

## “A Clinical Study on Effect of Matra Basti with Triphaladya Tailam in Sthoulya W.S.R. To Obesity”

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### ABSTRACT

Obesity is one of the major and basic causes of Life style disorders. Obesity is also one of most effective disease which affects one's social, physical as well as mental status. Worldwide according to WHO around 13% of the world populations are affected with Obesity. In Ayurveda Sthoulya is regarded as Medoroga, which is the disorder of MedoDhatu which results in impairment of fat tissue and fat metabolism. Since Basti is considered as nearest route of absorption through intestine by the virtue of the drugs present in the Triphaladya Taila has the property of Lekhana which intern helps in reduction of body weight, which in turn counter attack the disease condition Sthoulya. Hence in the present study as attempt is done to see the comprehensive effect of Triphaladya Taila Matra Basti in Sthoulya with special reference to Obesity. Clinical study was conducted among 30 patients diagnosed with the Sthoulya were selected randomly with Inclusion and Exclusion criteria. They were subjected to Matra Basti with Triphaladya Taila after Sthanika Abhyanga and Sweda for 14 days. Assessment was conducted on before the treatment, after the treatment and at follow up. Among the Subjective and objective parameter Matra Basti using Triphaladya Taila has the significant effect in the Gurugatratwa and AlpepiCheshtithe Shwasa, BMI, Waist circumference. Moderately effected in Swedadhikya, Dourgandhyatwa and not effective in ChalaSphik UdaraSthana.

**Key words:** Sthoulya, Matra Basti, Obesity, Triphaladya Taila

### I. INTRODUCTION

This era of modernization, science and technology development resulted into sedentary lifestyle. Also change in dietary habits all this lead into lifestyle disorders. Obesity is major among them. In India more than 135 million people suffering from obesity<sup>1</sup>. The prevalence of obesity

in India varies due to age, gender, geographical environment, socio-economic status etc. which has the complications like Cardio vascular diseases, Diabetes Mellitus, Infertility, CA, Endocrine disorders, Blood Pressure etc.

Obesity can be correlated to Sthoulya in Ayurveda. Which is a SantharpanotthaVyadhi and considered as one among Ashtanindita Purusha<sup>2</sup>. Due to intake of more Guru, Madhura, Sheeta, SnigdhaKaphakaraAhara, following Divaswapna, Adhyashana, Achinta<sup>2</sup> will vitiate KaphaDosh along with Vata affects Agni from there MedoDhatu causes Sthoulya. Due to Avarana of all the Srotas by the Medas, there is Vriddhi of KoshtagataVata (SamanaVayu), which in turn causes Atisandhukshana of Jataragni. But consuming the food more frequently causes Medovriddhi and which ultimately leads to Sthoulya<sup>3</sup>.

Symptoms like ChalaSphik, Udara, Sthanawith the AyathopachayaUtsahaand Ayushohra, Javoparodha, KricchaVyavaya, Daurbalya, Daurgandhya, Swedabadha, Kshudhatima trata, Pipasaatiyoga<sup>4</sup>.

Treatment for this Sthoulyaincludes Atarpana, KaphaharaChikitsaalso Bastiis indicated in Sthoulya<sup>5</sup>. And as Matrabastiis indicated in all specially in Sukumarapeople<sup>6</sup>. So it can be opted as the line of management.

Triphaladya Taila is used for the Matra Basti. Which is processed with Haritaki, Vibhitaki, Amalaki, Ativisha, Murva, Trivrith, Chitraka, Vasa, Nimbi, Aragvada, Vacha, Saphaparna, Haridra, DaruHaridra, Guduchi, Indravaruni, Krishna, Kushta, Sarshapa, NagaraChurna for Kalka where drugs possess the property of KaphaVataHarana, Ruksha, TeekshnaGuna, UshnaVeerya. And TilaTailaalong with SurasadiGana Kashaya<sup>7</sup>.

Hence the study is taken as to evaluate the effect of the Matrabasti using Triphaladyataila in Sthoulya.

