

A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF UDVARTANA (KOLAKULATHADI CURNAM) FOLLOWED BY VIRECANA (TRIVRIT CURNAM) WITH AND WITHOUT TRIPHALADI LEKHANA VASTI IN THE MANAGEMENT OF STHAULYA WITH SPECIAL REFERENCE TO OBESITY

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ABSTRACT

The 21st century has become the Era of Non-communicable diseases, ie., Lifestyle disorders. Obesity is a state of excess adipose tissue mass.^[1] Although often viewed as equivalent to increased body weight, this need not be the case-lean but very muscular individuals may be overweight by numerical standards without having increased adiposity. *Ācārya Caraka* mentioned that a person in whom excessive and abnormal increase of *Mēdōdhātu* along with *Māmsadhātu* is found which results into pendulous appearance of buttocks, belly and breasts and whose increase in bulk is not matched by the corresponding increase in energy levels is called *Sthūla Puruṣa*. More than 1 billion people worldwide are Obese-650 million adults, 340 million adolescents and 39 million children. **Methods:** For present study out of 60 selected patients total 60 patients, completed the treatments i.e. 30

in group A & 30 in group B completed the course of the therapy & were randomly divided into two groups viz; group A in which Udvarṭana with Kolakulathadi churnam, Virēcana with Trivrit churnam for 28 days.; and second group B in which Udvarṭana, Virēcana and Lekhana basti in a schedule of 36 days was given. **Results:** *Udvarṭana*, *Virēcana* and *Lekhana vasti* offered better result overall in comparison to *Udvarṭana* and *Virēcana* alone. The Later also showed good effect on *Sthaulya* but *Vasti cikitsa* is proved better statistically & symptomatically with a significance of (p<0.0001). **Conclusion:** the present study signifies the role of *Udvarṭana*, *Virēcana* and *Lekhana vasti* in the management of *sthaulya* which has

been administered through the different routes. which may have to be considered as an unique model, as these routes have never been tried in the previous researches, and more over the results are quite encouraging.

KEYWORDS: Obesity, Sthoulya, *Udvarṭana*, *Virechana*, *lekhana vasti*.

INTRODUCTION

Obesity is a state of excess adipose tissue mass.^[1] Although often viewed as equivalent to increased body weight, this need not be the case-lean but very muscular individuals may be overweight by numerical standards without having increased adiposity. Most authorities use the term overweight (Rather than obese) to describe individuals with BMIs between 25 and 30.^[3] A BMI between 25 and 30 should be viewed as medically significant and worthy of therapeutic intervention. a BMI of 30 is most commonly used as a threshold for obesity in both men and women. More than 1 billion people worldwide are Obese-650 million adults, 340 million adolescents and 39 million children. WHO estimates that by 2025, approximately 167 million people will become less healthy because they are overweight or obese.^[6] *Ācārya Caraka* mentioned that a person in whom excessive and abnormal increase of *Mēdōdhātu* along with *Māmsadhātu* is found which results into pendulous appearance of buttocks, belly and breasts and whose increase in bulk is not matched by the corresponding increase in energy levels is called *Sthūla Puruṣa*. Sthaulya is considered as *Saṅtarpanajanya Vyādhi* (Over nutritional), due to Excessive accumulation of *Mēda* (Depot fat) in Body.^[9] Because of Dietary habits, Sedentary life style, stress, technology etc. it became wide spread disease with so many complications^[10] *Apatarpana* is the logical treatment for *Saṅtarpanajanya Vyādhīs*. Taking this into Consideration among all the treatment modalities in *Āyurvēda*, “*Vasti*” seems to be the best, because it would be causing *Apatarpana* quickly, when prepared with *Apatarpana* drugs.^[12] In *Apatarpana* specifically “*Lēkhana*” is the treatment which can remove abnormally increased *Snēha*^[11] which is proven fact by previous research works. *Acarya Vagbhata* described *Udvarṭana* in *Astanga hrdaya Sutra sthana* (A.H.Su.2/15).^[15] By considering all the above mentioned aspects of *Sthaulya* in ayurvedic texts, the therapeutic potentiality of *Udvarṭana*, *Virēcana* and *Lekhana vasti* are going to be evaluated in the Present Study.

AIMS AND OBJECTIVES

Aims

- i. To evaluate the efficacy of *Udvarṭana* with *kolakulathadi churnam*, *Virechana* with *Trivrt churnam* in the management of *Sthaulya*.
- ii. To evaluate the efficacy of *Udvarṭana* with *kolakulathadi churnam*, *Virechana* with *Trivrt churnam* and *Triphaladi Lekhana vasti* in the management of *Sthaulya*.
- iii. To compare the efficacy of *Udvarṭana* and *Virēcana* with and without *Triphaladi Lekhana vasti*.

