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PRACTICAL UTILITY OF VISHESHA SIDDHANTA IN THE MANAGEMENT OF STHAULYA

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ABSTRACT

The two categories viz. samanya and Vishesha are seen to be of immense value in the applied aspect of treatment and also for maintaining health. The object of Ayurveda has been said to be of maintaining of dhatu samya kriya i.e. to maintain the homeostasis to the level of physiological equilibrium. The samanya and Vishesha are the dynamic forces which keep this normal condition of the body. Charaka says that the samanya is the cause of increases of all the things at all times, and the Vishesha is the cause of their decrease, whereas the application of these principles in the treatment lead to increase and decrease of body elements. To analysze vishesha siddhanta, the disease Sthoulya has been is selected for the present study. Study revealed satisfactory response.

KEYWORDS: Vishesha, Samanya, Siddhanta, Sthoulya, Chikitsa

INTRODUCTION

Samanya and Vishesha are the most useful padartha in the treatment. The main theory of Ayurvedic medicine is to maintain the equilibrium or balance of the dosha dhatu malas and actions.[1] Samanya and Vishesha factors are relative one and it is to be remembered that only Vishesha category will serve no purpose for the maintenance of health, as the maintenance of the equilibrium of tissue (as well as dosha) elements in the effect of both the factors i.e. generic concomitance and the varient factors. The first will cause augmentation while the later would cause diminution. Thus taken separately either of them will not able to maintain the equilibrium.[2]

SELECTION CRITERIA

Inclusion criteria

30 cases of both the sexes were screened and selected out of 50 available cases for trial under one group.

During distribution of cases in trial group – age, sex and degree of severity were controlled.

a) Age group – 16-59 years
b) Sex – Male and Female both.

A. Subjective Criteria:

i) Kshudra Swāsha (Shortness of breath on exertion)
ii) Ksudhātimātra (excess hunger)
iii) Pipāsātiyoga (Excessive thirst)
iv) Ati Nidrā (Excess sleep)
v) Swedādhikya (Excess sweating)
vi) Daurgandha (Bad body odour)
vii) Daurbalyam (General weakness)

viii) Javoparodha (hampering movement)
ix) Sadana (Tiredness)

B. Objective Criteria:

i) Weight (20% more than desirable weight)
ii) BMI (Body Mass index) – >30-39.9 Kg/m^2

(as per the definition of adult obesity)

iii) Hyperlipidaemic case – Cholesterol (high)> 250 mg/DL
iv) Circumference of Abdomen

Exclusion criteria:

1. Cases having medical emergencies associated with I.H.D., C.V.A., myocardial infarction etc.
2. Overweight cases (severe obesity) >40 BMI
3. Hypertension
4. Diabetes mellitus
5. Hypothyroidism
6. Obesity due to hereditary cause

MATERIALS: (**Selection of trial drugs)**

1. The drugs were selected based on Ayurvedic classic i.e. Charaka Chikitsa sthana vide chapter no.6 which are having anti sthaulya effect.
2. Easily available in the market
3. Low cost
4. Easy to consume by the patients.

The following five dravyas are taken for the study.

1. Amalaki - 3 gm
2. Haritaki – 3 gm
3. Vibhitaki – 3 gm
4. Aragvadha – 5 gm
5. Mustaka – 3 gm

All above mentioned ingredients were taken and finely powdered seperately and mixed well to from homogenous mixture.

STUDY DESIGN (Single group)

Single group- pre-test - post-test - experimental design was applied.

The measures were obtained in every post-test. The results were assessed from phase to phase in terms of BMI, Cholesterol, overweight and circumference of abdomen during the experiment.

i) Clinical study: An open non comparative clinical trial was done with herbal compound to explore and evaluate the efficacy and safety in controlling obesity patients.

ii) Dose and duration of treatment:

Dose: Powder in a dose of 6 gm thrice a day

iii) Anupana: Luke warm water.

iv) Duration : 42 days .

v) Diet schedule: Recommendation of desirable diet and exercise.

