

## CLINICAL STUDY ON ETIOPATHOGENESIS OF *STHAULYA* AND ITS MANAGEMENT WITH MEDOHAR COMPOUND

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### ABSTRACT

In the present study total 38 cases of *Sthaulya* were studied. In-group 'A' 25 patients treated with *Medohar vati* in a dose of 1 gm. 3 times a day, with lukewarm water before meal, whereas in group 'B' 13 patients were treated with *Iesabgol husk* in a dose of 15 gm. 2 times a day with lukewarm water before meal for 60 days. On General Symptom Group A 56.47 %, Group B 58.18 % relief was observed. On Associated Symptoms Group A 44.20 %, Group B 47.19 % relief was observed. On Weight & BMI Group A 3.39 %, Group B 5.07 % relief was observed. On Body Circumference Group A 3.51 %, Group B 2.87 % relief was observed. On Skin Fold Thickness Group A 17.16 %, Group B 18.82 % relief was observed. On Walking Time & Respiratory Rate Group A 17.13 %, Group B 20.13 % relief was observed. If we see the overall effect of all three groups in total average improvement then we found that Group A 23.64 %, Group B 25.38 % relief was observed. No adverse drug reactions attributable to the trial drugs observed during the study.

**Key Words-** *Sthaulya*, obesity and *Medoroga* etc.

### INTRODUCTION

Obesity (*Sthaulya*) is one among the major diseases of Modern era. In Modern era with continuous changing life styles and environment, changed diet habits, man has become the victim of many diseases caused by unwholesome dietary habits; the 'Obesity' is one of them. Everybody is busy & living fast & stressful life. High caloric, fast food consumption is also increasing. The industrialization, stress during the work, dietary habits, lack of exercise & various varieties among the daily diet e.g. fast food, frozen fruits, increased amount of soft drinks and beverages, canned foods result into the clinical

entity which we can call as Obesity. It is the most common and adverse nutritional problem in industrialized world. And now obesity has become a global problem. Obesity is such a disease, which provides the platform for so many hazards like hypertension, coronary heart disease, diabetes mellitus, osteoarthritis, infertility, impotency as psychological disorders like stress, anxiety, depression, etc. These indicate the weakening of the various body systems which in turn affects the physiological equilibrium. Thus the mortality and morbidity rates are more in an obese person. The aim of Ayurveda is to maintain *swasthya* of *swastha purusha* and to cure the disease of pathological

condition of the patient. In other words Ayurveda guides the masses to overcome the diseased condition by preventive methods.

### Material and Method

For this present study *Medohar Vati* (Group A), *Iesabgol Husk* (Group B) have been selected. *Medohar Vati* is made up of *Charakokt Medohar Dravyas*<sup>1</sup> recommended in *Sutra sthan*. *Iesabgol Husk* has been selected on the basis of its *Medohar* property narrated by *Acharya Priyavritta Sharma in Dravyaguna Vigyan*<sup>2</sup>.

#### Group A: Medohar Vati.

**Ingrédients of Medohar Vati:**(1) *Haritaki* 1 part (2) *Vibhitki* 1 part (3) *Aamalaki* 1 part (4) *Vidang* 1 part (5) *Yavakshar* 1 par(6) *Agnimanth Q. S.* (Bark *kwath*) (7) *Madhu Q.S.***Doses: -Medohar** vati 1gm.T.D.S, with lukewarm water before breakfast, lunch and dinner (Nirannakala).

**Duration:** 2 Months. Anupan: Lukewarm water.

**Group B: Iesabgol Husk. Ingrédients:-** Iesabgol seed husk. **Doses: -Iesabgol husk** 15 gm / BD / Anupan: Lukewarm water

**Duration:** 2 Months

#### Criteria of Assessment

**Subjective Parameter:** All the symptoms of *Sthaulya* described in various Ayurvedic texts. these are- *Daurgandhya*, *Ayaseshwas*, *Angagauravata*, *Atikshudha*, *Atipipasa*, *Chalaspshika*, *Chalauadara*, *Chalastana*, *Utsahani*, *Daurbalya*, *Nidraadhikya*, *Snigdhatrata*, *Sandhishool*, *Atimutrata* and *Angashaithilya*.