Objectives

- i. The objective of the study is to review the literature of the disease and drug from *vedic* period to *Nighantu* period along with recent researches and observations.
- ii. To study the concept of *Sthaulya* and evaluate efficacy of *Udvarṭana* and *Virēcana* with and without *Triphaladi Lekhana vasti*.
- iii. To introduce Simple and cost-effective Treatment in *Sthaulya*.

MATERIALS AND METHODS

Sources of data

Literary source:- All the classical books like Brihatrayees and Laghutrayees, modern literature and contemporary text including the internet about the disease, drugs and procedure was reviewed and documented for the intended study.

Group A

- a) For *Udvarṭana*: *Kolakulathādi Curnam*
- b) For *Virēcana*: *Trivrit Churna*

Group -B

- a) For *Udvarṭana* – *Kolakulathādi Curnam*
- b) For *Virēcana* – *Trivrit Churna*
- c) For *Triphaladi Lekhana vasti*

Lekhana vasti

Ingredients

1. *Saindhava lavana* (Rock salt)
2. *Makshika* (Honey)

3. *Sarshapa taila*
4. *Ushakadi gana kalka*
5. *Gomutra*
6. *Yava kshara*
7. *Triphala Kashaya*

METHODS

60 patients of Obesity were registered for clinical study by the O.P.D and I.P.D of the Dept.of Panchakarma of S.V. Ayurvedic college and hospital, irrespective of Sex, caste, religion and randomly allocated in to two groups.

Group – A: Consists of 30 patients who will be subjected to *Udvarṭana* followed by *Virēcana*

Group- B: Consists of 30 patients who will be subjected to *Udvarṭana* followed by *Virēcana* and *Triphaladi Lekhana Vasti*.

Clinical plan

Phase – I

Inclusion criteria

1. Patients of Age between 18 years to 55 years.
2. Patients having signs and symptoms of *sthaulya*.
3. B.M.I. - 25 to 35 kg/m².
4. Skin fold thickness.
5. Waist / Hip ratio.
6. Patients who are eligible for *Udvarṭana*, *Virēcana*.
7. Patients who are eligible for *Udvarṭana*, *Virēcana* and *Triphaladi Lekhana vasti*

Exclusion criteria

1. Age below the 18 years and above the 55 years.
2. The obese patients suffering from Endocrinological imbalances, uncontrolled hypothyroidism, cardiovascular disease, severe hypertension, and pregnant women and other major systemic illness.
3. The very obese patient having B.M.I.>35,<25 was also being excluded. .
4. Patients who are not eligible for *Udvarṭana*..
5. Patients who are not eligible for *Virēcana*.
6. Patients who are not eligible for *Triphalādi Lekhana vasti*.

Phase-II

Group – A Consists of 30 patients who will be subjected to *Udvardana* followed by *Virēcana*.

Group- B Consists of 30 patients who will be subjected to *Udvardana* followed by *Virēcana* and *Triphalādi lekhana vasti*.

Symptoms score assessment as per ayurvedic classics**1. Chala sphika udara stana**

- Absence of Chalatva - 0
- Little visible movement (In the areas) after fast movement – 1
- Little visible movement (In the areas) even after moderate movement – 2
- Movement (In the areas) after mild movement - 3
- Movement (In the areas) even after changing posture –4

2. Daurbalya (Alpa vyayama)

- Can do routine exercise – 0
- Can do moderate exercise without difficult – 1
- Can do only mild exercise – 2
- Can do mild exercise with very difficult-3
- Cannot do be even mild exercise – 4

3. Svedadhikya (At normal temperature in normal condition)

- Sweating after heavy work and fast movement or in hot season – 0
- Profuse sweating after moderate work and movement – 1
- Sweating after little work and movement – 2
- Profuse sweating after little work and movement – 3
- Sweating even at rest or in cold season – 4

4. Daurgandhya

- Absence of bad smell - 0
- Occasional bad smell in the body removed after bathing – 1
- Persistent bad smell limited to close areas difficult to suppress with deodorants - 2
- Persistent bad smell felt from long distance is not suppressed by deodorants –3
- Persistent bad smell felt from long distance even intolerable to the patient himself – 4

5. *Ati kshudha*

- Feeling of hunger after 6 hours-0
- Feeling of hunger between 5 to 6 hours-1
- Feeling of hunger 4 hours after the meal-2
- Irritable desire of hunger 3 to 4 hours after meal-3
- Irritable desire of hunger within the 3 hours after meal-4

6. *Atipipasa*

- Normal thirst-0

Upto 1 litres excess intake of water-1

1 to 2 litres excess intake of water-2

2 to 3 litre excess intake of water-3

More than 3 litre intake of water-4

OBSERVATIONS AND RESULTS**General observations****1. Distribution of patients according to age**

Among the 60 patients included in the study 7 patients (12%) belong to the agegroup of 41-50 years, 17 patients (28%) belong to the age group of 31-40 years, 2 patients (3%) belong to 51- 60 age group and 34 patients (57%) belong to age group 20-30 years.

