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Ayurvedic Management of *Sthaulya* (Obesity): A Case Report

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ABSTRACT

Obesity is burning health issue for society nowadays. In *Sutrasthana* of *Charaka Samhita*, in different *Adhyaya* (eg. *Astauninditiya*, *Langhanabrumhaniya*, *Santarpaniya*) causes, symptoms and treatment of *Sthaulya* are described. As an alternative approach, Ayurvedic treatment may serve as promising modality. A 17 years old male patient came in P.D. Patel Ayurveda Hospital on 22th May 2017. Patients weight was 114.8 kg and BMI was 37.51 which fairly included in obesity category according to NHI guidelines. He also had some associated complaints like exertional dyspnoea, increased appetite, excessive perspiration. He was treated with *Snehana* (*Aabhyantara* and *Bahya*), *Swedana*, *Vamana*, *Virechana*, *Niruha Basti*, *Udvardana* along with oral medicines like *Varunadi Kwatha*, *Arogyavardhini Vati*, *Triphala Guggulu*, and *Navayasa Lauha* along with prescribed dietary regimes and life style modification. He lost about 9.7 kg of weight, which was 105.1 kgs and BMI was 34.34 only in 26 days without any complications.

Key words: Obesity, BMI, Metabolic syndrome, Varunadi kwatha, Arogyavardhini Vati.

INTRODUCTION

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health. It is defined by body mass index (BMI).^[1] Obesity is one of the leading preventable causes of death worldwide.^[2] Obesity increases the risk of many physical and mental conditions. These co-morbidities are most commonly shown in metabolic syndrome, a combination of medical disorders which includes: diabetes mellitus type 2, high blood pressure, high blood cholesterol,

and high triglyceride levels.^[3] According to "The Hindu" 2007-10-12, "India facing obesity epidemic: experts", Obesity in India has reached epidemic proportions in the 21st century, with morbid obesity affecting 5% of the country's population. Due to genetic tendency of Indians towards abdominal obesity and its associated risk of related lifestyle diseases like Diabetes and Heart Disease, Ministry of Health and Family Welfare along with the Indian Council of Medical Research released updated guidelines in 2012 and according to that, Normal BMI : 18.0 - 22.9 kg/m², Overweight : 23.0 - 24.9 kg/m², Obesity : > 25 kg/m². The World Health Organization (WHO) predicts that overweight and obesity may soon replace more traditional public health concerns such as under nutrition and infectious diseases as the most significant cause of poor health.^[4]

CASE STUDY

We are presenting a case of 17 years old male patient. He came to our OPD on 22th may 2017 and diagnosed as patient of obesity. He was not suffering from any other underlying systemic pathology. Family history of

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the patient was positive for obesity. The patient presented with symptoms like Weight gain with gradual onset since 3 years, exertional dyspnea and excessive perspiration. As per *Charaka Samhita*, symptoms like *Bhara Vridhhi* (weight gain), *Chalaspik Udara Stana* (excessive movements of abdomen, breast and gluteal region), *Ati Kshuhudha* (excessive appetite), *Ati Pipasa* (excessive thirst), *Swedabadha* (excessive perspiration), *Daurbalya* (weakness) were found. On examination as objective criteria, his weight was 114.8 kgs and BMI was 37.51. He was also analysed with body fat analyzer at every follow up. So, on the basis of modern and classical symptomatology, through examination and tests he was diagnosed as a patient of grade – 2 Obesity (*Sthaulya*). He did not take any medicine previously for obesity. We started his *Ayurvedic* treatment as follows;

