

## A COMPARATIVE CLINICAL STUDY OF MADHUTAILIK KAL-BASTI AND UDVARTANA WITH MADHUTAILIK KALA BASTI IN MEDOROGA WITH SPECIAL REFERENCE TO OBESITY.

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### ABSTRACT

**Background:** Madhutailika Basti is a type of 'Aasthaapana Basti' also termed as 'yapna basti'. This unique basti contains madhu and taila as main ingredient, hence this basti is named as Madhutailika Basti. Udvartana means rubbing with dry medicated powder on body. Udvartana normalize Kapha and liquefies Meda given in Medoroga. **Objectives:** To Compare the effect of *Madhutailik Basti* with *Triphala Churna Udvartana* in Medoroga with special reference to obesity. **Methodology:** Total 60 patients having signs and symptoms of Medoroga and Age group of 20 to 60 years of either sex and eligible patients for basti chikitsa and Udwartan were selected. **Group A-** advised *Madhutailik Kala Basti* in the dose of 320 ml followed by Til tail Matra Basti in the dose of 60 ml and **Group B** advised *Udvartana* done with *Triphala churna* all over the body along with *Madhutailik kala basti* were given. **Results and Conclusion:** In Group-A the mean reduction in Sharir bhar(Weight) observed was 3 kg. while in Group-B, the mean reduction of weight was 4.20 kg.

**Keywords:** Madhutailika Basti, Udvartana, Sharir bhar, yapna basti, Medovrudhhi.

## Introduction:

Acharya Charaka coined another term "Sthaulya" for Medoroga in context of Ashtounindita Purusha. A person having pendulous appearance of *Sphika* (Hip), *Udara* (Abdomen) and *Stana* (Chest) due to excess deposition of *Meda* along with *Mamsa Dhatu* and also having unequal or abnormal distribution of *Meda* with reduced zeal towards life is called "Atisthula".<sup>1</sup> According to Acharya Sushruta Snehā, Sweda, Gaṭrasnigdhatā, Snigdha Gaṭrata Drudhatva and Asthipushti are the functions of Medadhātu. In Sthaulya, over nourishment of only Meda dhatu cause malnourishment of all other dhatus including Asthi Dhatu.<sup>2</sup> Medodhatu vridhi causes Snigdhatā of Shareera, Udara, Parshvavidhi, Kasa, Shwasa, Hikka, Daurgandhatā of Shareera which are the signs of Medoroga. Role of Ahara rasa is very significant in deciding the pramana of meda dhatu in the body. Sushruta in Sutrasthana has highlighted this fact by quoting that "the quantity and quality of ahara rasa in the shareera is responsible for sthoolta or karshyata". Symptoms related to Medodushti like Atinidra, Tandra, Alasya, Vistrashariragandha, Angagaurava, Shaithilya etc. can be considered as Purvarupa of Medoroga.<sup>3</sup> Acharya Charak Said that basti is an Ardha Chikitsa or *poorna chikitsa*. It is the best remedy for morbid *vata*, using various combinations of ingredients.<sup>4</sup> Basti is not only best for Vata disorders it also equally effective in correcting the morbid Pitta, Kapha and Rakta.<sup>5</sup>

'Maadhutailika Basti', a type of 'Aasthaapana Basti' also termed as 'yapna basti. This unique basti contains madhu and taila as main ingredient, hence this basti is named as madhutailika

basti.<sup>6</sup> Udvartana is a process in which massage is done with some pressure in an opposite sequence (*pratiloma gati*). Triphala powders are used during this procedure for Udawartan. Udvartana means rubbing with dry medicated powder on body. Udvartana normalize Kapha and liquefies Meda. It gives firmness to the body, smoothness to skin and increase its complexion.<sup>7</sup> Acharya Sushruta describes that Udvartana helps to restore the deranged Vayu of the body to its normal condition. It liquefies Kapha and Meda, gives smoothness and cleanness to the skin and imparts firmness to the limb.<sup>8</sup>

So, in this comparative clinical study, total 60 patients were recruited to see the effect of Madhutailik basti and Udvartana With Madhutailik Kala Basti in Medoroga with special reference to obesity.

## Aim and Objectives:

### Aim:

A Comparative Clinical Study of Madhutailik Kal-Basti and Udvartana with Madhutailik Kala Basti in Medoroga with special reference to Obesity.