**Aims and objectives**

To evaluate the efficacy of Triphaladya Taila MatraBasti in Sthoulya.

**II. METHODS**

**Source of data:** Patients of either sex diagnosed to be suffering from Sthoulya and fulfilling the inclusion criteria is selected from OPD and by conducting special camps in Karnataka Ayurveda Medical College Hospital, Mangalore.

**Pharmacological source:** The formulation selected for research work, TriphaladyaTailam prepared in Bhaishajya Kalpana department, Karnataka Ayurveda Medical College.

**Diagnostic criteria-**

- 1) UdaraparshwaVruddhi.
- 2) Swedadhikyata.
- 3) Sphik Lambana.
- 4) Udara Lambana.
- 5) Gurugatrathva.
- 6) Alpepi Cheshtithe Shwasa.
- 7) Patient who has the BMI more than 25kg/m<sup>2</sup>
- 8) Patient who has Waist circumference more than 102 cm (men) and 88 cm (women).

**Exclusion criteria-**

1. Increased weight associated with underlining Endocrine pathologies and Genetic disorders.
2. Pregnancy and Lactating women.

Patients will be given with the 72 ml of TriphaladyaTaila as Matrabasti for 14 days.

<b>Poorva Karma:</b>	<ul style="list-style-type: none"> <li>• Abhyanga is done with TriphaladyaTaila followed by NadiSweda.</li> <li>• Patient is advised to have Light Diet.</li> <li>• Patient is asked to evacuate bowel and bladder.</li> <li>• Patient is made to lie in the left lateral position with the right leg flexed.</li> </ul>
<b>Pradhana Karma:</b>	<ul style="list-style-type: none"> <li>• The Tip of the catheter is smeared with oil.</li> <li>• The anal orifice is lubricated with oil.</li> <li>• The catheter is then introduced into the anal canal till 4- 6 inches.</li> <li>• When all the oil is pushed into the rectum, the catheter is gently pulled out.</li> </ul>
<b>Paschath Karma:</b>	<ul style="list-style-type: none"> <li>• SphikThadana is done.</li> <li>• Patient is made to lie on supine position.</li> <li>• Patient is made to rise the legs by flexing the hip 3-4 times.</li> </ul>

The Treatment was assessed based on the Subjective and Objective criteria with grading

**Drug profile**

No.	Drugs	Amount
1	Haritaki, Vibhitaki, Amalaki, Ativisha, Murva, Trivrith, Chitraka, Vasa, Nimbi, Aragvada, Vacha, Sapthaparna, Haridra, DaruHaridra, Guduchi, Indravaruni, Krishna, Kushta, Sarshapa, NagaraChurnafor Kalka	Equal quantity 1 Karsha (12gm) each drug that is 242 gm
2	TilaTaila	1 ltr
3	SurasadiGanaKashaya	4 ltr

- ❖ For 1 ltr of TriphaladyaTaila
- ❖ Taila prepared based on TailapakaVidhi
- ❖ TailaPakadone till it getskharaPaka

**Subjective parameters-**

1) <b>Gurugatrata.</b>	G <sub>0</sub> - No heaviness of body G <sub>1</sub> - Mild heaviness of body at particular time of the day G <sub>2</sub> - Mild- moderate heaviness of body throughout the day G <sub>3</sub> - Heaviness of the body throughout the day
2) <b>Swedadhikyata.</b>	G <sub>0</sub> -Usual sweating after heavy works/fast movements/hot season G <sub>1</sub> -Profuse sweating after moderate works/movements G <sub>2</sub> -Profuse sweating after little works/movements G <sub>3</sub> -Profuse sweating at rest or cold season
3) <b>Dourgandhyata.</b>	G <sub>0</sub> - No foul smell from the body/sweat G <sub>1</sub> - Mild foul smell of the body/ sweat G <sub>2</sub> - Moderate foul smell of the body/ sweat G <sub>3</sub> - Intolerable smell of the body/ sweat
4) <b>AlpepiCheshtiteSh wasa</b>	G <sub>0</sub> - No tiredness other than heavy physical work G <sub>1</sub> - Mild tiredness after moderate amount of physical work G <sub>2</sub> - Tiredness after moderate physical work but not on walking G <sub>3</sub> - Tiredness after mild physical work/ even after walking
5) <b>ChalaSphik, Udara, Sthana</b>	G <sub>0</sub> - Properly maintained physical stature G <sub>1</sub> - Mild fat deposition in thigh, gluteus, abdomen and breast region/round type of body stature G <sub>2</sub> - Moderate fat deposition in thigh, gluteus, abdomen, breast region mild flabbiness G <sub>3</sub> - Excessive fat deposition in thigh, gluteus, abdomen, breast region flabbiness

