



A CASE STUDY: AYURVEDIC MANAGEMENT OF CHILDHOOD OBESITY (STHAULYA).

**Dr. Dattatraya G. Parde,^{1*} Dr. Savita S. Bangale², Dr. Pooja S. Khose³, Dr. Satwa E.
Darade⁴**

^{1*} Assistant Professor, Department Of Kaumarbhritya/Balroga, Government Ayurvedic College, Osmanabad,
Maharashtra- 413501.

^{2,3,4} PG. Scholar, Department Of Kaumarbhritya/Balroga, Government Ayurvedic College, Osmanabad, Maharashtra-
413501.

***Corresponding Author**

Dr. Dattatraya G. Parde

Assistant Professor, Department Of Kaumarbhritya/Balroga, Government Ayurvedic College, Osmanabad,
Maharashtra- 413501.

ABSTRACT:

The numbers of childhood obesity has increased speedily in the last decade & it has lots of undesirable health effects. It is being documented as a serious public health concern. The obesity indicates excessive fat and not merely excess weight. Several clinical and anthropometric parameters are used to diagnose obesity like body mass index (BMI), waist circumference (WC), waist hip ratio, weight for height etc. In *Ayurvedic* text the obesity has been described by term *Sthaulya* and *Medoroga*, which is also mentioned in *Ashtanindita purusha*. *Kapha dosha*, *Agnidushti* and vitiated *Medo dhatu* are the main contributory factors in the pathogenesis of *Sthaulya* (obesity). And the treatment protocols comprise *Nidan Parivarjana*, *Guru Apatarpan Chikitsa*, *Satat Karshana*, *Laghu Santarpana Chikitsa*, *Langhana (Shodhana & Shamana rupi)*, *Pathy-apathya*. This is a case of 13 year male child, who is brought by his parents with complaints of excessive weight gain and increased desire of food since 2 yrs. After complete and whole clinical examination and evaluation, we started treatment with *Deepana*, *Pachana*, *Udavartana*, *Nadisweda*, *Lekhanbasti*, *Vaman* and physical work out and we found significant result in this case.

KEYWORDS: Childhood obesity, *Sthaulya*, *Medoroga*, *Vaman*.

INTRODUCTION:

With an estimated of 30% or more, the obesity is becoming a serious problem in children and adolescent. Obesity is not only a cosmetic problem, now it is recognized as a disease, which reduces the life span. Apart from impaired mobility and interference in daily activities, it has several health consequences like hyperinsulinemia, hypertension, diabetes, dyslipidemia, intertriginous infection, sleep apnoea, renal alterations, hyperuricemia, psycho social profile and eating disorders. Obesity and overweight are often used interchangeably. Though overweight refers to a situation where the person is up to 20 % more than ideal body weight (IBW), while obesity is when the weight is 20% above IBW. The term is most commonly used for quantitative obesity is body mass index (BMI), calculated by (weight in kg /height in cm²). Obesity is simply caused by an imbalance of energy intake and output, but the exact mechanisms are unclear.^[1]

Obesity can be of many types like constitutional and pathological (Endogenous). Constitutional obesity is developed due to imbalance in energy intake expenditure. Pathological obesity is developed due to endocrine cause, genetic syndromes, hypothalamic obesity and monogenic obesity.^[2]

The management of obesity includes different approach like diet restriction, physical activity, supportive treatment and also surgical procedures. Prevention of obesity is very much essential and it can be done by giving proper awareness.

STHAULYA: The person with excessive growth of *Sphik, Udar, Sthana* is known as *Sthula* and this condition is called as *Sthaulya*. It is developed due to excessive and abnormal accumulation of *Medodhatu* and *Mansadhatu*.^[3]

The etiopathological factors described in *Ayurvedic text* can be classified as given below:

- a) *Aaharaj*
- b) *Viharaj*
- c) *Mansik*
- d) *Anya*.

