



EMPHASIZING THE ROLE OF POOGATRIM BASTI (MEDICATED ENEMA) ALONG WITH OTHER THERAPIES IN THE MANAGEMENT OF ADOLESCENT OBESITY: A SINGLE CASE STUDY.

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ABSTRACT

In our fast-forward culture, we have lost the art of eating well. Food is often little more than fuel to pour down the hatch while doing other work stuffs like web surfing, driving, walking. All of this speed takes a major toll on the health. Poor diet and sedentary behavior have led to an increase in *obesity* and lifestyle related disease and a huge rise in chronic medical conditions. In *ayurveda*, *obesity* falls under the heading of *santarpana rogas* and the line of treatment should be to pacify vitiated *kapha*, *medas*, *agni* and *vata*. Among all the therapeutic procedures, *vamana* and *virechana* require few hours to produce *sodhana* whereas *niruha basti* takes only few minutes which substantiates its superiority over other *sodhanas*. A single case study was done to prove the efficacy of *poogatrim basti* in the management of *obesity*. *Pooga* being the main ingredient exhibiting *lekhana* property shows remarkable changes in terms of overall weight reduction and anthropometrical measurements of the subject.

KEYWORDS: Obesity, *Poogatrim basti*, *pooga*, *lekhana*, *basti*, *Santarpana rogas*

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INTRODUCTION:

Obesity is one side of the double burden of malnutrition and today more people are obese than underweight in every region except sub-Saharan Africa and Asia. Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A body mass index (BMI) over 25 is considered overweight, and over 30 is obese. The issue has grown to epidemic proportions, with over 4 million people dying each year as a result of being overweight or obese in 2017 according to the global burden of disease^[1]. When people are told to 'eat many small meals', what they may actually hear is 'eat all the time' making them likely to respond with some degree of compulsive overeating. This might be the first generation where kids are dying at a younger age than their parents and is related primarily to the obesity problem. 'One must eat to live and not live to eat', is a famous quote from the well-known playwright, Moliere's play, 'The Miser'. This proverb aims to communicate that one must eat as much as is needed to survive and not overeat. One must not make eating their life's purpose. Our busy lives don't permit us to develop extensive exercise routines. Hence it becomes essential to limit our intake to what the body can process, instead of making it work overtime to break down the extra

amount of food that we have consumed. After all, too much of anything is good for nothing.

karshyameva varam sthoulya, nahi sthulasya bheshajam^[2] opines that emaciation is better than obesity, since the latter lacks treatment. Neither brmhana line of approach nor langhana is capable of pacifying the increased medas, agni and vata which are the main perpetuators in the pathogenesis of obesity. The treatment modality adopted should be capable of alleviating the increased medo dhatu and agni^[3], at the same time bringing back the kupita vata to normalcy. This often becomes challenging as anything we do to pacify vata (brmhana), increases medas and kapha and vice-versa owing to its antagonistic properties^[4]. henceforth basti on account of its various actions like of doshas based on the properties of the drugs used for it.

The word lekhana itself indicates its action means **lekhanam patlikaranam**^[5] " (scarifying helps in reducing fats). its therefore a process of emaciation. While sharangadhara explained the term in a broader aspect as in drying up or dessication of all excess dosha, dhatu and mala ie**deha vishoshanam dhatun malan va dehasya vishoshya lekhavecha yat lekhanam**^[6]... the drug which clarifies the protoplasmic contents of tissue cells and thus gradually clears the system of its deranged constituents is lekhana. Lekhana basti is

therefore indicated in obesity and hyperlipidaemia. Classical references of lekshana basti is also found in susruta chikitsasthana^[7].

Lakshanas of *Sthula purusha* includes *meda-mamsa vridhhi, chalatva of sphik, stana* and *udara, ayushohrasa, atisveda, dourgandhy, atikshut and pipasa, vyadhiasahtva*^[8]. As *vyadhi asahtva* is one of the lakshana mentioned by charaka^[9], *sthulapurusha* doesn't have resistance to the disease due to *alpavyadhi ksamatva*. The contemporary science also states that persons with obesity and pre-diabetes, there is some evidence of immune mechanism in both cells mediated and of humoral activity against β cells. Thus, some people appear to have defective immune mechanism and under some environmental trigger, attacks their own insulin producing cells.