### Objectives:

1. To study the effect of *Madhutailik Basti* with *Triphala Churna Udvartana* in Medoroga With Special Reference to Obesity.
2. To Compare the effect of *Madhutailik Basti* and *Triphala Churna Udvartana* with *Madhutailik Basti* in Medoroga With Special Reference to Obesity.

## Materials and Methods:

**Study design-** Comparative Clinical Study

**Sample size :** Total 60 diagnosed patients of Sthoulya(obesity).

**Sampling Technique :** Purposive Sampling

**Study setting :** *Panchakarma / Kayachikitsa* OPD of attached Hospital with Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar, Pune.

**Ethical clearance:** An institutional ethical clearance was obtained prior to start of study. A well-informed consent was obtained from each patient in the language understood by the patients.

#### **Method of Selection of Study Subjects:**

Patients having signs and symptoms of *Medoroga* and age group of 20 to 60 years of either sex and eligible patients for *basti chikitsa* and *Udwaran*. Patients willing to discontinue the treatment and excluded if any adverse effects develop during the treatment.

#### **Method of Administration:**

**Duration of therapy-** Total 15 days (*Kala basti* format)

From day 1<sup>st</sup> *Tila Taila Matra basti* and *Madhutailik Basti* alternatively were given and on last 3 days *Tila taila Matra basti* were given.

#### **Group management :**

**Group A** - *Madhutailik Kala Basti* in the dose of 320 ml followed by *Til tail Matra Basti* in the dose of 60 ml given per rectum early morning.

**Group B-** *Udvaratana* done with *Triphala churna* all over the body along with *Madhutailik kala basti* were given as per above procedure.

Treatment were given for 15 days Daily assessment and follow up on 7<sup>th</sup>, 15<sup>th</sup>, 30<sup>th</sup> day

#### **Standard operating method of Administration:**

##### **Basti Preparation : 9**

*Basti* formulation were prepared according to *Sharangdhara Samhita* as 1:16:8 (*Eranda Bharad + Shatapushpa:Water:kvatha*). In a vessel, 80 gms of *Eranda Bharad + Shatapushpa* 20 gram + 1280 ml of water was added to it. It was boiled at low flame without lid. It was reduced up to 160 ml. The prepared filter *Kvatha* were kept aside. In another

vessel, 80 ml of *Madhu* + 10 gms of *Saindhava* was mixed with *Mathani Yantra*, 80 ml *Tila Taila* were added to it. It was mixed well with *Mathani Yantra*. Then 160 ml *Prepared filter Kwatha* was added and mixed well to form homogeneous mixture of *Madhutailik Basti* of *matra* 320 ml.

A well prepared *Basti Dravya* should not run quickly out of the hand nor should it stick or remain steady on the hand. It should be uniform mixture without separation (*Samhata*) of its contents.<sup>10</sup>

#### **Standard operating method of Administration of Basti 11**

##### **Pre Basti Management (Purvakarma)**

*Pachana* were given by *Musta Churna* for 2gm *Vyanodana Kala* (after meals) On the day of *Basti*, *Sthanik Snehana* (local external oleation) with sesame oil and *Sthanik Nadi Swedana* (local sudation) at low back and abdomen were done.

##### **Pradhan Karma-**

Patient was asked to lie down in left lateral position i.e. Left leg were asked to keep straight and right leg folded. *Basti Netra* (simple rubber catheter no -10/11) were attached to *basti putaka* (enema pot). The Column of catheter were filled with *Basti Dravya* and air were removed. Sesame oil were applied to anal opening and catheter tip. with proper care 4 *angula* of rubber catheter were introduced per rectum. Then patient was asked to take deep inspiration. Then the enema pot was kept upward to allow *basti* to enter into the rectum by keeping little quantity behind.

##### **Paschat Karma-**

The patient was asked to lie down comfortably on supine position. Then *Sphik Tadana* were done to achieve *Basti Pratyagama* and it was observed by

*prashna pariksha*. After *basti Pratyagama* patient was advised to take bath with *sukhoshna jala* and *laghu bhojan* were advised.<sup>12</sup>

### UDVARTANA

**(Purvakarma):** The Patient who is fit to undergo *Udvartana* were taken to the *panchakarma* treatment room.

#### Pradhan Karma-

Patients is asked to seat with both the legs extended in this state *Udvartana* done to the Shoulders, hands and legs. After lying on the back side of the body patient(right and left) get the *Udvartana* to the face, chest, abdomen , groin and legs. Similarly, same procedure done on right hand , right leg, right ear, neck ,back, lumbar region, buttocks, thighs, and fore legs.

