



Research Article

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A CLINICAL STUDY ON THE EFFECT OF LEKHANA BASTI [WITH & WITHOUT KATU TAILA] IN THE MANAGEMENT OF STHAULYA WITH SPECIAL REFERENCE TO OBESITY

Yogeshwari Suple¹, Gaurav Sawarkar^{2*}¹Assistant Professor, Department of Panchakarma, B.M. Ayurveda College and Hospital, Nagpur, Maharashtra, India²Assistant Professor, Department of Rachana Sharir, Mahatma Gandhi Ayurveda College, Hospital and Research Centre, Salod (H), Wardha, Maharashtra, India

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***Corresponding author**

Dr. Gaurav Sawarkar, Assistant Professor, Dept. of Rachana Sharir, Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod (H), Wardha- 442004 Maharashtra, India E-mail: drsawarkar.gaurav@gmail.com

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ABSTRACT

The aim of this study was to study the efficacy of Katu taila i.e. sarshapa taila in Lekhana Basti in the management of Sthaulya. Comparative study was conducted. Informed consent of all patients included in the study was taken. Their disease and line of treatment was explained to them. Ethical clearance was approved by ethical committee of Poddar Ayurveda Medical College, Worli, Mumbai, India. Patients were selected from OPD and IPD of said institute. The study was conducted with 40 patients in two groups, group A (20) i.e. trial group, treated with lekhanasti with Katu tail (as per Dalhan)⁵ and group B (20) i.e. control group, treated with lekhanasti with Til tail (as per Sushruta). Total quantity of niruha was 960 ml and anuvasana was 240 ml, administered for 16 days. Lekhanasti with katu taila was better in improving good cholesterol and decreasing bad cholesterol and overall improving lipid profile. Lekhanasti with katu taila emphasizes more results in decreasing total cholesterol, triglycerides, LDL and VLDL and increased HDL significantly. While Lekhanasti with Til Taila had impact only on total cholesterol and triglycerides. It can be concluded that lekhanasti with katu taila is better in improving good cholesterol and decreasing bad cholesterol and overall improving lipid profile than control group.

Keywords: Sthaulya, complications, lekhanasti**INTRODUCTION**

Sthaulya (Obesity) is one among the major diseases of modern era with continuous changing life styles, environment and diet habits. Man has become the victim of many disease caused by unwholesome dietary habits and obesity is one of them. Obesity is a blessing of the modern age of machines and materialistic facilities. In 2008, WHO claimed that 1.5 billion adults, 20 and older, were overweight and of these over 200 million men and nearly 300 million women were obese¹. As per WHO, The world health statistics 2012 report, one in six adults obese². Obesity has reached epidemic proportion in India in the 21st century with morbid obesity affecting 5 % of country's population³. The industrialization, stress during the work, dietary habits, lack of exercise and various varieties among the daily diet e.g. fast food, frozen fruits, large proportions of soft drinks and beverages, canned foods results into the clinical entity named as obesity. In Ayurveda, various treatment modalities are available for obesity like lekhanasti. Lots of research work was done with lekhanasti⁴ by research scholar. This study was carried out to verify and improve the effectiveness of lekhanasti, with and without katu tail (sarshapa).

MATERIALS AND METHOD

Comparative study was conducted. Informed consent of all patients included in the study was taken. Their disease and line of treatment was explained to them. Ethical clearance was approved by ethical committee of Poddar

Ayurveda Medical College, Worli, Mumbai, India (2008-2009/Panchakarma/3). Patients were selected from OPD and IPD of said institute. The study was conducted with 40 patients in two groups, group A (20) i.e. trial group, treated with lekhanasti (Table 1) with Katu tail (as per Dalhan)⁵ and group B (20) i.e. control group, treated with lekhanasti with Til tail (as per Sushruta)⁵. Total quantity of niruha was 960 ml and anuvasana was 240 ml, administered for 16 days⁶, (Table 2)

Table 1: Content of lekhanasti

Drug	Quantity
Triphala Decoction	240 ml
Gomutra (cow urine)	120 ml
Saindhava (salt)	10 g
Madhu (honey)	160 ml
Yavakshar	30 g
Katu Tail / Til Taila (oil)	240 ml
Ushakadi Gana prakshep -i.e. shilajit, kasis bhasma, hingu, vacha, tuttha	80 g ⁵