AHARATMAK NIDAN:

The dietary(*Aaharaj*) factors of *Sthaulya* (obesity) are *Guru, Madhura, Sheeta guna pradhan ahara* (Excess consumption of heavy, sweet, cold food item) *Atibhojan* (Over eating)- *Madhur* and *Snighdha Pradhan Bhojana* (Excessive intake of sweet and oily food item).

VIHARATMAK NIDAN:

The *viharatmak* factors of *Sthaulya* (obesity) are *Avyayam* (Lack of physical exercise), *cheshtadweshi* (Laziness).

MANSIK NIDAN:

The *mansik* factors of *Sthaulya* (obesity) are *Achintanat* (Lack of concentration of mind), *Diwaswapa* (Day sleep), *Nityharsham* (Happy life).

ANYA NIDAN:

It include *Beejdosha* (genetic).

SAMPRAPTI:

In thr pathology *Sthaulya* (obesity) there is obstruction in *Strotasa* developed by *Meda*, which is responsible for the movement of the *Vata* mainly into stomach and whip up the *Agni* and absorbs the food. The fat man digests food quickly and craves for food extremely. Excessive eating produces more production of *Rasa* which causes over growth of *Meda Dhat*, which leads to *Sthaulya*(obesity).^[4] The clinical features of *Sthaulya* (obesity) are *Ayushorhasa* (Decreased life span), *Javoparodha* (Lack of enthusiasm), *Daurbalya* (Debility), *Daurgandhya* (Foul smelling of body), *Swedabadh* (Distressful sweating), *Kshudhatimatrata* (Excessive hunger), *Pipasatiyoga* (Excessive thirst).^[5] and the treatment includes *Nidan parivarjana*, *Apatarpana* and *Sevan of Guru Gunpradhan aahara* and *Vataghna, Shlema medohara Annapana, Guru, Ushna, Ruksha, Tikshna Ahara and Shodhana and shamana Chikitsa, Vyayam*.

CASE REPORT:

A 13 years male child was brought by his parents in OPD of Kaumarbhritya/Balroga, at Government Ayurvedic college Osmanabad having following complaints

Sr. no.	Complaints	Duration since
1	Excessive weight gain	2 Yrs
2	Constipation	2 Yrs
3	Increased desire of food (<i>Kshudha Atimatrata</i>)	2 Yrs
4	Breathlessness during work	2 Yrs
5	Debility (<i>Daurbalya</i>)	2 Yrs
6	Foul smelling of body (<i>Daurgandhya</i>)	2 Yrs
7	Excessive thirst (<i>Pipasaatiyoga</i>)	2 Yrs

So, they started the house hold remedies and exercise, consulted many doctors for it but didn't get satisfactory result, so they came in OPD of Kaumarbhritya/Balroga.

HISTORY OF PAST ILLNESS:

- H/O- cleft lip and cleft palate
- Sx H/O – Cleft lip & cleft palate- at the age of 4 month, 10 month, and 6 years.
- H/O- Mumps infection at age of 11 yrs.
- No H/O- Diabetes mellitus/ Hypothyroidism.
- H/O Similar illness to mother (Obesity)
- H/O immunization- All vaccine is received as per age & as per immunization schedule.

BIRTH HISTORY:

- Prenatal- No H/O Oligo/poly/PIH/DM
- Perinatal- FTND, BCIAB, having B. wt-2.8 kg.
- Postnatal- H/O cleft lip & cleft Palate

DIETARY HISTORY:

Patient has habit of watching television and mobile while taking his meal. He also demands for sweet food like chocolates, Candy and bakery products. He also has routine of eating junk food like chips, kurkure, toasts etc.

LIFE STYLE:

Patient like to spend most of his time in playing video games, mobile games and watching television and didn't want to go for playing outdoor games. He didn't like get involved in any physical activity but like sedentary life style and to be stuck at one place. And habit of sleeping during day times.

