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Effect of *Jayantyadi Churna* in the Management of *Medoroga* – A Case Study

Case Report

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Abstract

Introduction: The global burden of lifestyle diseases is rising steeply in the modern period. Sedentary lifestyle is the result of modernization and the advancement of science and technology. One of the main lifestyle disorders that affect a person's physical, emotional, and social well-being is obesity, often known as being overweight (*Sthaulya*). According to Ayurveda, *Sthaulya* is considered as one of the *ashtauninditas* (diseases which are difficult to manage). In this case report, Ayurveda intervention in *sthaulya* is reported. Thirty-seven-years old obese female presented to Kayachikitsa OPD of Mahatma Gandhi Ayurveda College Hospital and Research Centre, Wardha, Maharashtra,India.with gradual increase in body weight along with dyspnea on minimal exertion, bad body odor, excessive hunger and thirst, fatigue and bilateral knee joint pain Aim: To evaluate the effect of *Jayantyadi Churna* in the Management of *Medoroga* Methodology: The patient was given Ayurveda treatment in the form of *Jayantyadi Churna* along with diet and physical activity for six months. The patient was assessed for improvement in signs and symptoms of obesity. Results*: Jayantyadi Churna* along with diet and physical activity was found to be effective in the management of *Medoroga* (obesity). Conclusion: Obesity though considered as one of the eight diseases which are difficult to treat, can be managed with Ayurvedic intervention.

Keywords: *Aptarpan Chikitsa, Jayantyadi Churna*, *Medoroga*, Obesity.

Introduction

In *Ayurveda*, obesity has been described as *Sthoulya* or *Medoroga* and considered as *Santarpanotha Vikara*. (disease caused due to over nourishment). *Sthoulya* is the disease of *Medodhatvagni Vikriti* (disturbed fat metabolism) (1). The good and potent *Dhatvagni* is responsible for the maintenance of healthy *Dhatus* through proper metabolism at *Dhatu* level. *Kapha* is an *Ayurvedic* humour which is dense, heavy, slow, sticky, wet and cold in nature. In a balanced state, *Kapha* gives nourishment to the tissues and govern all organs (2). However, when it is aggravated; *Kapha* which is heavy and dense in nature abnormally accumulates in weaker channels of the body, causing their blockage. In the case of an obese person, *Medovaha Srotas* (fat channels) is affected and the site of metabolic disturbances in an obese individual is *Medho dhatu* caused mainly due to excess intake of *Madhura* and *Snigdha Ahara*, When the body produces more fat tissues, it causes an increase in weight. *Acharya Charaka* has mentioned *Guru Cha Apatarpana* as the line of treatment. This case report highlights the effects of Ayurveda interventions in a patient of obesity (3).

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Case report

A 37 years old non-alcoholic, non-smoker, non-tobacco chewer female patient came to OPD of Kayachikitsa at our hospital with the complaints of gain in body weight since last 2 to 3 years along with dyspnea on minimal exertion, bad body odor, excessive hunger and thirst with fatigue and bilateral knee joint pain. Her personal history revealed her sedentary life style and a habit of consuming spicy and junk food. On past history examination, she was not having hypertension, diabetes mellitus, bronchial asthma, hyperthyroidism etc. Positive family history of overweight was seen from her paternal side. Investigations showed normal hematological/ biochemical reports. Data was collected regarding *Asthavidha Pariksha*, *Dashvidha Pariksha*, systemic and general physical examination with anthropometry of patient. After considering all examinations, *pariksha's*, hematological and biochemical finding with BMI (28 .08 kg/m^2), the said patient was diagnosed as overweight.

Clinical Findings

Patient had a Bulky appearance, endomorphic built and was well nourished with normal built. Anthropometry, Personal History, general examination and systemic examination before starting the treatment, increased body

weight and BMI can be observed. Also evaluation is done by using *ashtavidha* and *dashavidha parikshan*.

General Examination

General condition of patient was good, satisfactory a febrile, no pallor, non dehydrated with blood pressure 128/82 mm of Hg, pulse 88 /min, respiratory rate 22 per minute and SPO^2 98%. The height of patient 1.74 meter weight 85 kg with waist circumference 96.52 cm and BMI 28.08 kg/m^2.

Systemic Examination

During systemic examination of patient, she was completely well oriented and conscious her respiratory, cardiovascular, digestive and central nervous system were within normal limits.

Dashavidha Rogi Pareeksha

Her *Prakriti* was *Vata Kaphaj, Vikrita Dosha* was *Kapha, Dushya* was *Rasa, Mamsaand Meda. Sara* was *Madhyama, Samhanana* was *Madhyama, Satva* was *Madhyama, Abhyavaran Shakti* was *Pravara & Jarana Shakti* was *Pravara, Vyayama Shakti* was *Avara, Satmya*was *Madhyama, Vaya* was *Madhyama, Pramana* was *Pravara* (4-5).