#### Objective parameters:-

- I. Age specific weight for height table.
- II. Ponderal Index: Height (Cm) / 3 body weight (kg)
- III. Body mass Index (BMI or Quetelet's Index)

### Observation and Result:-

Effect of drug Group A Medohar vati(table no-1)	n=25		For Group A	t Value			
	Mean	A.T.	n= 25	0.05	0.01	0.001	
	B.T.	A.T.	D.F.=24	2.06	2.80	3.76	
Symptoms	Mean	A.T.	% of Improve.	S.D.	S.E.	't'	P
<i>Daurgandhya</i>	2.32	1.04	55.17	0.46	0.09	13.97	< 0.001
<i>Ayaseswas</i>	2.32	1.04	55.17	0.46	0.09	13.97	< 0.001
<i>Angagauravata</i>	2.12	1.16	45.28	0.61	0.12	7.86	< 0.001
<i>Atikshudha</i>	2.52	0.92	63.49	0.76	0.15	10.47	< 0.001
<i>Atipipasa</i>	0.76	0.20	73.68	0.65	0.13	4.30	< 0.001
<i>Chalaspshika</i>	2.80	1.92	31.43	0.67	0.13	6.61	< 0.001
<i>Chalauadara</i>	2.76	1.88	31.88	0.73	0.15	6.06	< 0.001
<i>Chalastana</i>	2.64	1.84	30.30	0.65	0.13	6.20	< 0.001
<i>Utsahani</i>	2.60	0.92	64.62	0.56	0.11	15.09	< 0.001
<i>Daurbalya</i>	2.80	1.04	62.86	0.52	0.10	16.83	< 0.001
<i>Nidraadhikya</i>	1.56	0.44	71.79	0.73	0.15	7.72	< 0.001
<i>Snigdhatrata</i>	2.60	1.16	55.38	0.58	0.12	12.35	< 0.001
<i>Sandhishool</i>	1.64	0.64	60.98	0.58	0.12	8.66	< 0.001
<i>Atimutrata</i>	0.36	0.04	88.89	0.48	0.10	3.36	< 0.01
<i>Angashaithilya</i>	2.84	2.80	2.78	0.35	0.07	0.57	> 0.05

#### Effect on Weight & B.M.I. by Medohar Vati: (table no-2)

Symptoms	Mean		% of Im-prove.	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Weight	80.23	77.53	3.37	1.38	0.28	9.79	< 0.001
B.M.I.	31.41	30.35	3.37	0.53	0.11	9.97	< 0.001

**Effect on Circumference by Medohar Vati: (table no-3)**

Symptoms	Mean		% of Im-prove.	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Chest	102.68	99.36	3.23	1.49	0.30	11.12	> 0.001
Abdomen	106.24	102.36	3.65	2.32	0.46	8.38	> 0.001
Hip	114.00	110.12	3.40	1.59	0.32	12.20	> 0.001
Thigh	62.08	58.60	5.61	2.82	0.56	6.18	> 0.001
Leg	39.76	38.42	3.37	1.36	0.27	4.93	> 0.001
Arm	32.12	31.72	1.25	0.50	0.10	4.00	> 0.001
Forearm	26.58	26.24	1.28	1.18	0.24	1.44	< 0.05

**Effect on Skin Fold Thickness (Cm.) by Medohar Vati: (table no-4)**

Symptoms	Mean		% of Im-prove.	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Biceps	2.40	1.97	17.97	0.31	0.06	7.08	> 0.001
Triceps	2.85	2.41	15.43	0.21	0.04	10.28	> 0.001

**Effect on Walking Time in Sec. & Resp. Rate/M by Medohar Vati: (table no-5)**

Symptoms	Mean		% of Im-prove.	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Walking Time	27.04	22.16	18.05	1.83	0.37	13.31	< 0.001
Respiration Rate	24.12	20.16	16.42	1.51	0.30	13.08	< 0.001