EXAMINATION:**Anthropometry:**

- Height-146 cm,
- weight-66.44kg,
- HC-54 cm-,
- CC-88cm,
- MAC-30cm,

General examination:

- GC- Fair,
- Temp- 98.2°F,
- BP-110/70 mm of Hg

DIAGNOSIS:

Present weight-66.44 kg, Present height-146 cm BMI-31.16kg/m²

INVESTIGATION:**CBC:**

1. WBC-15.7 X 10³/UL
2. RBC-5.25 X10³/UL
3. Hb- 13. g/dl
4. PLT-349X 10³/UL

LIVER FUNCTION TEST:

1. Ser. Bilirubin-total-0.21 mg/dl
2. Direct bilirubin-0.07 mg/dl
3. Indirect bilirubin-0.14 mg/dl
4. SGOT-27.0 U/L
5. SGPT-22U/L

LIPID PROFILE:

1. Ser. Cholesterol-164.0 mg/dl
2. Triglycerides 142.0 mg/dl
3. HDL-33.8 mg/dl
4. LDL-101.8 mg/dl
5. VLDL- 28.4 mg/dl

RENAL FUNCTION TEST:

1. Ser. Urea- 18.0 mg/dl
2. Ser. Creatinine- 0.99 mg/dl
3. Ser. Uric Acid- 5.9 mg/dl

THYROID FUNCTION TEST:

1. T3(Total)- 177.7 ng/dL
2. T4-(Total)- 6.51 µg/dL
3. TSH-(Ultrasensitive)- 3.38 µIU/ml

Blood sugar (Fasting)- 105 mg%

MATERIALS AND METHODS:

This case was managed with Ayurveda regimen in the form of *Deepana, Pachana, Udwartana, Nadi swed, Lekhan Basti, Vaman and Pathya-apathya* along with physical exercise.

1. DEEPANA- PACHANA:

- a) *Lashunadi vati*2 BD
- b) *Arogyavardhinivati* 2BD
- c) *Phalatrikadi kwath*10 ml BD with equal amount of water

2. YOGABASTI:

Lekhan basti: Erandmula Bharad, Dashmula Bharad, Guduchi Bharad, Rasna Bharad, Triphala Bharad, Madanphala Bharad –Each 5gm, *Madhu* 20 gm, *Saindhav* -10 gm, *Sneha* -30 ml Along with *Sarvanga Snehana* with *Peti Sweda*

3. UDVARTANA:

Udwartana with *triphala, Haridra, Shunthi churna*

4. PHYSICAL ACTIVITY:

Cycling; Half hour, Outdoor sports-Daily 2 hours For 7 days

5. VAMAN:

Day -1	<i>Snehapana</i> with <i>panchatikta ghrut</i> -30 ml, <i>Pathya + koshnajalpana</i>
Day- 2	<i>Snehapanawith panchatikta ghrut</i> -60 ml, <i>Pathya + koshnajalpan</i>
Day-3	<i>Snehapanawith panchatikta ghrut</i> -90 ml, <i>Pathya + koshnajalpan</i>
Day-4	<i>Snehapanawith panchatikta ghrut</i> -120 ml, <i>Pathya + koshnajalpan</i>
Day-5	<i>Snehapanawith panchatikta ghrut</i> -150 ml, <i>Pathya + koshnajalpan</i>
Day-6	<i>Sarvanga abhyanga</i> with <i>til taila, Sarvanganadi sweda</i>
Day-7	<i>Sarvanga abhyanga</i> with <i>til taila, nadi sweda Vaman</i> with: <i>madanphalpippali churna</i> -5gm <i>vacha churna</i> -2.5gm <i>yastimadhu churna</i> -7.5gm <i>pippali churna</i> -2.5gm <i>Madhu</i> -15ml <i>Akantha pan</i> with <i>ikshu rasa</i> -1lt. <i>Vamanopag yashtimadhu fant</i> -2lt

S. no.	Treatment
1	<i>Samsarjan Karma</i> for 5 Days
2	<i>Varunadi Kashaya</i> (10 ml with 30 ml Luke warm Water) B/F
3	<i>Ushna jalpana</i>
4	Dietary Advise