**Objective parameters-**

1. Weight.
2. BMI (Body Mass Index) more than 25kg/m<sup>2</sup>
3. Waist circumference more than 102 cm (men) and 88 cm (women).

**III. OBSERVATION**

The data collected during the clinical study on various parameters which gives significant clues on the etiopathogenesis progression made in this regards are analytically compounded. Out of 30 samples 15 (50%) of patients lies between the age group of 21- 30 years, 13 (43.5%) of patients lies between the age group of 31-40 years, 2 (6.5%) patients lies between the age group of 41-50 years. 10 (33.34%) are Male and 20 (66.64%) are Female. 26 (86.64%) are from Hindu religion and 4 (13.34%) are from Christian religion. 1(3.34%) is from Lower Middle Class, 11 (36.67%) are from Middle Class, 18 (60%) are from Upper Middle Class Socio economic status. 1 (3.34%) went to high school, 6 (20%) went to PU, 20 (66.67%) completed Graduation, 3 (10%) completed Post- graduation. 3 (10%) are students, 5 (16.67%) are House Wives, 4 (13.34%) are work as Teachers, 9 (30%) are works in IT, 3(10%) does

Business, 2 (6.67%) are Pharmacists, 4 (13.34%) are Bank employees. 4 (13.34%) are vegetarians and 26 (86.67%) are Non vegetarians. 3 (10%) are of Vata- Pitta Prakrithi, 7 (23.34%) are of Pitta-KaphaPrakrithi, 17 (56.67%) are of Kapha-VataPrakrithi, 3 (10%) are of Vata- Pitta-KaphaPrakrithi. 9 (30%) will get Sound sleep, 4 (13.34%) are has Disturbed Sleep, 17 (56.67%) has the habit of Day sleep. 16(53.34%) patients are does not practicing any type of exercise, 1 (3.34%) does proper exercise, 13 (43.34%) follow Regular Exercise.

**STATISTICAL ANALYSIS**

The effect of the treatment are marked by using Subjective and objective Parameter. Subjective parameters are like Gurugatrata, Swedadhikya, Dourgandhyatwa, AlpepiCheshtiteShwasa, ChalasphikUdaraSthanawhich are analyzed using the Wilcoxon Signed Rank test. Which is summarized as Median, Inter Quartile Range, Z value and P Value for Before Treatment(BT) vs After Treatment (AT) AND Before treatment (BT) vs Follow Up (FU). Objective parameters like Weight, BMI, Waist circumference analyzed using Paired T test which is summarized as Mean and Standard Deviation, T value and P value for Before

the Treatment (BT) vs After Treatment (AT) and Before the Treatment (BT) vs Follow Up (FU) and they represented in terms of Standard Deviation (SD) and Standard Error (SE). The obtained results were interpreted as-

Insignificant with  $p > 0.05$   
 Moderately significant with  $p < 0.01$   
 Highly significant  $p < 0.001$

#### IV. RESULTS

##### Effect of TriphaladyaTailaMatraBasti on Grurugatratwa

Criteria	Effect	Median	IQR(Q3,Q1)	Z value		P value	
Gurugatratwa	BT	2.00	2.00, 1.00	AT-BT	-4.630	AT-BT	<0.001
	AT	1.00	1.00,1.00				
	FU	1.00	1.00,1.00	FU-BT	-4.347	FU-BT	<0.001