**Effect of drug Group B Isabgol Husk(table no-6)**

Symptoms	Mean		%of Im-prove.	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
<i>Daurgandhya</i>	1.23	0.46	62.50	0.60	0.17	4.63	< 0.001
<i>Ayaseswas</i>	1.62	0.62	61.90	0.58	0.16	6.24	< 0.001
<i>Angagauravata</i>	1.92	1.23	36.00	0.48	0.13	5.20	< 0.001
<i>Atikshudha</i>	3.62	1.23	65.96	0.51	0.14	16.98	< 0.001
<i>Atipipasa</i>	1.23	0.62	50.00	0.77	0.21	2.89	> 0.01
<i>Chalaspika</i>	1.69	1.38	18.18	0.48	0.13	2.31	> 0.01
<i>Chalauadara</i>	1.85	1.62	12.50	0.44	0.12	1.90	>0.05

For Group B	t Value		
n= 13	0.05	0.01	0.001
D.F.=12	2.179	3.06	4.32

<i>Chalastana</i>	2.00	1.31	34.62	0.75	0.21	3.32	< 0.01
<i>Utsahahani</i>	2.00	0.69	65.38	0.48	0.13	9.81	< 0.001
<i>Daurbalya</i>	2.46	1.15	53.13	0.48	0.13	9.81	< 0.001
<i>Nidraadhikya</i>	1.00	0.31	69.23	0.63	0.17	3.96	< 0.01
<i>Snigdhatrata</i>	1.77	0.85	52.17	1.04	0.29	3.21	< 0.01
<i>Sandhishool</i>	1.46	0.54	68.42	0.82	0.23	4.42	< 0.001
<i>Atimutrata</i>	0.31	0.00	100.00	0.48	0.13	2.31	> 0.01
<i>Angashaitilya</i>	3	3	13.64	0.44	0.12	1.90	> 0.05

**Effect on Weight & B.M.I. by Isabgol Husk: (table no-7)**

Symptoms	Mean		% of Improve.	S.D.	S.E.	't'	P
	B.T.	A.T.					
Weight	76.25	72.49	4.93	1.80	0.50	7.54	< 0.001
B.M.I.	30.55	29.02	5.01	0.77	0.21	7.13	< 0.001

**Effect on Circumference by Isabgol Husk: (table no-8)**

Symptoms	Mean		% of Improve.	S.D.	S.E.	't'	P
	B.T.	A.T.					
Chest	101.08	98.62	2.44	1.66	0.46	5.33	< 0.001
Abdomen	97.42	94.54	2.96	2.89	0.80	3.60	< 0.01
Hip	111.69	109.00	2.41	1.97	0.55	4.92	< 0.001
Thigh	57.08	54.46	4.58	2.53	0.70	3.72	< 0.01
Leg	38.96	37.85	2.86	1.08	0.30	3.71	< 0.01
Arm	31.46	30.38	3.42	1.38	0.38	2.81	> 0.01
Forearm	26.88	26.46	1.57	0.49	0.14	3.09	< 0.01

**Effect on Skin Fold Thickness (Cm.) by Isabgol Husk: (table no-9)**

Symptoms	Mean		% of Improve.	S.D.	S.E.	't'	P
	B.T.	A.T.					
Biceps	2.16	1.61	25.62	0.36	0.10	5.55	< 0.001
Triceps	2.46	2.16	12.19	0.16	0.04	6.84	< 0.001

**Effect on Walking Time in Sec. & Resp. Rate/M. by Isabgol Husk: (table no-10)**

Symptoms	Mean		% of Improve.	S.D.	S.E.	't'	P
	B.T.	A.T.					
Walking Time	30.85	23.62	23.44	3.22	0.89	8.10	< 0.001
Respiration Rate	28.54	23.77	16.71	2.24	0.62	7.67	< 0.001

**Group A: Individual Symptom wise improvement of patients:- (table no-11)**

Group A	Improvement in Percentage.							
	In General Symptom	Associated Symptoms	Weight & B.M.I.	Body Circumference	Skin Fold Thickness	Walking Time & Resp. Rate	Total	Over all
1	68.75	63.64	5.21	2.66	6.25	16.33	162.84	27.14
2	62.50	54.84	2.41	3.70	14.58	13.56	151.60	25.27

