

Ayurvedic Management of Overweight child with *Panchagavya* Therapy – A Case Report

Case Report

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Abstract

Childhood obesity is a widely spreading public health condition specifically after the COVID pandemic. It is also a risk factor for the onset of various non-communicable diseases. Obesity in childhood period does not only affects the growth and development in children but also has a life-long impact if neglected. This article encompasses management of an overweight child having complaints like Exertional dyspnea, Perspiration, increased appetite & thirst. The treatment protocol was based on *Panchagavya*. Both the methods of management of *sthaulya* were practiced viz. *Shodhana* (Purification therapy) in the form of *Gomutradi Asthapana Basti* & *Shamana* (Pacifying therapy) in the form of oral medication. *Panchagavya* is the group of five sacred elements obtained from the Indian cow, from which *Gomutra* has been said to be useful in treating *Sthaulya* in adults. Strict emphasis on *Nidanparivarjana* (Avoidance of causative factors) was also considered. Marked improvement in the BMI from 25.4 (Before treatment) to 22.9 (After treatment) and the clinical symptoms from grade 2 to grade 0 was observed. Modification in the oral administration of *Gomutra* in the form of *Gomutra arka* was found to be palatable considering the age of the child. *Gomutra* via both *Asthapana Basti* and Oral route helped in the breakdown of the Pathology of *Sthaulya*. Diet restriction also helped in the process.

Keywords: *Panchagavya, Sthaulya, Shodhana, Shamana, Gomutradi Asthapana Basti, Gomutra arka pan.*

Introduction

Sthaulya has been considered one of the eight censurable physiques by Acharya Charaka (1). It is a *Santarpanajanya vyadhi* (2) (disease occurred due to over nourishment) which is mostly found in people with predominant *Kapha Prakriti* (3). So, the terms overweight & obese can be compared with *Sthaulya*. According to global and Indian data, children and adolescents from all socioeconomic groups confront a dual nutrition burden and its implications. Overnutrition is a risk factor for numerous non-communicable diseases like Cardiovascular diseases, DM, obstructive sleep apnoea, some types of cancer, osteoarthritis, etc., according to long-term cohort studies (4). Khadilkar V V (5) in 2013 observed that “according to the IOTF Categorization, the overall prevalence of overweight and obesity was 18.2%, and 23.9 % as per WHO standards”. Children who are overweight or obese are more prone to become obese adults. In the last 3 years,

the global spread of COVID-19 caused social withdrawal, school closings, online learning opportunities, an increase in screen time, and a decrease in outdoor and physical activity along with the increased amounts of food quantum, junk foods & sugary beverages, which increased the danger of child health deterioration and the incidence of childhood obesity (6). According to the WHO expert constitution, on average, obesity reduces life expectancy by 6 – 7 years in adults (7).

Managing overweight children is helpful to prevent them to grow into obese adults. The management of *Santarpanottha vyadhi* in Ayurveda is a multidimensional modality. It includes management with *Sanshodhana* (purification) & *Samshamana* (medicinal management) along with *Nidanparivarjana* (avoidance of causative factors). *Panchagavya* is the group of five sacred elements obtained from the Indian cows. *Gomutradi Asthapana basti* has been effectively used in the management of *Sthaulya* in adults (8). According to *Acharya Sushruta*, *Gomutra* can be used to treat *Sthaulya* via various routes like *Basti, pana* etc (9).

Thus, here an attempt has been made to demonstrate the effect of *Gomutradi Asthapana basti* along with *Gomutra Arka pana* in an overweight child.

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Case Report

Incidence of childhood obesity increased after COVID pandemic due to increased screentime, excessive sitting & lack of physical exercise. This is a typical case representing childhood obesity after COVID pandemic which was successfully treated with Panchagavya therapy.

A 14-year-old male patient reported in the OPD of the *Kaumarbhritya* department at CSMSS Ayurved Hospital, *Chh. Sambhajinagar (Aurangabad)* with complaints of weight gain, *Kshudra-shwasa* (Exertional dyspnoea), *Swedadhikya* (Perspiration), *Kshudhadhikya* (Increased appetite), & *Pipasa-adhikya* (Increased thirst). During the lockdown period his dietary habits and daily activities got hampered due to which he started to gain weight and subsequently landed into the overweight category as per new Indian standards of 5 – 17 years charts of BMI for boys & girls, published by IAP (10). He developed the symptoms of exertional dyspnoea, perspiration etc. So, in search of Ayurvedic management, he visited the OPD of *Kaumarbhritya*.