Case report -

A 22-year-old boy hailing from battalar koppalu visited our panchakarma opd at hassan presenting with gradual weight gain (over 35 kgs) within a span of 1 year. He was a part time business student and his work nature was more of office work. He further presented with *chala sphik* and *udara, atikshudha, svedhabadha, dourgandya, dourbalya* and *nidranasha*. His family history

was negative for obesity. Other systemic pathologies were ruled out. On examination his weight was 131 kg, body mass index 43.4 kg/m². So, on the basis of weight, bmi and symptomatology he was diagnosed as a patient of Grade- III obesity (*sthoulya*). He was on water fasting few months before hospitalization and no relevant medical or surgical history was noted.

Table 1: International Classification of adult underweight, overweight and obesity according to BMI^[10]

Classification	BMI kg/m ²
Underweight	<18.50
Normal range	18.50- 24.99
Overweight	≥ 25
Pre obese	25-29.99
Obese	≥ 30
Obese class I	30- 34.99
Obese class II	35-39.99
Obese class III	≥ 40

Personal history

Nadi (Pulse): 73/min

Mala: Regular/*Prakrita*

Mutra: 3-4 times/day

Agni: *Vishama*,

Sparsha: *Sheeta/Khara*

Drk: *Prakrita*

Shabdha: Dull/feeble voice

Jihwa: *lipta*

BP :130/90 mm Hg

Akriti: <i>Sthula</i>	Adhishtana : Medo Dhatu.
Bala: <i>Avara</i>	Roga Marga : Bahya
Ahara: <i>Akalabhajana/Adhyasana</i>	Agni : Teekshnagni Dhatvagni Mandya
Habits: Junks/fast food/ bakery	Dosha : Kapha And Vata
Vihara: <i>Avyayama/ Divaswapna/ Sedentary.</i>	Dushya : Rasa, Mamsa And Medo Dhathu
Samprapthi Ghataka-	Srotas : Medovaha, Rasavaha, Mamsavaha
Udbhava Sthana: Amashaya	Sroto Dusti : Sanga
Vyakta Sthana: Sarva Shareera	Sadhya Asadhyata: Krichra Sadhya ^[11]

Table 2: Treatment schedule

DATE	PROCEDURE	MEDICINE WITH DOSAGE
10/1/2021 to 14/1/2021	1. <i>Sarvanga Udwartana</i>	<i>Churnas of Triphala 2p + Kulatha 4p + Yava 2p+ Mudga 1p+ Methika 1p + Sarshapa 1/4p</i>
	2. <i>Sarvanga Parisheka</i>	<i>Dasamoola Qwatha</i>
	3. <i>Kashaya Shirodhara</i>	<i>Jatamamsi + Musta + Amalaki + Yashtimadhu</i>
	4. <i>Shiva gutika</i>	1 BD before food
15/1/2021	5. <i>Sarvanga Udwartana + Sarvanga Parisheka f/b Sadyovirechana (alternate days)</i>	with <i>Haritaki Churna 25g + Honey QS</i> No. of <i>Adhovegas</i> : 8
16/1/2021	6. <i>Sarvanga Abhyanga</i>	<i>Brihat Saindhavadi taila</i>
	<i>Sarvanga Parisheka</i>	<i>Dashamoola qwatha</i>
	Repeat 2,3.	
17/1/2021	7. <i>Sarvanga Abhyanga +Sarvang Parisheka f/b Sadyo virechana</i>	<i>Haritaki churna 25g + Amritsara 50ml</i> No. of <i>Adhovegas</i> : 9 times
18/1/2021	8. Repeat 2,3,5	

19/1/2021	9. <i>Sarvanga Abhyanga +Sarvang Parisheka f/b Sadyo virechana</i>	<i>Haritaki churna 25g + amritsara</i> 50ml No. of <i>Adhovegas</i> : 7 times
20/1/2021	Repeat 2.3.5	
	10. <i>Anuvasana Basti (5a)</i>	<i>Pippalyadi Taila</i> 80ml
21/1/2021 to 24/1/2021	11. <i>Poogatrim Niruha Basti (3n)</i>	Honey: 90g <i>Saindhava lavana</i> : 8g <i>Pippalyadi Anuvasana Tl</i> : 80ml <i>Poogatrim Kalka</i> : 30g <i>Poogatrim Kashaya</i> : 300ml <i>Amritsara</i> : 100ml