3	69.23	47.62	3.71	4.44	25.00	21.67	171.67	28.61
4	57.14	46.67	0.92	2.32	16.67	17.74	141.46	23.58
5	62.50	47.06	2.64	2.80	17.78	15.69	148.47	24.74
6	50.00	28.57	2.31	2.59	8.82	25.00	117.30	19.55
7	40.00	37.50	3.46	2.64	13.56	17.02	114.18	19.03
8	50.00	33.33	1.54	2.10	8.11	25.00	120.08	20.01
9	71.43	56.25	1.26	2.34	13.79	15.22	160.29	26.71
10	58.33	37.50	5.69	4.26	17.81	17.31	140.90	23.48
11	53.85	48.28	4.88	2.45	7.69	20.69	137.83	22.97
12	44.44	47.37	7.79	4.56	28.57	22.22	154.95	25.83
13	50.00	36.00	2.10	2.42	25.49	16.00	132.01	22.00
14	55.56	30.43	1.75	3.38	11.76	11.54	114.42	19.07
15	60.00	40.91	2.00	5.85	38.18	14.29	161.23	26.87
16	60.00	39.13	2.87	4.89	28.85	18.87	154.60	25.77
17	50.00	66.67	4.37	3.13	30.00	15.91	170.07	28.34
18	55.56	34.62	1.89	3.08	15.38	14.29	124.81	20.80
19	61.54	42.86	3.35	4.88	14.75	13.73	141.10	23.52
20	62.50	50.00	3.86	4.83	18.60	15.56	155.35	25.89
21	50.00	46.67	6.04	4.45	25.00	17.78	149.93	24.99
22	58.33	41.67	2.83	3.35	15.09	14.00	135.28	22.55
23	50.00	40.00	3.49	3.57	13.21	17.31	127.58	21.26
24	60.00	41.67	5.01	3.64	6.90	15.91	133.12	22.19
25	50.00	45.83	3.51	3.51	7.02	15.56	125.42	20.90
<b>Total</b>	1411.66	1105.07	84.87	87.86	428.88	428.16	3546.48	591.08
<b>%</b>	56.47	44.20	3.39	3.51	17.16	17.13	141.86	23.64

**Individual Symptom wise improvement of Group B patients:- (table no-12)**

Gro up B	Improvement in Percentage.							
	In General Symptom	Associated Symptoms	Weight & B.M.I.	Body Circumference	Skin Fold Thickness.	Walking Time & Resp. Rate	Total	Over all
1	50.00	38.89	7.94	2.40	27.91	20.00	147.14	24.52
2	53.85	43.75	6.25	1.74	12.82	16.13	134.53	22.42
3	60.00	53.85	2.38	1.88	15.56	22.73	156.38	26.06
4	54.55	44.44	3.71	3.37	29.27	19.67	155.00	25.83
5	66.67	55.56	8.57	4.83	28.57	27.27	191.46	31.91
6	62.50	38.46	5.73	5.08	14.63	22.81	149.22	24.87
7	44.44	34.78	1.13	1.38	3.92	15.52	101.18	16.86
8	33.33	40.00	2.67	3.28	18.52	19.12	116.92	19.49
9	71.43	71.43	5.75	2.13	32.43	19.64	202.81	33.80
10	70.00	75.00	4.61	1.18	20.00	24.00	194.79	32.46

<b>11</b>	75.00	47.62	4.21	3.90	6.52	13.73	150.97	25.16
<b>12</b>	54.55	41.67	10.06	3.55	24.19	23.08	157.09	26.18
<b>13</b>	60.00	28.00	2.97	2.60	10.34	18.00	121.91	20.32
<b>Total</b>	756.31	613.44	65.96	37.31	244.69	261.69	1979.40	329.90
<b>%</b>	58.18	47.19	5.07	2.87	18.82	20.13	152.26	25.38