Past History: Not specific

Family History: Mother-normal; Father-overweight, prediabetic; child born of a non-consanguineous marriage; sibling – one younger brother-aged 10 years with normal growth & development; Maternal & Paternal grandfathers-Diabetic.

Birth History: Full term hospital delivery, cried immediately after birth, No H/O NICU stay.

Developmental History: Achieved all milestones at appropriate age.

Vaccination History: Routine vaccines received.

Metabolic Diseases History: No awareness to check it by investigations.

General Examination

General condition-Good

Respiratory system – Air entry bilateral equal

Cardiovascular System – S1 S2 Normal

Table 1: Showing Anthropometrical Measurements & Vitals

Weight – 58.5 kg	Height – 151.9 cm	BMI – 25.4	Triceps Skin Fold Thickness – 12.8 mm
Waist circum.–70 cm	Hip circum.– 82 cm	Waist Hip ratio = 0.85	Waist height ratio = 0.46
R/R – 18/ min	Pulse – 86 / min.	B.P. –110/70 mm of Hg	

Ashtavidha Parikshana-

- *Nadi-Kaphapradhana Vata, regular*
- *Mutra- Samyak Pravritti*
- *Mala- Samyak Pravritti*
- *Jivha- Saama*
- *Shabda-Prakrit (normal)*

- *Sparsha- Samashitoshna, ruksha*
- *Druka- Prakrit*
- *Akriti- Sthula*

Prakriti Parikshana: *Kapha-vatala*

Koshtha: *Madhyam*

Brief history

Socioeconomic status: Higher middle class

Ahara Itivritta (Dietic history): Overeating of oily foods with increased frequency & increased indulgence of sugary beverages like Frooti, juices etc.

Vihara Itivritta: Increased screentime with excessive sitting, no running, little playing outdoors, no cycling.

Diagnosis: Patient was not diabetic nor he had hypothyroidism. So he was diagnosed as a typical case of *Santarpanjanya sthaulya*. It was based on new standards of the IAP BMI chart for 5 – 17 years of children and clinical symptoms of *Sthaulya* (Overweight).

Therapeutic regimen

The patient was subjected to both *Shamana* (pacification) and *Shodhana* (Purification) Therapy. He was treated for 3 months. During each month, he was given *Gomutradi Asthapana Basti* for 8 days; after which he was subjected to Oral intake of *Gomutra arka* early morning for next 22 days.

Shodhana & Shamana Chikitsa –

Table 2: Showing Gomutradi Asthapana Basti

Poovakarma			
Karma	Contents	Procedure	Duration
1. <i>Sasneha Haridra Gana Udvartana</i> (Scraping therapy)	<i>Haridra (Curcuma longa Linn), Daruharidra (Berberis aristata Dc), Madhuyasthi (Glycyrrhiza glabra Linn), Prushniparni (Uraria picta Desv), Kutaja (Holarrhena antidysenterica Linn) + Tilataila</i> (Sesame oil)	Rubbed with pressure all over body for 20 minutes	8 days every month
2. <i>Swedana</i> (Swedana box)	<i>Nirgudi (Vitex negundo, Linn) kwatha</i>	For 20 minutes	8 days every month
Pradhana Karma			
<i>Gomutradi Asthapana Basti</i>	Fresh <i>Gomutra</i> – 80 ml + <i>Dashamoola kwatha</i> (decoction) – 200 ml + Sesame oil – 50 ml + Honey – 20 gm + <i>Saindhava</i> (Rock salt) – 5 gm	Given with Enema can in left lateral position	8 days every month

Paschat Karma: After *Asthapana basti pratyagamana*, the patient was advised to bathe with Lukewarm water, eat according to the diet restriction with sufficient Lukewarm water to drink and he was also asked to follow the dietary pattern strictly.

Gomutra arka pana (Oral administration of Cow Urine distillate): After 8 days of *Gomutradi Asthapana Basti*, the patient was advised to take *Gomutra arka pana* early morning in a dose of 4 ml daily for the next 22 days.

Diet Restriction

Last but not the least, the patient was counselled about *Nidanaparivarjana* (Avoidance of causative factors) (11). Sugary, oily food items, milk & milk products, bakery products, potato and sugary beverages were restricted throughout therapeutical management. He was also asked to lessen the quantity and frequency of meals.

This cycle of *Gomutradi Asthapana Basti* for 8 days a month followed by *Gomutra Arka Pana* along for next 22 days a month with diet restriction was continued for the next two months.