PARAMETERS OF ASSESSMENT

A. Clinical Parameter (Subjective Criteria)

1. Kshudra Swāsa
2. Ksudhātiyoga
3. Pipāsāti Yoga
4. Ati Nidrā etc.

B. Physiological Parameter (Objective Criteria)

1. Weight (In kg.) (LIC Scale)
2. B.M.I. (Body Mass Index)
3. Abdominal Circumference (in cm.)

C. Laboratory Parameter (Estimation of Lipid Profile)

1. Serum Cholesterol (Mg/dl)

RESULTS

The assessment of progress was noted based upon 3 cardinal sign, such as excess body weight, B.M.I. and abdominal circumference. On expire of 42 days from

the beginning of treatment. The result in view of percentage of improvement was classified as follows:

1. Maximum improvement ≥ 75% or more improvement
2. Moderate improvement – 50 to 75% improvement
3. Mild improvement – 25 to 50% improvement
4. Unsatisfactory ≤ Negligible or less than 25% improvement

Observations in the study were made on the basis of the demographic profile, clinical profile of 30 cases of obesity whose results of therapeutic trial were distributed in one group.

The observation was made as following heading.

1. Demographic profile
2. Clinical profile
3. Results of therapeutic trial.

Showing the weight in excess of the patients before and after treatment of Female and Male

Weight(Kg) In Excess	Female=20				Male=10			
	B.T.		A.T.		B.T.		A.T.	
	f	%	f	%	f	%	f	%
10 to <14	-	-	5	25	-	-	-	-
14 to <18	4	20	9	45	5	50	7	70
18 to <22	11	55	5	25	5	50	3	30
22 to <26	4	20	1	5	-	-	-	-
26 to 30	1	5	-	-	-	-	-	-
Mean ± S.D.	**20.51 ± 3.46**		**16.30 ± 3.72**		**18.28 ± 1.86**		**16.6 ± 2.10**	

B.T. = Before Treatment

A.T. = After Treatment

During the study of wt in excess it was found that before treatment out of 20 cases (females) maximum 11(55%) were in range of (18 to <22) kg excess weight followed by 4(20%) in (14 to < 18 kg) and 22 to <26) kg each , 1 (5%) in (26 to 30) kg . However after 42 days of treatment 5(25%) come to the range of 10 to <14 kg, 9 (45%) in (14 to <18) kg , 5 (25%) in (18 to <22) kg , 1 (5%) in (22 to <26)kg

The mean ± S.D. value before treatment was 20.51± 3.46, after 42 days of treatment it was come to 16.30 ±3.72.

Similarly out of 10 cases in males it was observed that no. of patents i.e. 5(50%) were in the range of (14 to <18)kg followed by 5(50%) in (18 to <22)kg . After 42 days of treatment 7(70%) were in the range of (14 to <18), 3(30%) in (18 to < 22) kg.

1(10%) comes to the range (<10) kg , 6(60%) in (14 to <18) kg, 3(30%) in (18 to <22) Kg.

However the mean ± S.D. before treatment was 18.28 ±1.80 which comes to 16.6 ±2.1 after 42 days of treatment.

Showing the BMI of the patients before and after treatment of Female and Male

$\text{BMI} = \frac{\text{Wt. In Kg}}{\text{Ht. In m}^2}$	Female				Male			
	B.T.		A.T.		B.T.		A.T.	
	f	%	f	%	f	%	f	%
28 to < 30	-	-	16	80	-	-	4	40

30 to <32	17	85	3	15	9	90	6	60
32 to < 34	2	10	1	5	1	10	-	-
34 to < 36	1	5	-	-	-	-	-	-
Mean ± S.D.	**31.24 ± 1.28**		**29.42 ± 1.15**		**31.07 ± 0.56**		**30.37± 0.65**	

B.T. = Before Treatment

A.T. = After Treatment

From the study it was observed that before treatment in Female maximum no. of patient i.e. 17 (85%) were in the B.M.I. range of (30 to <32) followed by 2 (10%) in (32 to <34), 1 (5%) in (34 < 36). After 42 days of treatment 16 (80%) comes to (28 to <30) B.M.I. range, 3 (15%) in (30 to <32), 1 (5%) in (32 to < 34) B.M.I. range. However the mean ± S.D. before treatment was 31.24 ± 1.28. which was remarkable changes to 29.42 ± 1.15 after 42 days of treatment.