ASSESSMENT CRITERIA:

Anthropometry	Before treatment	After treatment
Weight	66.44 kg	62.8 kg
Height	146 cm	146 cm
Head circumference	54 cm	54 cm

RESULTS:

1. After treatment was started the child's excessive desire of food has reduced.
2. After the course of treatment, general health status has improved.
3. Weight has reduced from 66.4kg to 62.8kg by the completion of 28 days treatment.
4. The feeling of lightness of body after the purification of body with *Vaman*.

DISSCUSSION:

In this case the patient was having complaints like excessive weight gain, constipation, and breathlessness during working, debility (*Daurbalya*), foul smell of body (*Daurgandhya*). On the basis of *Samanya Vishesh Sidhhant*,^[6] The excessive intake of foods of similar substance, similar quality, similar in action helps in over production of *Dhatu*. In this case growth of *Medo Dhatu* is observed due to eating of excessive fatty and *Guru Gunatmak* sweet food substance. Continuously weight gain and unctuousness leads to weakness of muscle and that accounts for the inability of an individual to bear the physical activity (*Daurbalya*). The breathlessness in this case is due to the vitiated *Vata in Koshtha*, which leads to exertion and unctuousness of body, and increased *Kapha* causing *Kshudra Shwas*. *Kshudha-adhikya* due to bodily aggravated *Vata* confines into *Koshtha* and stimulates *Agni* rapidly, as a result the patient feels hungry and takes more food, *Daurgandhya* due to excess of *MedoVridhhi*, due to which over production of *Seweda* occurs and if it is not cleaned properly will putrefy and produce foul smell. *Pipasadhikya* is due to obstruction of *Udakavaha Strotas*, which causes *Prakopa* of *Vata* and *Pitta*. These *Prakupit Dosha* confines at *Talu* and *Jivha* and brings about the dryness of them and the patient develops a desire of taking water to keep these part moist which is exhibited through a symptoms called as *Trishna*. Again excessive perspiration is a feature of *MedoVridhhi* and it leads to the dehydration of the body, to rehydrate the body, the patient shows the symptoms of *Trishnadhikya* (Excessive thirst). *Udwartana* is done for *Bahya-rukshankriya*. Due to this *Kaphaharan* and *Vatshaman* and *Pravilayan* of *Dushta Meda* occurs. *Sarvanga Abhyang* was done with *TilTailam* followed by *NadiSweda*. *TilTailam* helps in *Karshana* and thereby reducing the body weight. Also *Lekhan Basti* do *Strotoshodhana*, *Medhohar*, *Kaphavatahar*, and *Lekhan and Karshana* action on body which do *Samprapti Bhang* of *Medoroga*. *Vaman* is useful for *Dushta Kaphaharan* and *Vata Shamana*, and also help in reduce *Strotavrodh* and *Prakrut Agni* and also helps in *Prakrut Dhatu Nirmana* of *Medo Dhatu*. After giving proper *Samsarjana karma*, patient was advised to start *Shamanaushadhi* for periods of 1 month along with exercise patient get significant relief from associated symptoms' and Decreases the weight.

CONCLUSION:

This case was diagnosed as *Sthaulya* (Exogeneous obesity):- Due to obstruction of *Strotasa* by *Meda*, the *Vata* moves mainly into stomach, whips up the *Agni* and absorbs the food. The corpulent man digests food speedily and craves for food exceedingly. Excessive eating produces more production of *Rasa* which causes over growth of *MedaDhatu* leading to *Sthaulya*. The *Vaman* and *Karshana Basti* was done as the *Shodhan chikitsa*, *udwartana as bhayya chikitsa*. After the treatment there was significant relief from symptoms and there was significant weight loss. Hence the *Vaman* and *Karshanbasti* has a crucial role in the management of *Sthaulya* (Exogenous obesity).

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