Treatment Plan

SN	Treatment Modality	Days	Specifications
1	<i>Snehapana</i> (As <i>Poorvakarma</i> of <i>Vamana</i>)	1 st day to 4 th day	<i>Tila Taila</i> was started with 40 ml twice a day which gradually increased up to 90 ml twice a day on 4 th day
2	<i>Sarvanga Abhyanga</i> and <i>Bhaspa Swedana</i>	5 th day to 6 th day	<i>Sarvaanga Abhyanga</i> with <i>Narayana Taila</i> and <i>Sarvanga Bhaspa Swedana</i> of <i>Nirgundi Patra</i> were done for 2 days.
3	<i>Vamana</i>	On 6 th day	<i>Madanaphala Choorna</i> – 4g. with <i>Madhu</i> was used for <i>Vamana Karma</i> .
4	Rest	On 7 th to 9 th day	No any internal medicines were given or procedures were performed. Patient was prescribed modified <i>Sansarjana Krama</i> .
5.	<i>Snehapana</i> (As <i>Poorvakarma</i> of	10 th day to 12 th day	<i>Tila Taila</i> again started with 40 ml twice a day from 10 th day which gradually increased up to 75 ml twice a day on

	<i>Virechana</i>)		12 th day.
6.	<i>Sarvanga Abhyanga</i> and <i>Bhaspa Swedana</i>	13 th day to 15 th day	<i>Sarvaanga Abhyanga</i> with <i>Narayana Taila</i> and <i>Sarvanga Bhaspa Swedana</i> of <i>Nirgundi Patra</i> was done for 3 days.
5	<i>Virechana</i>	On 15 th day	<i>Virechana Karma</i> done with <i>Eranda Sneha</i> – 40 ml with <i>Dindayala Choorna</i> – 4 g.
6	Rest	On 16 th day	No any internal or external medicines were given or procedures were performed.
7	Oral Medicine	From 17 th day to 26 th day	<ul style="list-style-type: none"> ▪ <i>Varuṇadi Kwatha</i> - 40 ml BID empty stomach. ▪ <i>Triphala Guggulu Vati</i> - 3 tabs TID before meal/snacks. ▪ <i>Arogyavardhini Vati</i> - 2 tabs TID before meal/snacks. ▪ <i>Navayasa Lauha</i> - 2 gm BD before meal/ snacks.
8	<i>Sarvanga Udavartana</i>	From 18 th day to 25 th day	From 18 th day of admission, patient was started <i>Udavartana</i> by <i>Aamalaki</i> + <i>Lodhra Choorna</i> for 30 min. followed by <i>Sarvanga Bhaspa Swedana</i> of <i>Nirgundi Patra</i> till the day before discharge i. e. for 8 days.
9	<i>Sarvanga Bhaspa Swedana</i>	From 18 th day to 25 th day	<i>Sarvanga Bhaspa Swedana</i> of <i>Nirgundi Patra</i> was given before <i>Sarvanga Udavartana</i> .
11	<i>Niruhabasti</i>	From 18 th day to 25 th day	From 18 th day of admission, patient was given <i>Niruha Basti</i> prepared with <i>Triphala Kwatha</i> 350 ml a day till the day before discharge i.e. for 8 days

12	Oral Medicine	From 21 th day to 25 th day	<ul style="list-style-type: none"> Manjisthadi Kwatha (for itching problem on back) - 40 ml BID empty stomach. i.e. for 5 days
13	Oral Medicine	SOS only for 1 day	<ul style="list-style-type: none"> Avipatikar Choorna (for Hyperacidity problem) - 2 gm BID on 12th day of treatment
14	Local Medicine	From 23 th day to 26 th day	<ul style="list-style-type: none"> Dashanga Lepa - Locally on Puschules i.e. for 4 days

Interventions

Diet: As patient was treated on IPD base so, patient was advised to have boiled *Munga* (green gram) and boiled vegetables in diet throughout course.