Table 2: Days of Administration

Day	Type of Basti	Day	Type of Basti
1	Anuvasana	9	Anuvasana
2	Niruha	10	Niruha
3	Anuvasana	11	Anuvasana
4	Niruha	12	Niruha
5	Anuvasana	13	Anuvasana
6	Niruha	14	Anuvasana
7	Anuvasana	15	Anuvasana
8	Niruha	16	Anuvasana

Selection Criteria
Inclusion Criteria

Patients between the age group of 20-60 years of both sexes were included. Patients of sthoulya i.e. having classical signs and symptoms of Sthaulya like mansmedoativruddhi⁷ were determined by BMI more than 24.9 [Haslett C (1999)] and Waist –hip ratio and sphikstanodar lumbanam⁷ i.e. pendulum movement of breast, thighs and abdomen. Values of lipid profiles for selecting patients for study, total cholesterol level: between 150-450 mg/dl and serum triglyceride level between 150-450 mg/dl.

Exclusive Criteria

Patients requiring acute medical care, having morbid obesity i.e. BMI > 40⁸, with multi organs involvements, cardiac, respiratory, hepatic and renal disease, neurological problems, pregnant and lactating women^{9,10},

patients with gudarsha (haemorrhoids), parikartika (fissure), bhagandar (fistula)¹¹ were avoided.

Criteria for Diagnosis and Assessment of Patients
Subjective

Krichchvyavayata (loss of libido), kshudraswasa (dyspnoea on exertion), gatrasedha (fatigue), daurgandhya (bad odour), swedadhikya (increased sweating at normal temperature), atipipasa (increased thirst), atikshudha (increased appetite), swapnadhikya (excessive sleep).^{12,13}

Objective

Weight, body mass index [BMI] – weight in kg/ [Height in metre] X 2, waist hip ratio, abdominal circumference, mid arm circumference, laboratory investigations to rule out other pathological conditions-serum lipid profile, LFT, RFT, CBC, BSL (fasting, post meal), urine-routine and microscopic HIV and VDRL.

OBSERVATION AND RESULT

Table 3: Effects of therapy symptoms on subjective criteria in 40 patients (Wilcoxon matched pair test)

Group	A Group		B Group	
	Before	After	Before	After
Mean + SD	8.3 + 3.147	1.8 + 1.542	7.8 + 1.436	2.15 + 2.183
P value	< 0.0001***		< 0.0001***	

***Highly significant

Table 4: Effects of therapy on physical variables (on objective variables) for both group (Paired t test)

S. No.	Variable	Mean + SD		T	p
		Before Treatment	After Treatment.		
1	Weight				
	A Group	81.575 + 10.4	78.32 + 11.66	4.220	0.00014**
	B Group	86.87 + 14.65	83.3 + 13.03	4.023	0.0007***
2	B.M.I.				
	A Group	33.98 + 3.409	32.94 + 3.959	1.720	0.1016
	B Group	34.1 + 2.93	32.92 + 2.8	3.998	0.0008**
3	Waist-hip ratio				
	A Group	1.02 + 0.7612	1.006 + 0.08	1.382	0.1832
	B Group	0.97 + 0.05	0.99 + 0.06	1.055	0.3046
4	Mid arm circumference				
	A Group	34.8-3.443	32.9 + 3.56	5.871	0.0001***
	B Group	34.1 + 2.575	32.7 + 3.42	3.177	0.0050**
5	Abdominal circumference				
	A Group	108.9 + 8.344	104.7 + 11.07	3.579	0.0020**
	B Group	110.8 + 10.16	105.7 + 10.93	4.680	0.0002**

Significant, *highly significant

Table 5: Effects of therapy on lipid profile parameters, for both A and B Group (Paired t test)