Showing the abdominal circumference (in cm) of the patients before and after treatment of Female and Male

Abdominal circumference in cm.	**Female**				**male**			
	B.T.		**A.T.**		**B.T.**		**A.T.**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
89-94	1	5	13	65	3	30	5	50
95-100	10	50	5	25	4	40	3	30
101-106	4	20	2	10	2	10	1	10
107-112	5	25	0	0	1	10	1	10
Mean ± S.D.	101.9 ± 5.6		94.4 ± 3.96		99.3 ± 5.57		95.9 ± 5.52	

B.T. = Before Treatment

A.T. = After Treatment

It was observed that in case of abdominal circumference before treatment in Female. Maximum number i.e. 10 (50%) were in range (95-100) cm followed by 5 (25%) in (107-112) cm, 4 (20%) in (101-106) cm, and 1 (5%) in the range (89-94) cm. After 42 days o treatment 13 (65%) comes to (89-94) cm, 5 (25%) to (95-100) cm, 2 (10%) to (101-106) cm range. The mean difference ± S.D. was 101.9 ± 5.6 before treatment which reduces to 94.4 ± 3.96 Similarly in Male as given in table.

Showing the percentage of the patients got improved after treatment with respect to different sign & symptoms in Female and Male

Sl. No.	**Sign & Symptoms**	**Female**	**Male**
		% of improvement	% of improvement
1.	Kshudra swāsha	46	20
2.	Pipāsātiyoga	42	20
3.	Kshudhātiyoga	40	25
4.	Nidrā	35.71	50
5.	Sadana	75	50
6.	Swedādhikya	30	0
7.	Krathana	16.6	0

8.	Daurgandha	0	0
9.	Daurbalya	57.16	25
10.	Javoparodha	2	0
11.	Wt. In excess	95	80
12.	BMI	95	80
13.	Abdominal Circum	100	20
14.	Total Serum Cholesterol	90	90

It is observed from the above table that percentage of the patients to different subjective sign and symptoms viz. Kshudra Swasa – 46%, Pipasatiyoga – 42%, Kshudhatiyoga – 40%, Nidra – 35.71%, Sadana – 75%, Swedadhikya – 30%, Krathana – 16.6%, Daurgandha – 0%, Daurbalya – 57.16%, Javoparodha –2%, Percentage of the patients got improvement after 42 days of treatment in different anthropometric measurements, viz. – weight – 95%, BMI – 95%, Abdominal circumference – 100%, percentage of the patients got improvement after 42 days of treatment, in different biochemical parameters viz. – total serum cholesterol – 90%. Similarly the percentage of male patients got improvement is mentioned on the table.

Showing the percentage of improvement in different signs and symptoms after 42 days

Sl. No.	Sign & symptoms	Female (A.T.)				Male (A.T.)			
		I_1	I_2	I_3	%	I_1	I_2	I_3	%
1.	Weight	1	4	14	79	5	3	0	46
2.	BMI	1	12	6	69	6	2	0	43
3.	Abdominal circum	5	10	5	62	10	0	0	37
4.	Total Serum Cholesterol.	9	0	0	19	2	0	0	8

I_1 I_2 I_3 = the degree of improvement define in the clinical profile, % = Mean Percentage of improvement

N.B.: The above percentage of improvement is calculated considering the scale defined in detail earlier (in the clinical profile)

Out of 20 patients in Female 19 got improvement, out of which 1 with mild improvement, 4 with moderate improvement and 14 with maximum improvement, after 42 days of treatment. The average percentage of improvement in weight reduction is 79%. In case of BMI, the average improvement is 69% after 42 days of treatment. The average improvement in abdominal circumference is 62%. The average improvement in total serum cholesterol is 19% after 42 days of treatment.