Exercises

- Morning and evening fast walk for 3 kms
- Kapalbhati Pranayama - 300 round (divided in 6 parts)
- Yogasana - Pascimotanasana (in form of stretching exercises - 200 times in 4 sets)

Uttanpadasana (maintain the leg at 30, 45, 90 degree for 5 seconds, 3 sets of 15 times with either leg followed by both leg)

Follow ups and outcomes

Table 1: Signs and symptoms

S N	Signs and symptoms	Initials (On first visit)	1 st follow up	2 nd follow up	3 rd follow up	4 th follow up
		22/05/17 *BT	29/05/17	06/06/17	13/06/17	16/06/17
1	Exertional dyspnea (<i>Ayase</i>	+++	++	++	+	+

	Swaskastataa)					
2	Excessive Perspiration (Swedabaddha)	+++	++	+	+	-
3	Weakness (Daurbalya)	++	+	+	+	-
4	Polydipsia (Ati Pipasa)	++	++	+	+	+
5	Polyphagia (Ati Kshudha)	+++	++	++	+	+

(++++) - Severe presentation of symptom, (+++) - Moderate presentation of symptom, (++) - Mild presentation of symptom, (+) - Least / sometimes presentation of symptom.

Table 2: Tests and Clinical examinations

S N	Tests and clinical examinations	Initials (On first visit)	1 st follow up	2 nd follow up	3 rd follow up	4 th follow up
		22/05/17 *BT	29/05/17	06/06/17	13/06/17	16/06/17
1	Weight (kgs)	114.8	109.1	105.8	105.3	105.1
2	BMI (kg/m ²)	37.51	35.59	34.54	34.38	34.34
3	Fat Mass (%)	60.7	61.9	51.4	53.4	50.2
4	Muscle Mass (%)	33.6	35.9	32.8	35.8	38.3

5	Bone Mass (kgs)	4.1	3.6	3.9	3.8	3.8
6	Water contain (%)	29	28.1	36.6	37.2	37.7
7	Waist Girth (cm)	126 cm	-	-	-	120 cm
8	Hip Girth (cm)	122 cm	-	-	-	112 cm
*Before Treatment, **After Treatment						

Table 3: Lipid Profile

SN	Lipid	Initials (On first visit) 22/05/17 *BT (mg/dl)	5 th follow up 16/06/17 **AT(mg/dl)
1	Serum Cholesterol	236	173
2	Serum Triglyceride	263	211
3	HDL	28	30
4	VLDL	32.6	42.2
5	LDL	175.4	100.8
*Before Treatment, **After Treatment			

DISCUSSION

The patient showed very encouraging results just in first follow up. He lost about 9.7 kg. of weight in 26 days and according to fat analyzer it is not water contain which helped in reducing weight but actually by reducing fat mass. At last follow up BMI of patient ranged from 37.51 to 34.34 which shows significant decrement and patient reached to class – 1 Obesity. Before treatment waist circumference of patient was 126 cm and waist / hip circumference was 1.03 which is greater than 0.9. This indicates patient was having

central Obesity.^[5] It was significant improvement in waist circumference from 126 cm to 120 cm which shows reduction in abdominal obesity. In all subjective criteria patient showed significant improvement and not only patient feel lightness in body but also is feeling energetic. Orlistat and Sibutramine etc. currently used pharmacological medicines help to lose 5 to 10 % of body weight with long term use but are having side effect like tachycardia, hypertension, headache and insomnia. While this case shows that Ayurvedic tripod approach (Diet, Exercises and Treatment) to obesity helps to lose more than 8.44 % of body weight and most importantly without any side effect in just 26 days. We found significant decrease in S. cholesterol, S. Triglyceride, LDL and VLDL along with increase in HDL after treatment which has defiantly lower down atherogenicity in patient. We found gradual weight loss and specifically decrement in fat mass throughout treatment. In relation with that hydration and muscle mass of patient were gradually improved. In association with that bone mass mostly remain intact. Overweight / Obesity (BMI of 25 to 30) confers elevated risks of many diseases. For example, overweight people experience two to threefold elevation in the risks of CAD and hypertension and a more than tenfold increase in the risk of type 2 diabetes compared with lean individuals (BMI less than 23).^[6] As patient was having Class - 2 Obesity, waist circumference 126 cm before treatment, patient was at very high risk of other life style diseases, but after treatment patient lost 9.7 kg of body weight which has defiantly lower down the risk of its morbid consequent pathologies.