#### Pashchat Karma -

After completion of *Udvartana*, patient was asked to take half an hour rest, not be exposed to the air and also advised to take hot water bath after half an hour.

### Observations and results:

#### Basic demography:

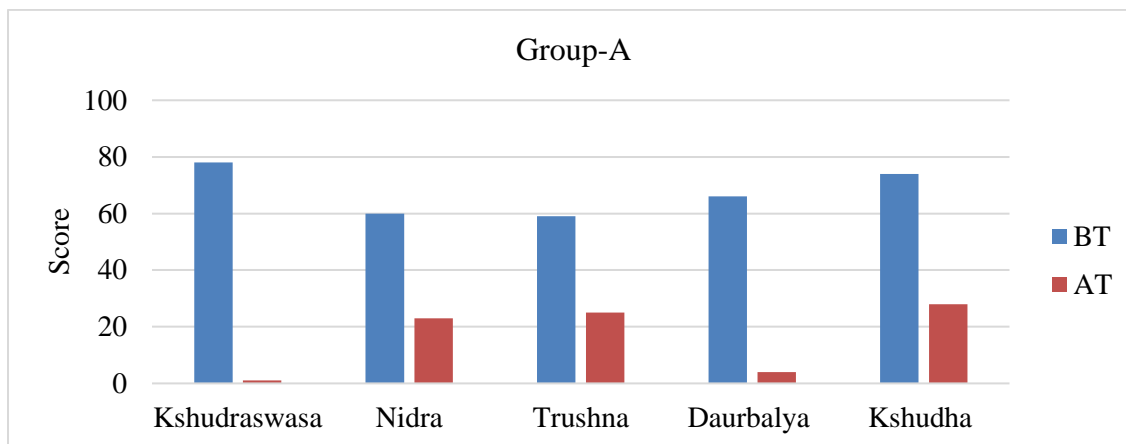
In this study 60 patients having age of 20 to 60 years of *Sthaulya* were studied. In this study, totally 22 [73.33%] were male and 38 [12.67%] were female while more female was recruited it may be due random selection of patients. Out of 60 patients' number of patients found in age group 20-30 were 06 [10%], 24[40%] in 30 to 40 age group, 19 [31.67%] were in 41 to 50 yrs. of age group while 11 [18.33%] in 50-60 years of age group in numbers and percentage respectively. Occupation Status shows that out of 60 patients, 33 [55%] were Housewives, 17 [28.33%] were in Service, 04[6.67%] were farmers, while 06 [10 %] patients were having their own business. Out of 60 patients, 52[86.7%] were having mixed type diet and only 08[13.3%] purely vegetarian. Most of patients were mixed type of diet.

### Clinical Observations:

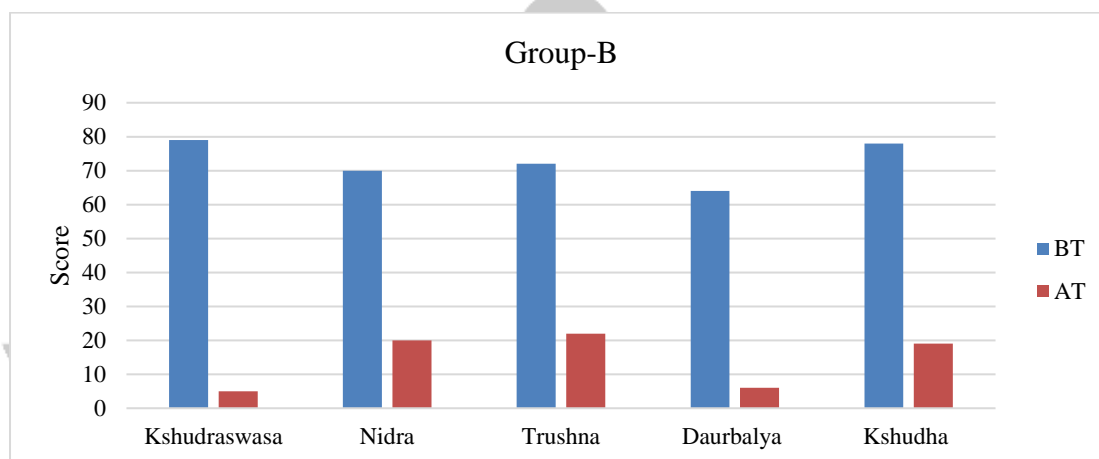
**Table no.1 Percentage of Relief (Subjective Criteria) in Each Symptom of *Sthaulya*:**