2. Distribution of patients according to gender

In the present study 23(38%) patients are males and 37 (62%) patients are females. The following table shows the details.

3. Distribution of patients according to socio-economic status

Among 60 patients 11 (18%) patients belong to middle class, 9 (22.5%) s, 11(18%) patients are poor, 38(63%) belong to upper middle class in the study.

4. Distribution of patients according to Nature of work

Among 60 patients, 3 (5%) patients are doing regular strenuous work, 49(82%) patients are involved in sedentary work. 8 (13%) patients are doing work with moderate strain.

5. Distribution of patients according to family history

In the present study, patients present with family history are 48 (80%), and absent are 12 (20%). The following table shows the details

6. Distribution of patients according to BMI State

Maximum patients i.e., 35 (58%) are over weight, Class-1 are 14 (23%), and Class-2 are 11 (19%) in number.

RESULTS

Subjective and Objective Parameters Before Treatment and After Treatment.

Parameter	Groups	Mean \pm S.D		S.E	M.D	t Value	P Value	% of Relief
		0 th Day	I immediately After Treatment					
Weight	Group A	89.40 \pm 8.32	88.40 \pm 8.28	0.144	1.00	6.9522	<0.0001	1.11%
	Group B	86.07 \pm 7.91	84.37 \pm 7.22	0.204	1.70	8.3225	<0.0001	2.0%
BMI	Group A	30.117 \pm 3.149	30.030 + 3.136	0.016	0.087	5.2770	<0.0001	0.28%
	Group B	32.40 + 4.36	32.03 + 4.405	0.061	0.367	6.0395	<0.0001	1.13%
W:H	Group A	0.792+ 0.032	0.788 + 0.031	0.001	0.0043	4.1763	=0.0002	0.33%
	Group B	0.772+ 0.036	0.759 + 0.033	0.002	0.013	7.7786	<0.0001	1.6%
Biceps	Group A	28.12+ 1.342	28.02 + 1.311	0.018	0.103	5.6631	<0.0001	0.35%
	Group B	23.81 + 3.19	23.19 + 3.01	0.069	0.6223	9.0430	<0.0001	2.6%
Triceps	Group A	28.41+ 1.06	28.33 + 1.07	0.017	0.80	4.7383	<0.0001	0.35%
	Group B	27.91 + 2.88	27.60 + 2.85	0.052	0.313	5.997	<0.0001	1.3%
Sub scapular	Group A	22.26+ 2.18	22.16 + 2.18	0.021	0.10	4.7848	<0.0001	0.38%
	Group B	25.61+ 3.52	25.27 + 3.46	0.04	0.34	7.8278	<0.0001	1.3%
Chala sphik	Group A	3.23+ 0.77	2.73 + 0.83	0.093	0.50	5.3852	<0.001	15%
	Group B	2.83 + 1.05	1.40 + 0.81	0.177	1.43	8.0816	<0.0001	50%
Daurbalya	Group A	3.43+ 0.63	2.90 + 0.66	0.093	0.53	5.7570	<0.0001	16%
	Group B	2.90 + 0.84	2.17 + 0.70	0.095	0.73	7.7120	<0.0001	26%
Svedadhikya	Group A	3.33+ 0.61	2.83 + 0.65	0.093	0.50	5.3852	<0.0001	15%
	Group B	2.83+ 1.02	2.10 + 0.88	0.095	0.73	7.7120	<0.0001	26%

Daurgaandhya	Group A	3.43+ 0.63	3.03 + 0.67	0.091	0.40	4.3970	=0.0001	12%
	Group B	2.50 + 0.57	2.00 + 0.59	0.093	0.50	5.3852	<0.0001	20%
Atipipasa	Group A	3.43+ 0.50	2.97 + 0.61	0.115	0.47	4.0649	=0.0003	11%
	Group B	2.73 + 0.74	2.17 + 0.83	0.104	0.57	5.4613	<0.0001	21%
Ati kshuda	Group A	3.50+ 0.51	3.13 + 0.35	0.089	0.37	4.0975	=0.0003	9%
	Group B	2.87+ 0.73	2.10 + 0.71	0.133	0.77	5.7687	<0.0001	27%

DISCUSSION

Visible movement in Hip-abdomen-breast (Cala-sphika-udara stana)

Group A has shown means of 3.23 and 2.73&2.40 on 0th 28th and 48th day with decrease in the visible movement in Hip- Abdomen-Breast with mean difference of 0.50 and 0.83 respectively 15% reduction in symptom statistically very significant ($p<0.001$), while in group B 50% reduction with means of 2.83,1.40 and 0.87 respectively on 0th 36th and 56th day, which was statistically extreme significant ($p<0.0001$). By comparing with mean difference and % improvement effect of therapies in group A & B on, *Cala-sphika-udara sthana* effect was seen more in Group-B.