##### Effect of TriphaladyaTailaMatraBasti on Swedadhikya

Criteria	Effect	Median	IQR(Q3,Q1)	Z value		P value	
Swedadhikya	BT	1.00	2.00, 1.00	AT-BT	-3.000	AT-BT	.003
	AT	1.00	1.00,1.00				
	FU	1.00	1.00,1.00	FU-BT	-3.162	FU-BT	.002

##### Effect of TriphaladyaTailaMatraBasti on Dourgandhyata

Criteria	Effect	Median	IQR(Q3,Q1)	Z value		P value	
Dourgandhyata	BT	1.00	1.00, 1.00	AT-BT	-2.714	AT-BT	.007
	AT	1.00	1.00, .00				
	FU	1.00	1.00, .00	FU-BT	-2.714	FU-BT	.007

##### Effect of TriphaladyaTailaMatraBasti on AlpepiCheshtitheShwasa

Criteria	Effect	Median	IQR(Q3,Q1)	Z value		P value	
AlpepiCheshtithe Shwasa	BT	2.00	2.00, 1.00	AT-BT	-4.472	AT-BT	<0.001
	AT	1.00	1.00, .00				
	FU	1.00	1.00, 0.25	FU-BT	-4.300	FU-BT	<0.001

##### Effect of TriphaladyaTailaMatraBasti on ChalaSphikUdaraSthana

Criteria	Effect	Median	IQR(Q3,Q1)	Z value		P value	
ChalaSphikUdaraSthana	BT	2.00	2.00, 1.00	AT-BT	-1.732	AT-BT	.083
	AT	2.00	2.00, .00				

				FU-BT	-4.672	FU-BT	<0.001
	FU	15.50	23.25, 7.75				

**Effect of TriphaladyaTailaMatraBasti on Weight, BMI, Waist circumference**

Variables	N	Mean		Mean	SD of BT &AT		Standar d Deviati on	T value	P value
		BT& AT	BT& FU		BT	AT			
Weight BT- AT	30	BT	AT	2.0167	BT	AT	1.3802	8.003	<0.001
		69.717	67.70		5.8275	6.052			
Weight BT- FU	28	BT	FU	2.1964	BT	FU	1.3900	8.361	<0.001
		69.982	67.79		5.9418	6.250			
BMI BT- AT	30	BT	AT	.7967	BT	AT	.8045	5.424	<0.001
		27.777	26.980		1.5721	1.6437			
BMI BT- FU	28	BT	FU	.8893	BT	FU	.7857	5.989	<0.001
		27.832	26.94		1.5914	1.692			
Waist Circumfe rence BT- AT	30	BT	AT	3.100	BT	AT	1.447	11.736	<0.001
		102.13	99.03		4.904	4.351			
Waist Circumfe rence BT- FU	28	BT	FU	3.107	BT	FU	1.474	11.153	<0.001
		102.18	99.07		4.989	4.455			

**V. DISCUSSION**

Sthoulya is a Kaphapradhana and Medopradoshajavyadhi. The chikitsa for this condition is guru Atarpana as it is a santharpanavyadhi. Also the Triphaladyataila is mentioned under the Sthoulyachikitsa . In Sthoulyachikitsaadhikara Acharyas explains about the Rooksha, teekshna, ushnabasti .Also there is explanation about the Triphaladyataila in the Sthoulyarogadhikara which also can be used as Matrabasti.

The effect of the treatment assessed based on the subjective and objective parameters. **Gurugatratwa** The effect of the Matrabasti before the treatment and after treatment at follow up shows the statistical significance with the P value is <0.001. So there is significant improvement in Gurugatratwa.

**Swedadhikya** The effect of the MatraBasti before treatment and after treatment and at follow-up statistically shows as moderately significant with

the p value of .003 (BT-AT), .002 (BT-FU). So there is moderate improvement in Swedadhikya.

