predominant *dravyas* and most among them are *ushna virya and katu vipaka*, and having the property like *lekhana, deepan, pachana, anuloman, bhedhan, kapha vaata hara, medohara* activities helps to relieve *dhatvagnimandya* and also act as *srotovishodhaka*.

In *vyoshadi saktu* maximum part is *yava saktu* which is having the property of pacify *kapha and pitta, ruksha*, and does *lekhana karma*. If the *saktu* is dissolved in water and drunk, it is strengthening, enhances semen, nourishing, expels hardened faces, satisfying, sweet in taste, promotes taste and yield energy on digestion. And also it has property like *kshut, trut hara*. It relieves aggravated *kapha*, tiredness, thirst etc. and also *yava* having the property like *kapha pitta hara, sthula vilekhana* and *medohara*. *Madhu* having the property like *guru, ruksha kashaya* and *madhur rasa, katu vipaka, kapha vaata hara, lekhan and srotovishodhaka*. Properties can be used as “*Guru cha Apatarpan*” drug which is line of treatment. *Tila tail* also having similar properties including *sukshma* and *vyavayi* property. *Gruta* is *yogavahi and tridosha shamak and guru guna*.

The *Vyoshadi Saktu* most of *dravyas* are having *amapachana, deepan, medohara*, and most of drugs

## Results

The results were assessed on the basis of objective criteria such as BMI and weight.

Effect of the *Vyoshadi saktu* based on assessment of parameters after 30 and 45 days same as below.

having *katu, tikta, kashaya rasa, laghu, ruksha* properties which are indicated in *sthaulya*.

### Effect on weight

*Vyoshadi saktu* showed 6.06% reduction in the body weight.

### Effect on BMI:

*Vyoshadi saktu* showed 7.98% reduction in BMI.

### Conclusion

After the completion of the study the following conclusion were drawn, *vyoshadi saktu* shows clinically and statistically effect on weight and BMI. Thus null hypothesis was accepted alternate hypothesis rejected.

In this present study parameters were limited to BMI and weight. So further study should be conducted on larger sample with longer duration. To find better way to administer by increasing its palatability.

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