Weakness (Daurbalyata)

By comparing with mean difference and % improvement the effect of therapies in group A & B on reducing weakness, effect was seen more in Group-B.

Excess sweating (Svėdādhikya)

On comparing the effects of therapies by mean difference & percentages it was found that both the treatments are effective in reducing excess sweating statistically. However on basis of percentage improvement Group-B seems to be superior.

Body odour (daurgandhya)

On comparing the effects of therapies by mean difference and percentage it was found that both the treatments are effective in reducing body odour statistically. However on basis of percentage improvement Group -B seems to be superior.

Excess thirst (Atipipāsa)

On comparing the effects of therapies it was found that there is significant effect in reducing

Atipipāsa in both groups. However on basis of percentage improvement Group-B seems to be superior.

Excess hunger (athikṣuda)

Both the treatments are effective. However on basis of percentage improvement Group-B seems to be superior.

Effect on objective criteria

Effect on body weight, BMI, and biceps, triceps, forearm, Abdominal skinfold thickness.

Weight: Both the treatments are highly significant. While on comparison of mean differences Group -B seems to be effective on weight reduction.

Bmi: By comparing both the therapies with mean difference Group-B seems to be effective.

Waist-hip ratio: By comparing both groups with mean difference Group-B seems to be effective.

Biceps: By comparing both groups with mean difference Group -B seems to be effective.

Triceps: By comparing both therapies Group B seems to be effective.

Sub-scapular: by comparing the mean differences of both therapies Group -B to be effective in skin fold thickness.

Role of *udvarṭana*

Udvarṭana can help in normalizing lipid profile (Dyslipidemia), also in reduction of weight; BMI, body circumference and skin fold thickness as it possesses *Shoshana* (Absorption) and *Kapha-Medohara* (Alleviation of vitiated *Kapha* and *Meda*) properties. *Udwardana* opens the minute channels and improves blood as well as lymphatic circulation. *Udwardana* is *kapha*, *vata hara* and removes *aavarana* or *Srotorodha*.

Role of *virēcana*

Trivṛt churnam was selected for *Virēcana*. *Trivṛt* is a *Sukha Virēcana Dravya*, hence it causes least complications in *Mrudu Koshta* people also. At the same time, it effectively removes *malas* from *Koshtha* as *Sarangadhara* describes it as *Rechaka* which expels even undigested *malas* by liquifying them.

Role of *lekhana vasti*

Sesame oil and Honey present in *Lekahana vasti* reduces *Rasa-Rakta gata Meda*. Most of the drugs of this *vasti* were having *Lekhana* Property. *Lekhana vasti* due to its *Lekhana* property

may cause *Dhatu Kshaya* and other Complications. But *Shilajit* present in it provides *Rasayana* effect against *Dhatukshaya*.

In this way, *Vasti dravyas* reduces *Kapha-Vata Dushti*, increases *Agni*, Digests the *Ama*, correct the *Medodhatvagni Mandhya*, remove obstruction in *Medovaha srotas* and nourishes *Uttardhatus*. Thus it become helpful in disease *Sthaulya*.

CONCLUSION

Udvarṭana, *Virēcana* and *Lekhana vasti* offered better result overall in comparison to *Udvatana* and *Virēcana* alone. The Later also showed good effect on *Sthaulya* but *Vasti cikitsa* is proved better statistically & symptomatically with a significance of ($p < 0.0001$). *Udvarṭana*, *Virēcana*, *Lekhana vasti* was found to have significant effect in reducing the symptoms of *Mēdō duṣṭi* and in reduction of objective parameters like weight, BMI, W;H ratio, biceps, triceps skinfold thickness that the present study signifies the role of *Udvarṭana*, *Virēcana* and *Lekhana vasti* in the management of *sthaulya* which has been administered through the different routes. which may have to be considered as an unique model, as these routes have never been tried in the previous researches, and more over the results are quite encouraging. As the study sample is small in relative terms and the course of the therapies, is for shorter duration. It may be suggested that the same therapies may be replicated in the larger samples for longer duration, to get outstanding results.

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