Along with the *Panchakarma* therapies the client was given diet and yoga schedule as below

Table 3: Diets and yoga advised

TIME	DIET	QTY
8 am	<i>Mudgamalaka yusha</i>	400g
11 am	<i>Khadira siddha yavagu</i>	200g
1 pm	<i>Yava roti + palya</i>	(2) + 1 box
	<i>Mudga yusha</i>	200 ml
4 pm	Veg soup	200ml
8 pm	Mehari khichdi	300g
	<i>Mudga yusha</i>	200ml
	Daily Water intake	2L/day
	YOGA	
7-8 am	General yoga	
11-12 pm	Obesity yoga	
4-5 pm	<i>Pranayama</i>	

Table 4: Discharge medicines

Medicine	Dose	<i>Anupana</i>
<i>Pathyadi khada</i>	6tsp tid (before food)	Luke warm water

Niargim tab	2tab tid (before food)	
Haritaki khanda	2 tsp bd (after food)	Warm water
Sinol drops	2 drops tid each nostril	

Table 5: Assessment of Anthropometry changes before and after treatment

OBSERVATION	BT (before Basti)	AT (After Basti)	AT (After Shamana)
Weight	131 kg	118 kg	118 kg
BMI	43.4 kg/m ²	39.46 kg/m ²	39.46 kg/m ²
Abdominal Circumference	78 cm	52 cm	51 cm
Mid Arm Circumference	R: 15.9cm L:15 cm	R: 12cm L:11.7cm	R: 12 cm L:11.7cm
Mid Thigh Circumference	R: 27.2 cm L: 26 cm	R: 24cm L: 23cm	R: 24 cm L: 23cm
Waist Circumference	91 cm	84cm	83.2 cm
Hip Circumference	100cm	95cm	94.1 cm
Waist/Hip ratio	0.91	0.88	0.88

DISCUSSION:

One of the etiological factors for the *sthaulya*, is said to be excessive consumption of *madhura rasa* which signifies *upalepa* type of *strotovikruti* which can be understood through the concept of dyslipidaemia, a consequence of the obesity and pre-diabetes and persons are more prone for atherosclerosis, hypertension, cardiovascular diseases etc. In *ayurveda* also it is said that *atiyoga* of *madhura rasa* leads to *dhamaniupalepa*, *shleshmaja vikara*, *mamsavrudhi* etc. It is the

law that the *nidana* is always inversely proportional to the treatment principle,

means if the *nidanas* are *kaphakara* in nature then the treatment should be aimed at *kapha kshaya* till the equilibrium is attained for which the principle adopted is either *samanya* or *vishesha* based on *dravya*, *guna* and *karma*.

In the present study *bahya rookshana* was done by *sarvanga udvartana* performed with triphaladi churna along with *kashaya parisheka* and *abhyantara rookshana* done with *yava* (in the form of chapatti), *mudga* and *khadira*. Basically acharya charaka^[12] explains *udvartana* in the context of *dinacharya* as *shareera parimarjana*. It cures *shareera daurgandhya*, *gurutwa*, *tandra*, *kandu*, *arochaka*, *sveda*, etc. It is advised that *udvarthana* karma should be done before

abhyanga so as to maintain health. *Acharya sushruta*^[13] explains that *udvartana* helps to bring back the *vikrutha vayu* to its normalcy. It decreases the fat and *vikruta kapha*. It also provides smoothness and cleanses the skin and gives firmness to the body. He further mentions that it also dilates the orifices of sira and stimulates *bhrajaka pitta* (peripheral circulation). As per *acharya vagbhata*^[14] *udvartana* normalizes *vikrutha kapha* and *liquifies* the *medas*. It provides firmness to body, smoothness to skin and increases the complexion of the skin. In the context of “*nitya pravrutti prakarana*” of *yogaratanakara*, author has mentioned that *udvartana* normalize the increased *kapha* and diminishes *medo dhatu*. It increases *rakta* and *shukra dhatu*, gives strength to body, increase blood formation, improves body complexion and makes skin smooth. The text also explains about “*mukhodvarthana*”. *Kashaya rasa* is *rookshatama* in nature and *parisheka* being *dravasveda* is beneficial for morbid *pitta* and the *ushna guna* is beneficial for morbid *kapha* and *vata*. *Dasamoola* has got *vatakapahara* and *shopahara* properties.