Sr. No	Symptoms	Group-A			Group- B		
		BT	AT	% of Relief	BT	AT	% of Relief
1	Kshudraswasa	78	01	98.7	79	05	93.7
2	Nidra	60	23	61.7	70	20	71.4
3	Trushna	59	25	57.6	72	22	69.4
4	Daurbalya	66	04	93.9	64	06	90.6
5	Kshudha	74	28	62.2	78	19	75.6

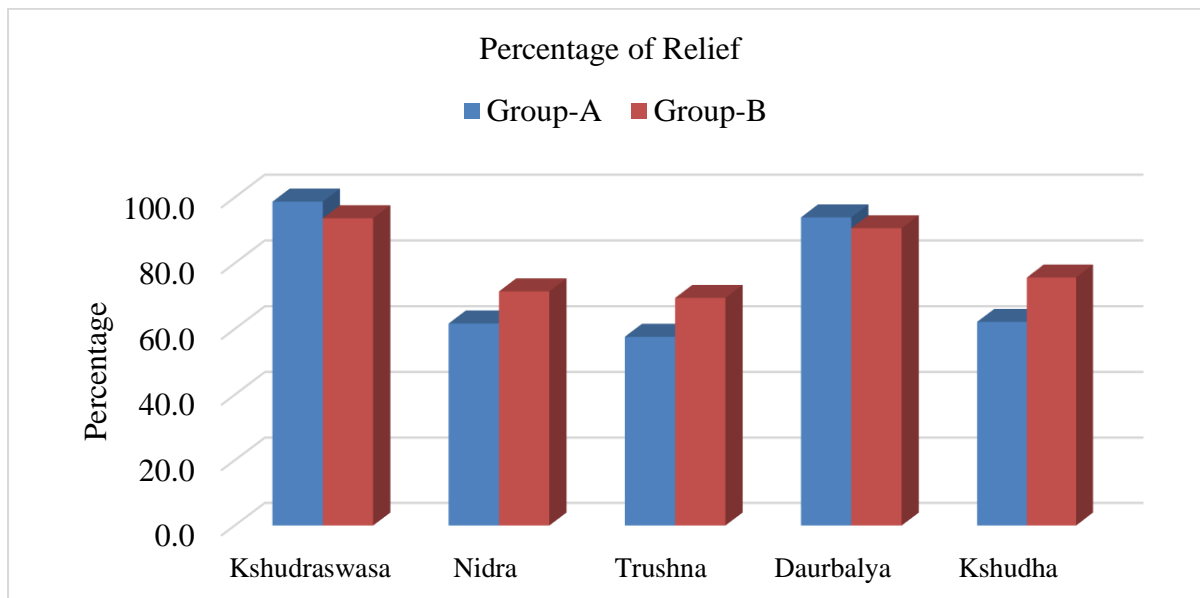
**Graph 1: Before and After Treatment score(Subjective Criteria) in patients of Sthaulya in Group-A**



**Graph 2 Before and After Treatment score(Subjective Criteria) in patients of Sthaulya in Group-B**



**Graph 3: Percentage relief (Subjective Criteria) in patients of Sthaulya in both Group**



**Table No.2 Percentage of Relief (Objective Criteria) in Each Parameters of 60 Patients of Sthaulya:**

Sr. No	Parameters	Group-A			Group- B		
		BT	AT	% of Relief	BT	AT	% of Relief
1	Sharir Bhara(Wt)	81	78	3.70	87.8	83.6	4.78
2	BMI	30.5	30.3	0.7	32.7	31.3	4.28
3	Waist /Hip ratio	0.86	0.86	0.00	0.86	0.85	1.16

**Table No.3 Wilcoxon Signed Rank Test of Symptom score of Sthaulya of Group-A :**

No	Symptoms	Mean ± SD		Median		Sum of +Ranks (T <sub>+</sub> )	P Value
		BT	AT	BT	AT		
1	Kshudraswasa	2.60±0.49	0.03±0.18	3	0	465	<0.001
2	Nidra	2.0±0.83	0.76±0.43	2	1	253	<0.001
3	Trushna	1.96±0.66	0.83±0.37	2	1	300	<0.001
4	Daurbalya	2.20±0.40	0.13±0.34	2	0	465	<0.001
5	Kshudha	2.46±0.77	0.93±0.58	3	1	417	<0.001

In Group-A, in symptom Kshudraswasa, Nidra, Trushna, Daurbalya, Kshudha the p value observed was <0.05 which was statistically considerably Highly significant (p<0.005).