Criteria of Assessment of effect of therapy

The patient was assessed on following assessment criteria

a. Objective parameters – Anthropometrical measurements – Weight, BMI, Waist circumference, Hip circumference, Waist-Hip ratio, Triceps skin fold thickness (TSFT)

b. Subjective parameters – Following gradations of the clinical symptoms shown by the patient were used to assess clinical improvement in the patient.

Table 3: Showing gradations of Kshudra Shwasa (Exertional Dyspnoea)

1	No dyspnoea even after heavy work	0
2	Dyspnoea after moderate work but relieved later and tolerable; dyspnoea by climbing upstairs of 10 steps & time taken more than 15 sec.	1
3	Dyspnoea after little work but relieved later and tolerable; dyspnoea by climbing upstairs of 10 steps & time taken more than 25 sec.	2
4	Dyspnoea after little work but relieved later and not tolerable; dyspnoea by climbing upstairs of 10 steps & time taken more than 35 sec.	3
5	Dyspnoea in resting condition	4

Table 4: Showing gradations of Swedadhikya (Perspiration)

1	Sweating after heavy work and fast movement or in hot weather	0
2	Profuse sweating after moderate work and movement	1
3	Sweating after little work and movement (stepping ladder)	2
4	Profuse sweating after little work and movement	3
5	Sweating even at rest or in cold weather	4

Table 5: Showing gradations of Kshudha-Adhikya (Increased appetite)

1	As usual/routine	0
2	Slightly increased (1 meal extra with routine diet)	1
3	Moderately increased (2 meals extra with routine diet)	2
4	Markedly increased (3 meals extra with routine diet)	3

Table 6: Showing gradations of Pipasa-Adhikya (Increased Thirst)

1	Feeling of thirst (7 – 9 times/24 hours) and relieved by drinking water	0
2	Feeling of moderate thirst (>9–11 times /24 hours) and relieved by drinking water	1
3	Feeling of excess thirst (> 11 times /24 hours) and not relieved by drinking water	2
4	Feeling of severe thirst (> 13 times/24 hours) and not relieved by drinking water	3

Outcome of the Treatment

Table 7: Showing effect of therapy on Objective criteria

Measurements	Before Treatment	After 30 days	After 60 days	After 90 days
Weight	58.5 kg	57.2 kg	54.9 kg	52.8 kg
BMI	25.4 kg/m ²	24.73 kg/m ²	23.51 kg/m ²	22.9 kg/m ²
TSFT	12.8 mm	12.1 mm	11.5 mm	11 mm
Waist circumference	70 cm	70 cm	68 cm	68 cm
Hip circumference	82 cm	81 cm	79 cm	79 cm
Waist-Hip ratio	0.85	0.85	0.85	0.86

Table 8: Showing effect of therapy on Subjective criteria

Symptoms	BT	After 30 days	After 60 days	After 90 days
Exertional Dyspnoea	2	2	1	0
Perspiration	2	1	1	0
Increased Appetite	2	2	1	0
Increased Thirst	2	2	1	0

Discussion

Panchagavya therapy is an important method of treatment in *Ayurveda* and it is useful in many diseases including *Sthaulya* or *Medovridhhi*. Incidence of child obesity is increasing day by day which is an alarming sign for society. This case typically represents the trends and underlying problems faced by society these days.

Atisantarpana and *Avyayama* causes *Medovridhhi* which creates vitiation of *Vata* which further leads to unwanted *Agnivridhhi*. Therefore, patient eats more and the vicious cycle continues. It is

very important to break this cycle to treat *Sthaulya*. Many times, one type of therapy is not enough to break the *samprapti*, therefore treatments like *Udvartana*, *Basti*, oral *Gomutra Arka pana* along with restricted diet were used for *samprapti vighatan*.

Only reduction of weight should not be the aim of the treatment but one must consider achieving reduction in *Vridhdha Medodhatu*, pacification of vitiated *Vata* and maintaining *samyak* state of *Agni* while treating a *Sthula* patient.

By virtue of *Katu-Tikta-Kashaya rasa*; *Tikshna-Ushna-Laghu guna*; *Kapha-Vatashamaka Prabhava* and *Deepana, Lekhana, Pachana, Malashodhana, Amapachana* properties *Gomutra* had a negative impact on *Kapha & Medovridhi*.