Shirodhara induces a relaxed state of awareness which results in a dynamic psycho-somatic balance. A total feeling of wellness, mental clarity, and comprehension is experienced in this process. It is done prior to

sarvanga udvartana and *abhyanga* in this case. *Abhyanga* does induce muscle relaxation and a calming effect. *Ushna virya* tailas like *brihat saindhavadi* are used here because though *udvartana* helps to tackle the *shakha gata ama*, like *amavata* one should never directly go with *brimhana* tailas immediately after *bahya rookshana* as it may again lead to accumulation of *ama*. There is enhancement of the relaxant activity in the subject which is due to the sequential use of both *shirodhara* and *abhyanga*.

As *sthaulya* is a *bahudosha pradhana vyadhi*^[15], *sodhana* is the first line of treatment which should be adopted. *Ataygni* is contra indicated in *sodhanaga snehapana*. As *atisthoulya purushas* cannot be subjected to *vamana* and if administered *virechana*, the presence of *tikshnagni* can cause charring/ burning of the *virechanoushadha*. So *sadyo virechana* was planned on alternate days with *haritaki churna* to remove the morbid *pitta* and *kapha* from *pachyamanasaya* and *pakvasaya* in *sthoka matras* as it helps in *koshta sodhana* and *vatanulomana* but temporarily. Therefore, *sodhana bastis* like *lekhana basti* was further planned in this case. *Lekhana basti* is therefore indicated in obesity and hyperlipidaemia^[16]. The drug which clarifies the protoplasmic contents of tissue cells and thus gradually clears the system of its

deranged constituents is *lekhana dravya*. Classical references of *lekhana basti* is also found in *susruta chikitsasthana*.

Each 10g of *pooga trim* is prepared from 5g of *shuddha pooga (areca catechu)* as the main ingredient and 1 g each of *khadira (acacia catechu)*, *katurohini (picrorrhiza kurroa)*, *saptarangini (salacia chinensis)*, *bhoonimba (swertia chirayita)*, *jamboo twak (syzygium cumini)*. Areca nuts contain tannins, arecatannin, gallic acid, negligible amounts of terpineol, lignin, alkaloids including arecoline, arecaidine, guvacine loaded with vaso-constricting properties. *Sodhita pooga* plays a pivotal role in balancing *kapha* and *pitta dosha*, cleanses gut from unwanted microbes, like tape worms, parasites, intestinal worms etc. It is *Kashaya madhura, ruksha, sheeta*^[17]. It has potent anti-inflammatory, anti-oxidant, analgesic, anti-ulcer and neuro protective properties. It's a great masticatory ingredient

as it serves as a natural mouth freshner and removes plaques in teeth. It's a strong digestive stimulant, diuretic, regulates menstrual flow and a laxative. Nutritional analysis of *kramuka/pooga* suggests it to be a richest source of organic chromium salts. The role of chromium in the metabolism of fats has been well established now through various studies. Hence its use has been recommended in the prevention and treatment of obesity. *Lekhana basti* is mainly *apatarpana* in nature as all the drugs are *ruksha, tikshna* and *srotoshodhaka* in nature. The detoxifying nature of *pooga* also adds remarkably in scarifying the deep seated *medhas* in *atisthaulya* cases. So *poogatrim basti* has a pivotal role in reducing the excess fatty tissue in a much economical way and flushing out the toxic microbes thereby replenishing the desirable gut microbiota.



Fig 1 and 2 : Ingredients of *Poogatrim Basti*



Fig 3: *Pooga (Areca catechu)*

CONCLUSION:

The overall reduction in the fatty tissue is the combined effect of *lekhana basti* and *bahya rookshana*. It is observed that *shodhana* therapies yields good results if the *purvakarmas* are done properly. The *kledahara* and *lekhana* properties of the *poogatrim basti* has acted on the *sthayi medas* which resulted in the significant reduction of the anthropometric measurements, skin fold changes, body weight and bmi. However, it should also be noted that along with therapeutic interventions, dietary modifications, exercises, yoga, lifestyle modifications and self-control is very important to hold enticing results in the management of obesity.

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