**Table No.4 Wilcoxon Signed Rank Test of Symptom score of Sthaulya of Group- B :**

No	Symptoms	Mean $\pm$ SD		Median		Sum of +Ranks (T <sub>+</sub> )	P Value
		BT	AT	BT	AT		
1	Kshudraswasa	2.63 $\pm$ 0.49	0.16 $\pm$ 0.37	3	0	465	<0.001
2	Nidra	2.33 $\pm$ 0.47	0.66 $\pm$ 0.47	2	1	465	<0.001
3	Trushna	2.40 $\pm$ 0.49	0.73 $\pm$ 0.44	2	1	465	<0.001
4	Daurbalya	2.13 $\pm$ 0.43	0.20 $\pm$ 0.40	2	0	465	<0.001
5	Kshudha	2.60 $\pm$ 0.49	0.63 $\pm$ 0.49	3	1	465	<0.001

### Effect of Therapy on Symptoms of Sthaulya in Group- B Statistically:-

In Group-B, in symptom Kshudraswasa, the Mean  $\pm$  SD value obtained Before Treatment (BT) was 2.63 $\pm$ 0.49 and After Treatment(AT) it was changed as 0.16 $\pm$ 0.37 which was statistically considerably Highly significant (p<0.001).

Similarly, in symptom like Nidra, Trushna, Daurbalya, Kshudha the p value observed was <0.05 which was statistically considerably Highly significant (p<0.005). So it is concluded that there is significant difference in before treatment and after treatment status due to intervention and not by chance.

**Table No.5 Comparison between Two Group w.r.t Symptoms Score of 60 Patients of Sthaulya By Mann-Whitney 'U' Test**

No	Symptoms	Mean $\pm$ SD		U statistics		P Value
		Gr-A	Gr-B	U'	U	
1	Kshudraswasa	2.56 $\pm$ 0.56	2.46 $\pm$ 0.57	493.5	406.5	0.5180
2	Nidra	1.23 $\pm$ 0.93	1.66 $\pm$ 0.60	568	332	0.0791
3	Trushna	1.13 $\pm$ 0.70	1.66 $\pm$ 0.60	616	284	0.01
4	Daurbalya	2.06 $\pm$ 0.58	1.93 $\pm$ 0.52	501	399	0.4437
5	Kshudha	1.53 $\pm$ 1.19	1.96 $\pm$ 0.55	514.5	385.5	0.3345

### Comparison between Two Group w.r.t Symptoms Score of 60 Patients of Sthaulya:

It was found that the sum of rank of Group-A for the symptom Kshudraswasa, Nidra, Daurbalya and Kshudha the test statistic U was not lies between Population Mean  $\pm$  1.96 SD which was not significant at 5% level of significance. (p>0.05) Therefore the difference between

Symptom Score of Kshudraswasa of Group-A and Group B is not significant statistically, so we can conclude that in the symptom Kshudraswasa, intervention in Group A and Group B has equally effective statistically. However, in the symptoms Trushna the test statistic U was between Population Mean  $\pm$  1.96 SD which was significant at 5% level of significance

as the p value < 0.05 hence in the symptoms of Trushna there is significant difference observed between group.

#### **Percentage of Relief in Each Patient for Subjective Criteria of Sthaulya:**

Overall it was observed that Percentage of Relief in Each Patient of Sthaulya in Group-A was 74.3% while 80.3 % in Group- B. The average in both groups observed was 77.3% relief in each patient of Sthaulya.

#### **Total Effect of Therapy:-**

In Group-A, 14 [46.7%] patients were markedly improved, 14 [46.7%] were moderately, 2[6.67 %] patients were mild improved, while no patients in left the study.

In Group- B, 21[70%] patients were markedly improved, 9 [30%] were moderately, while no patients in left the study.

Totally, 35[58.3%] patients were markedly improved, 23[38.3%] patients were improved moderately.

#### **Discussion:**

It might be a difficult to identify the exact causes of this epidemic, however the most predisposing factors leading to overweight or obesity are excessive intake of dense food, Intake of heavy, sweet, cooling and unctuous food, sedentary and changing lifestyle, Day sleeping(diwaswap) and lack of physical activity, exercise, Abstinence from sexual intercourse.etc. sometimes it may be due Sahaj ie. Hereditary pattern of obesity are found in some family irrespective of caste, religion.