S. No.	Haematological Parameter	Mean + SD BT	Mean + S.D. AT	Diff. In Mean	SE d	T valve	P value
1	Total Cholesterol						
	A Group	192.725 + 39.73	165.3 + 36.88	27.33	5.418	5.044	< 0.0001***
	B Group	200.88 + 31.37	166.35 + 26.78	34.53	5.977	5.777	0.0001***
2	Triglycerides						
	A Group	176.71 + 96.56	129.72 + 58.54	46.995	11.259	4.174	0.0174**
	B Group	160.6 + 83.35	130.02 + 72.03	30.58	7.747	3.947	0.0009***
3	HDL						
	A Group	31.55 + 7.48	34.47 + 6.22	-3.320	1.237	2.683	0.0147**
	B Group	32.64 + 6.204	35.21 + 4.09	-2.570	1.342	1.915	0.0707
4	LDL						
	A Group	139.33 + 29.31	113.83 + 24.54	25.49	3.843	6.634	0.0001***
	B Group	131.47 + 28.003	145.7 + 27.31	-14.23	7.740	1.839	0.0817
5	VLDL						
	A Group	25.42 + 13.88	20.86 + 10.23	4.562	0.917	4.976	< 0.0001***
	B Group	24.44 + 9.847	20.85 + 7.14	3.589	2.045	1.755	0.0953

Significant, *highly significant, BT – Before Treatment, AT – After Treatment

Table 6: Total effect of therapy between trial and control group

S. No.	Total effect of therapy	Trial Group		Control Group	
		No. of patients	Percentage %	No. of patients	Percentage %
1	Cured	00	00 %	00	00 %
2	Markedly improved	05	25 %	04	20 %
3	Improved	14	70 %	15	75 %
4	Unchanged	01	05 %	01	05 %

DISCUSSION

Swedadhikya (increased sweating at normal temperature), atipipasa (increased thirst), atikshudha (increased appetite) and swapnadhikya (excessive sleep); these symptoms were significantly reduced in both groups, hence lekhana basti was effective in treatment of obesity. Durgandhya, kruchchvyavayata reduced effectively in trial group than control group, so it can be said that lekhana basti with sarshapa taila more potent in treating subjective parameters. Both the group showed significant difference in the weight after treatment of lekhana basti, hence lekhana basti was effective in reduction of weight. However having looked at the observations, trial group shows efficacy in reduction of weight. Loss in weight in control group was more as compared to that in trial group. It may be due to patient in control group having dominance of vata pitta prakruti and so tendency to lose weight was more due to vata. While in trial group most of the patients were having kapha pittaj prakruti which is said to be kashtasadhya (very hard) to treat. Due to this reason, fall in BMI was more in control group. Both the group showed difference in BMI after treatment of lekhana basti. But it was significant only in case of control group. May be larger sample size and larger duration of treatment is required for further evaluation. Waist hip ratio does not fall down significantly in both groups. Trial group showed decrease in mid arm circumference highly significant and control group shows significant. Trial group shows decrease in abdominal circumference significant and control group shows high significant. Serum cholesterol significantly reduced in both groups, it can be said that lekhana basti may prove effectiveness in hyperlipidaemia. Decrease in serum cholesterol value was more in control group than that of trial group. Value of HDL was increased in both group but trial group was more effective to improve the lipid profile. Decrease in triglycerides value was more in trial group than that of control group. Decrease in its value was appreciable. Trial group had better efficiency to decrease LDL and VLDL than control group. Trial and control groups were effective to improve the lipid profile status or quality of life of patient but the total percentage of relief was slightly more in trial group than control group, but statistically there was no significant difference between their efficacies with respect to total effect of therapy.

CONCLUSION

Lekhana basti with katu taila emphasizes more results in decreasing total cholesterol, triglycerides, LDL and VLDL and increased HDL significantly. While Lekhana Basti with Til Taila had impact only on total cholesterol and triglycerides. It can be concluded that lekhana basti

with katu taila is better in improving good cholesterol and decreasing bad cholesterol and overall improving lipid profile than control group. No AE or SAE is observed in whole of the study this shows that there is no side effect of both therapies on body. Change in ESR was found to be significant in both the groups after treatment, so it can be concluded that there was no development of any underlying disorder related to inflammation caused due to catheterisation for basti procedure. Lekhana basti was useful in treating the symptoms like khudrashwasa occurred due to obesity. Trial group was proved more effective in especially with symptom kshudraswasa and durgandhya.

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