**Dourgandhyata** The effect of the MatraBasti before treatment and after treatment and at follow-up statistically shows as moderately significant with the p value of .007. So there is moderate improvement in Dourgandhyatha

**AlpepiCheshtitheShwasa** he effect of the Matrabasti before the treatment and after treatment at follow up shows the statistical significance with the P value is <0.001. So there is significant improvement in AlpepiCheshtitheShwasa

**ChalaSphikUdaraSthana** Here the effect of the matraBasti is statistically nonsignificant at before the treatment and the after the treatment with the P value of .083. And it is statistically significant at Before the treatment to Follow up with the p value of <0.001. So there is no improvement in the ChalaSphikUdara

**Weight** The effect of the Matrabasti before the treatment with the mean value 69.71 reduced into

67.70 after treatment and 67.79 at follow up shows the statistical significance with the P value is  $<0.001$  with significant improvement.

**BMI** The effect of the Matrabasti before the treatment with the mean value 27.777 reduced into 26.980 after treatment and 26.94 at follow up shows the statistical significance with the P value is  $<0.001$  with significant improvement.

**Waist Circumference** The effect of the Matrabasti before the treatment with the mean value 102.13 reduced into 99.03 after treatment and 99.07 at follow up shows the statistical significance with the P value is  $<0.001$  with significant improvement.

#### Mode of Action

The MatraBasti using TriphaladyaTaila which acts more with the of KaphaVatahara or Lekhana property due to the drugs used. So it does the Amaharana along with that it does the Improves the Agni by regulating Vata. So that MedodhatwagniMandya which leads to MedaSanchaya will be controlled and reduced. So that there will be prevention of DooshitaMedaSanchaya. The Veerya of Bastiis conveyed to Apana and then Samanavata which may regulate the function of Agni it then goes to Udana, Vyana, and Prana, thus providing its efficacy all over the body, at the same time Bastiby pacifying Vata restores the disturbed Kapha and Pitta at their Moolasthan and thus helps in the Samprapthivikhatana, Samshodhana, Samshamana, also it does the Karshana of Sthoola. According to the modern pharmacology, the rectal route is a potent mode of drug administration as palatability is invalid, larger volume can be administered, larger absorptive surface, longer retention, Absorption is the process by which drugs enter systemic circulation. Pharmacokinetic studies have also proved that drugs administered via rectum can achieve higher blood levels of the drug than oral route due to partial avoidance of hepatic first-pass metabolism. The rectum has a rich blood and lymph supply and drugs can cross the rectal mucosa as they can other lipid membranes. Thus, un-ionized and lipid-soluble substances are readily absorbed from the rectum. The portion absorbed from the upper rectal mucosa is carried by the superior haemorrhoidal vein into the portal circulation, whereas that absorbed from the lower rectum enters directly into the systemic circulation via the middle and inferior haemorrhoidal veins. Then there will be Action of the chemicals with the free fatty acids and the triglycerides. They will move to the large intestine by hyper osmosis and it will be excreted.

#### VI. CONCLUSION

Demographic data shows the Most of the females aged between the 21-30 belonging mostly to Middle class or Upper middle class with the sedentary occupations, with VataKaphaPrakriti are predominant in the study. TriphaladyaTaila which has the KaphaVata Hara, Lekhaneeya property with UshnaVeerya drugs. MatraBasti of the TriphaladyaTaila is significant in the Gurugatratwa, Swedadhikya, Dourgandhyata, AlpepicheshtitheShwasa, ChalaSphikUdaraSthana. Objective Parameters like BMI, Weight, Waist circumference. MatraBasti using TriphaladyaTaila has the Significant effect in the Gurugatratwa and AlpepiCheshtitheShwasa, BMI, Waist circumference with P value  $<0.001$ . Moderately effected in Swedadhikya, Dourgandhyatwa and non Significant in ChalaSphikUdaraSthana. Out of 30 patients 47% patients found mild remission, 33% of them found moderate remission and 23% of patients found better progression from the disease condition

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