Gomutra via Asthapana Basti

In *Sthaulya*, *Amasanchaya & srotorodha* are fundamental pathologies. Due to the aforementioned properties, Fresh *Gomutra* administered via *basti* for 8 days helped in clearing the *Amasanchaya & Srotorodha* which led to *Samprapti vighatana* of *Sthaulya*. Biochemical analysis of Cow's urine indicates that due to the presence of Nitrogen and copper, it helps to excrete out fat in the form of *Kleda* through urine by increasing kidney functions and diuretic action (12).

The combination of Cow urine with *Dashamoola kwatha* in *Asthapana basti* is found to be useful not only to reduce *Meda* but also in pacifying vitiated *Vata*. As *Vata dosha* is alleviated, *Agni* also gets balanced hence excessive hunger and thirst also get reduced and helps to break the *Samprapti* of *Medo Roga*.

Saindhava (Rock salt) helped the other contents of the *basti* to get absorbed easily. The inclusion of sesame oil helped in the avoidance of adverse effects of the *Gomutra* causing irritability to the intestinal and rectal mucosa as the *Asthapana Basti* was given for continuous 8 days a month.

Parve S et al studied the clinical efficacy of *Asthapana basti* with *Gomutra*, we also got the similar results.(8)

Oral intake of Gomutra

Obese Patients are prone to regain the lost weight. To prevent this from happening, it was planned to counsel the patient to take *Gomutra* orally till the next *Asthapana Basti*. As it was impossible to avail Fresh *Gomutra* for oral intake for 22 days a month for 3 consecutive months & considering the Strong odor and pungent taste of *Gomutra*, its *Arka* form was tried in the patient as he was a child. *Gomutra arka* can be easily stored for longer period of time because it has longer shelf life than *Gomutra* whereas it has the similar properties as that of the *Gomutra* (13).

Gomutra arka was found to be comparatively palatable and acceptable. Further, it's the distilled form of the *Gomutra* so the dose was also very little. Saini NK (12) indicates the efficacy of *Gomutra pana* in reducing weight & BMI of the patients. Like *Gomutra*, in this case, *Gomutra arka* given orally also found to be helpful in the breakdown of the pathology (*Samprapti*

vighatana) of *Sthaulya* by the virtue of *Teekshna-Ushna-Laghu Guna*.

Udvartana (External application)

Haridradi gana (14) is *Medokaphahara. Meda* is dominant of *Jala & Prithvi Mahabhuta* and designative of adipose tissue and other lipids in the body. *Haridradi gana* drugs have *Ushna* potency, *Ruksha*, and *Lekhana* properties. It stimulates *twakstha agni* which further leads to absorption and digestion of the drugs and further *pravilayan* of *Meda dhatu* (liquefaction of cutaneous fat) below the skin (15).

Udvartana mutilates and liquefies the fat so that it is available for disposal from the system via rubbing and scrubbing with pressure which in turn effectively worked in reducing *Medodushti*. By clearing the body of its excess fat and cholesterol, toxins, etc., *Udvartana* restores health (16).

Chaitralakshmi KN et al studied the anti-obesity action of *Haridradi gana Udvartana*, the same results were observed here via the absorption of *Kleda* by *twakstha agni* which was stimulated by *Udvartana* (15).

As *Sweda* is the *mala* of *Meda dhatu*, due to *Udwartana* procedure, the symptom of *Swedadhikya* (Perspiration) gradually reduced from grade 2 to grade 0.

Sesame oil helped in the prevention of skin damage due to excessive scrapping by the virtue of *Snigdha guna*.

Diet Restriction

Acharya Kashyapa has emphasized the importance of diet in one's health by phrasing it as '*Mahabheshaja*' (17).

After the first month of *Basti* and therapy, the patient lost weight, but it was less because he had not followed the diet restrictions properly. However, when the symptoms started showing some regression, the patient began to follow the proper diet restriction in the following month, which resulted in major weight loss in the following month.

The diet which was responsible for the over-nourishment of the body of this patient was restricted e.g. overeating, eating frequently, drinking Frooty, eating oily food etc. so that the *Medo dhatu* over-production was hampered which ultimately helped in the restriction of gain of the weight and BMI.

The exertional dyspnoea decreased with decreasing weight.

Conclusion

Gomutradi Asthapana basti, Gomutra arka pana along with *Haridradi gana Udvartana* and diet restriction helped in improving the subjective and objective parameters of *Sthaulya* in the patient. *Gomutra arka pana* is comparatively more palatable than *Gomutra*.

In such a way, obese patients can also be treated with the addition of physical exercise.

A larger sample is needed to get the concrete results.

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