Similarly the average improvement after 42 days of treatment in case of Male with respect to different sign and symptoms are weight – 46%, BMI – 43%, Abdominal circumference – 37%, Total Serum Cholesterol – 8%.

Showing the severity scale of patients according to WHO definition of BMI

Severity	BMI (kg/m^2)	Female = 20	Male = 10
Mild (Over weight)	25-29.9	-	-
Moderate (Obesity)	30-39.9	20	10

Severe (Morbid Obesity)	> 40	-	-

All the patients of Female & Male were comes under BMI range (30-99.9) kg/m^2 which was indicated the moderate degree of obesity.

Showing the Assessment of result after treatment in female and male

Sl. No.	Clinical Assessment	After 42 days of treatment	
		Female	Male
1.	Maximum improvement	6 (30%)	-
2.	Moderate Improvement	12 (60%)	-
3.	Mild improvement	1 (5%)	8 (80%)
4.	Unsatisfactory	1(5%)	2 (20%)

The clinical assessment of result shows that in case of female after 42 days of treatment, 6 (30%) patients got maximum improvement, 12 (60%) patients got moderate improvement, 1 (5%) got mild improvement and 1 (5%) could not get satisfactory improvement.

As compare to male where 80% got mild improvement and 2 (20%) could not get any satisfactory improvement.

Showing the statistical Assessment of the Result

Sign and Symptoms	Treatment Groups	Duration	Mean ± SD	Mean difference± SD	d.f.	T-Value	P. Value	Remarks
Excess Weight	Female	BT	20.51± 3.46		19	16.65	<0.001	HS
		AT	16.3±3.72	4.21±1.13				
	Male	BT	18.28± 1.86		9	5.83	<0.001	HS
		AT	16.6±2.10	1.68±0.91				
B.M.I	Female	BT	31.24±1.28		19	15.60	<0.001	HS
		AT	29.42± 1.15	1.85 ±53				
	Male	BT	31.07± 0.56		9	5.82	<0.001	HS
		AT	30.37±0.65	0.70±0.38				
Abdominal circumference	Female	BT	101.9±5.6		19	11.6	<0.001	HS
		AT	94.4±3.96	7.5±3.03				
	Male	BT	99.3±5.57		9	15.57	<0.001	HS
		AT	95.9±5.52	3.4±0.69				
Serum cholesterol	Female	BT	216.31±22.73		19	7.26	<0.001	H.S.
		AT	210.34±22.96	5.97±2.42				
	Male	BT	218.55±29.41		9	3.6	<0.010	HS
		AT	215.64±29.64	2.86±2.5				

± S.D. = Standard Deviation H.S.= Highly significant p. value = Probability
d.f. = Degree of freedom S= Significant
t- value = Test of significant I.S. = Insignificant

From the above statistical analysis it was found that the mean value ± S.D. of Excess wt. In Female patient was, 20.51 ± 3.46 kg at before treatment. After 42 days of treatment it is reduce to 16.30 ± 3.72. The test of significance shows that the effect of trial drug is highly significant with p value less than 0.001.

Similarly in case of male the mean value, ± SD of excess wt. Before treatment was 17.68 ± 3.07, which decreases to 16 ±2.85 after 42 days of treatment. The test of significance shows that effect of trial drug in male is also highly significant with p – value less than 0.001.

Statistically analysis of BMI shows that in Female the mean ± SD before treatment was 31.24 ± 1.28 kg/m^2. After 42 days of treatment it decreases to 29.42 ± 1.15 kg/m^2. The test of significance shows that the effect of trial drug is significance with p value less than 0.001. In Male the mean ± SD of B.M.I. before treatment was 30.82 ± 0.9 kg/ m^2, which decreases to 30.14 ± 0.72 after 42 days of treatment, with p – value less than 0.001.