All above treatments are fairly mentioned in classical Ayurveda texts;

As per *Charaka*, *Vamana* is contraindicated in *Ati Sthaulya*.^[7] But being a syndromic condition (*Bahu Doshasya Laksanama*) *Samsodhana* therapy is highly recommended for *Sthaulya* patients possessing stamina and strength.^[8] *Sushruta* has given contraindication of *Vamana* in *Sthaulya*, while it is indicated in *Medoroga*.^[9] All *Sthula* patients with *Adhika Dosh* and *Adhika Bala* should be treated with

Samsodhana therapy, including Vamana, Virechana, Ruksha Niruha, Raktamoksana and Sirovirechana.^[10] So Vamana and Virechana were planned for this patient. Ruksha, Ushna and Tikshna Basti are also suggested by Acharya Charaka^[11] and according to that we have planned Niruha Basti prepared with Trifala Kwatha. Ruksha Udvartana is the Bahya Sodhana indicated for the management of Sthaulya.^[12] For that we have used Aamalaki and Lodhra Choorna. Oral medicines are also mentioned in our texts which are as under,

Arogyavardhini Vati^[13]

It is clearly indicated as Medovinasini (causing fat loss), Sarvaroga Prasamani (curing all diseases), it performs all these works in association with Dipana, Pachana Karma and impact of Pathya and Hridya Prabhava. Arogyavardhini Vati potentiates the antioxidant activity and shown less degree of carbon tetra chloride inducing hepatic damage. It suppress the formation of free radicals so, might have contributed for antioxidant activity.

Navayasa Loha Churna^[14]

Navayasa Loha Churna described for mainly Pandu, Hridroga, Kushtha, Arsha and Kamala but in Charaka Samhita Santarpaniya Adhyaya. Charaka described many medications for Sthaulya Chikitsa. With that reference most of all drugs are ingredient of Navayasa Loha churna, even Pandu and Kustha etc., are Santarpanajanya Vyadhi. To have impact on Sthaulya and also preventing measures for other complications it is very useful. In that Trikatu is very effective in Ama Pachana which is prime cause of all the diseases. Triphala is tonic for whole body and also having property of Tridosha Shamana. Motha have property of anti-inflammatory, anti diabetic and anti helminthic effect. It's also has Lekhaniya Pachaniya and Triptighna effect. Vidanga have carminative and hepatoprotective effect. Chitraka reduces vitiated Vata and Kapha.

Varunadi Kwatha^[15]

Acharya Susruta has mentioned this Kwatha for Medovaha Srotas Dushti. They mentioned it as

"Kapha Medo Nivarana" and for Shirah Shula, Gulma, Abhyantara Vidradhi too. Also it has anti lipidemic and having property of lowering blood glucose level.

Triphala Guggulu^[16]

Acharya Sharangdhara mentioned this Yoga in Bhagandara, Gulma, Shotha and Arsha. It contains Triphala, Pippali and Guggulu. Triphala has known effect of Tridosha Shamana. Pippali helps to modulate digestive power even associated with Ama Pachana. Guggulu has Rasayana and Lekhana effect. So, combination of all these drugs maintain digestive fire and inhibit Ama production and gradually decreases extra fat from the body.

CONCLUSION

At last follow up BMI of patient ranges from 37.51 to 34.34 and weight of patient ranges from 114.8 to 105.1 kg which shows significant decrement and patient reach to upper border of class-1 obesity. A well integrated tripod of diet, physical exercises and Ayurvedic medicine give excellent results in obesity and other life style diseases. Ayurvedic treatment is more cost effective as compared to other treatment. Ayurveda can provide not only weight loss but sense of well being and quality life style to obese person. There is no any side effect observed for this Ayurvedic medicine. This case report suggests standard clinical practice guidelines for obesity as black box (Individual) method and gives reference to examine it on research bases by testable hypothesis.

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