## DISCUSSION

*Sthaulya* has been mentioned by Acharya Charaka in *Ashtaunindita Adhyaya* <sup>3</sup>. In *Medohar vati Haritaki, Bibhitaki, Vidanga, Yavakshar, Agnimanth & Madhu has Tikshna, Laghu, Gunas, Ushna Veerya* which helps in the clearing the obstruction in the channels. These *Tikta* drugs posses the *Lekhana, Karshana, Meda-KledaUpashoshana* properties. *Bibhitaki* has *Chhedan* property, *Yavakshar* has *lekhan* property which helped in curing the various symptoms of *Medoroga*. **Medohar vati** has *katu-ras* and *Ushna-veerya-dravyas*, which act on *kapha* and *vayu* to break the *samprapti* of *sthaulya*. In pathogenesis, *Avarna* of *Vata* is there. Most of the drugs (5drugs) having *UshnaVeerya* which is effective against *Vata*.

**Isabgol husk** has sheet *veerya* property and it act on *teekshna-agni* to suppress increased appetite to reduce calorie intake. It also act on vitiated *Pachak –Pitta* and normalize the state of *Agni*. It decreases serum cholesterol through proper excretion of bile acids. It is also beneficial in appetite and helps in

### Group & Symptom wise improvement:-

Group wise	Improvement in Percentage.						
	In Gen-eral Symptom	Associ-ated Symp-toms	Weigh t & BMI	Body Circum-ference	Skin Fold Thick-ness	Walking Time .& Resp. Rate	Over all
Group A	56.47	44.20	3.39	3.51	17.16	17.13	23.64
Group B	58.18	47.19	5.07	2.87	18.82	20.13	25.38

### Group wise overall effect:-

Effect	Range	Group A	Group B
Unchanged	(0 to 10 %)	0	0
Mild Improved	(10 to 25 %)	16	6

weight control through its ability to lower the rate of glucose absorption & bulk forming properties which may enhance the feeling of satiety. It is well studied lipid lowering agent with generally modest reductions seen in blood levels of total cholesterol and low-density lipoprotein (bad cholesterol).

## CONCLUSION

**Overall Effect of Therapies** On General Symptom Group A 56.47 %, Group B 58.18 % . On Associated Symptoms Group A 44.20 %, Group B 47.19 % on Weight & BMI Group A 3.39 %, Group B 5.07 %

On Body Circumference Group A 3.51 %, Group B 2.87 %. On Skin Fold Thickness Group A 17.16 %, Group B 18.82 % On Walking Time & Respiratory Rate Group A 17.13 %, Group B 20.13 % relief was observed. If we see the overall effect in both groups improvement then we found that Group A 23.64 %, Group B 25.38 % relief was observed. Thus, in this way overall comparison of all the parameter showed that effect of Group B was better than Group A



<b>Moderate improved</b>	(25 to 50 %)	9	7
<b>Mark. Improved</b>	(50 to 75 %)	0	0
<b>Complete remission</b>	(75 to 100 %)	0	0
	Total Pt.	25	13

**TOTAL EFFECT OF THERAPY: Percentage of Patients in Group wise improvement:**

Result	Range	Group A % of Pt.	Group B % of Pt.
<b>Unchanged</b>	0 to 10 %	0	0
<b>Mild Improved</b>	10 to 25 %	64	46.15
<b>Moderate improved</b>	25 to 50 %	36	53.85
<b>Mark. Improved</b>	50 to 75 %	0	0
<b>Complete remission</b>	75 to 100 %	0	0

Above table shows following percentage of improvements: Group A Mild Improvement was found in 64% patients, Moderate improvement was found in 36 % patients (total number of pt. n=25). Group B Mild Improvement was found in 46.15 % patients, Moderate improvement was found in 53.85 % patients (total number of pt. n=13). There is no marked improvement or complete remission was found in any group. In this study, Considerable effect was not achieved to some patients. This may be due to the short duration of the study. Charaka Samhita also described long-term of the treatment for the disease of *Jirna* and *Atisthulata* which was consider under *Krichhrasadhya Vyadhi*.

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