The statistical analysis of abdominal circumference reveals that, in case of female the mean ± SD value of the patients before treatment was 101.9 ± 5.6 cm, after 42 days of treatment it decreased to 94.4 ± 3.96 cm.

The test of significance shows that the effect of trial drug is highly significant for abdominal circumference with p value < 0.001.

In male the mean ± SD before treatment was 99.3 ±5.57 cm which decreases to 95.9± 5.52 after 42 days of treatment. The test of significance shows that, the effect of trial drug is also highly significant with P- value < 0.001.

The mean ± SD of serum cholesterol before treatment in case of female 216.31 ± 22.73 mg%. After 42 days of treatment, it changed to 210.34 ± 22.96 mg % . The test of significance shows that the effect of trial drugs is highly significant with p –Value < 0.001

In case of male, the mean ± SD before treatment was 218.55 ± 29.41 mg % which changed to 215.64 ±29.64 after 42 days of treatment .The test of significance shows that the effect of trial drug is significant with p – value < 0.01.

DISCUSSION

As regards the management of sthaulya it is not easily accessible to treat. Still there is no satisfactory treatment for it in modern medical science. In contrast, Ayurveda directs two fold treatments like pursuing out the excess physiological and pathological factors or to palliate them at their own site. The former (shodhana) is more powerful than the later one (shamana chikitsa) for a reason of expulsion of the morbidity instantly.

Probable Action of Herbal Compound

The drugs possess Tikta, katu Rasa as Pradhana rasa, while Katu, Tikta Rasa by their action causes Agnideepan, Mamsavilikhati and Kledamalanupaham and Margam Vivrinoti[3]. The Kasāya Anurasa and Sheeta Virya of Musta[4] is mainly responsible for the Pācana activity. In Sthaulya due to Āma Rasa there is Dhatvagni Mandya which leads to accumulation of Medadhatu. Now if the Kosthagata Samprapti vitiates the Purisavaha Srotas, Rasa Dhatu associated with rakta , mamsa and Meda , this is the probable Samprapti where Musta may be administered. The Ruksa Guna of Tikta Rasa, mainly concerned with the Medashoshana at various sites (e.g. Stana – Musta) The Ruksa Guna of Katu Vipaka, in Musta can be assessed by signs and symptoms related to purisvaha srotas (Grahi). Hence though both the drugs are

kapha pittaghna in nature, Musta is more preferable in shaithilya Pradhana conditions. The main pathological factor in sthaulya are kapha and Meda (both snigdha pradhana), they are jala and Prthvi dominant, while rest drugs are Agni, Vāyu and Nābhasa dominant because of its Katu, Tikta Rasa (Ruksha Guna). Panchabhautic constituents of Kapha and Meda (Snigdha Guna) Verses test drug (ruksa) are just opposite. Hence the drugs are effective in reducing the excess. Drug recommended in the text for sthaulya is here by justified and confirms its indication.

CONCLUSION

Darshanika and Ayurvedic view regarding sthaulya is almost equal theoretically but from therapeutic point of view the applicability is slightly different in Ayurveda. Statistic reveals that the incidence of obesity mostly found in the middle age group of female cases and especially after menopause. The clinical trial showed that the efficacy of the trial herbal compound is good in control of obesity. On the basis of the samanya vishesha siddhanta selected the herbal medicine having kaphaghna and medaghana effect reducing the overall obesity by 30% along with the body weight reduction, cholesterol 69% also reduced which is tested in clinical trial. It has been tried to make a comparative study between sthaulya and obesity both literally and clinically and the efficacy of the trial drug in its controlled by re-establishing the theory of vishesha. Study also giving a nucleus to re-think about samanya and vishesha siddhanta of Ayurveda which is essential for physiological and pathological state.

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