In Group-A, percentage of relief noted in symptoms like Kshudrashwas percentage of relief was noted as 98.7%, 61.7 % in Nidra, 57.6% in Trushna, 93.9% in Daurbalya , 62.2% in Kshudha respectively. Madhutailik Basti reduces Kapha and

Meda. The main cause of kshudrashwas is kapha and meda. kapha is a sheeta guna and erandmula and shatapushpa is a main content in madhutailik basti which is ushna veeryatmak which is opposite to sheeta guna of kapha therefore this leads to pacify of vitiated kapha dosha.

In Group-B, the relief in percentage in symptoms like Kshudrashwas was noted as 93.7%, 71.4 % in Nidra, 69.4% in Trushna, 90.6 % in Daurbalya , 75.6% in Kshudha respectively. Erandmula and shatapushpa is a main content in madhutailik basti which is ushna veeryatmak which is opposite sheet guna of kapha therefore this leads to pacify of vitiated kapha dosha. In this group Triphala churna also used which having Medakaphahar properties alongwith it enhances agni and ultimately it helps in increasing lekhan and dhatwagni so the samprapti is broken for further meda preparation.

In Group-A, in weight (sharirbhar) the percentage relief was 3.70%. In parameter like BMI (Body mass Index) the percentage relief was 0.7%, while in other parameters like Waist /Hip ratio, Skin Fold Thickness, Mid Arm Circumference, Chest Circumference, Abdominal Girth and Thigh Circumference it ranges 0-2% relief. Group A because Erandamoola is main content in Madhutailika Basti as Erandmoola as acted by its Ushna Veerya which ultimately did Medo Kshaya and they also followed the Basti regimen properly.

Similarly, in Group- B for weight (sharirbhar) the mean weight reduced by 4.78%., In parameter like BMI (Body mass Index) the percentage relief was 4.28%, while in other parameters like Waist /Hip ratio, Skin Fold Thickness, Mid Arm Circumference, Chest Circumference, Abdominal Girth and Thigh



Circumference it ranges 2-3% relief. Basti treatment with *Udvartana* was given to this group as *Erandamoola*, *Shatapushpa*, *Tila taila* such contains of Basti acted by its *Veerya Ushna* resulting in *Medokshaya*.

#### Mode of action:

Madhutilik basti contents Eranda, which having properties like Anulomana, Srotoshodhana which is against Vata dosha. Shatapushpa is also act as Vatahar, both drugs along with Til tail acts as Vatashamak that's why reduced the symptoms Kshudraswasa. Madhu having properties like Madhur, Guru, Kapha-Pittashamak, Til taila having properties like Agneya, Ushna, Tikshna, Madhur rasa, madhur vipaki, Bruhan, Prinana which help in reducing Nidra, Trushna, Daurbalya, Kshudha.

#### Mode of action of Udawartan:

Udvartana means rubbing, it helps in the absorption of effusions, relief of blood stasis and carrying away the morbid products in the system. As the hair follicles are cleared up, the bacteria responsible for body odour are unable to get entry to show their game. The alternate pressure and relaxation bring fresh blood to the part. It gives them a mechanical stimulation causing them to contract. It increases elimination of waste products. Also helps in the reabsorption of inflammatory products and absorption of fat in fatty tissues. Triphala also having Medakaphahar properties alongwith it enhances agni and ultimately it helps in increasing lekhan and dhatwagni so the samprapti is broken for further meda preparation.

**Limitation and Scope of study:** Study duration could be longer for better results. Along with Basti treatment, patients can also be advised for regular exercise and Pathyapathya. Patient counselling need

to be done for diet and exercise management

#### Conclusion:

Obesity is can be compared as 'Medoroga' or 'Sthaulya Roga.' Diet(Ahar) and Life style(Vihar) modifications plays an important role in the management of Obesity. In this study, out of 60 patients, 52[86.7%] were having mixed type diet and only 08[13.3%] purely vegetarian. In Group-A (Madhutilik Basti), the mean reduction in Sharir bhar(Weight) observed among patients was 3 kg. Body Mass reduced by 1.3 kg/m<sup>2</sup> while in Group-B, the mean reduction of weight was 4.20 kg and Body Mass reduced by 1.4 kg/m<sup>2</sup>. This group was treated with Madhutilik Basti and Udwartan of Triphala Churna for 15 days. Overall it was observed that Percentage of Relief in Each Patient of Sthaulya in Group-A was 74.3% while 80.3 % in Group-B.

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