Astasthavidh Pareeksha

Her *Nadi* (- pulse) was *Prakrita, Mala* (- faeces) was *Niraama Mala, Prakrita. Mootra* (- urine) was normal, *Jivha* (- tongue) was *Sama, Shabda* (- speech) was clear, *Sparsha* (- temperature) was *Anushna Sheeta, Drik* was normal, *Aakruti* was *Sthoola* (- obese).

Diagnostic Assessment

During overall evaluation and assessment, patient was diagnosed as overweight. Certain conditions were ruled out before starting the treatment of obesity like hypothyroidism, PCOS (Polycystic Ovarian Syndrome), Cushing's Syndrome, Diabetes, medications that causes weight gain, genetics and family history. The final diagnosis was obesity due to overeating and sedentary lifestyle.

Present Symptoms

- Excessive weight gain (*Sharir Bhar vruddhi*) - 2 Years
- Shortness of breath (Dypneoea) (*Kshudraswas*) - 1 year
- Increased perspiration with foul smelling (*Daurgandhya*) - past 2 years
- Excessive hunger (*Atikshudha*) - 1 year
- Excessive thirst (*Atipipasa*) - 1 year

Assessment Criteria for present symptoms (6)

Score	Grade
A. Kshudraswasa (Shortness of breath)	
No Dyspnoea.	0
Dyspnoea after heavy work by relieved soon and up to tolerance.	1
Dyspnoea after moderate work by relieved later and beyond tolerance	2
Dyspnoea after little work by relieved later and beyond tolerances.	3
Dyspnoea in resting condition.	4
B. *Atipipasa* (Excess thirst)	
Normal Thirst.	0
Upto 1 liter excess intake of water.	1
1 to 2 liter excess intake of water.	2
3 liter excess intake of water.	3
More than 3 liter excess intake of water.	4
C. *Atikshudha* (Excess hunger)	
Absent	0
Mild	1
Moderate	2
Severe	3
Markely Severe	4
D. *Swedadhikya* (Excess perspiration)	
Sweating after heavy work and fast movement.	0
Profuse sweating after moderate work and movement.	1
Sweating after little work and movement.	2
Profuse sweating after little work and movement.	3
Profuse sweating without any exercise.	4
E. *Dourgandhyata* (foul smelling)	
Absence of bad smell.	0
Occasional bad smell from body, which removed after bathing.	1
Persistent bad smell limited to close areas difficulty to suppress by deodorants.	2
Persistent bad smell felt from long distance and is not suppressed by deodorants.	3
Persistent bad smell felt from long distance even in tolerance to patient himself.	4

Observation

Sr. no.	Symptoms	Duration	Grade
1	*Kshudraswasa*	1 year	3
2	*Swedadikyta*	1 year	4
3	*Daurgandhyata*	past 2 years	4
4	*AtiKshudha*	1 year	4
5	*Atipipasa*	1 year	4

Associated Symptoms

- Low back pain
- Both Knee joint pain
- Fatigue
- Feeling of laziness (*Daurbalya*)

Table 1: History of Laboratory Investigations

HB	11.8gm%
W.B.C	9,300cells/cu mm
E.S.R	41 mm/hr
Neutrophils	54%
Lymphocytes	43%
Monocytes	1%
Eosinophils	2%
Platelets	3.45lakhscells/cumm
RBC Count	4.67millions/cumm
F.B.S	80mg/dl
Blood urea	17 mg/dl
Serum creatinine	0.9mg/dl

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Table 2 : Lipid Profile

Total cholesterol	214.00mg/dl
H.D.L cholesterol	43.80mg/dl
L.D.L cholesterol	141.22mg/dl
Triglycerides	144.90mg/dl
V.L.D.L cholesterol	28.98mg/dl

Therapeutic intervention

Major focus of treatment plan was on reduction of body weight, BMI, Waist circumference along with minimizing the present symptoms of overweight. Treatment plan includes Diet, physical activity and ayurvedic medicine. Low calories diet in which 1200 to 1400 calories for female and 1600 to 1800 calories for male in daily basis. Physical activity includes minimum 30 minutes daily walk. Ayurvedic medicine includes *jayantyadi churna* (*Amalaki* fruit powder 1 Part, *Haritaki* fruit powder 1 Part, *Agnimanth* bark powder 1 Part, *Kutaj* bark powder1 Part) 3 gram twice a day before meals with *Koshna jala anupana*). Detailed treatment is summarized in table 3.

Table 3: Details of Treatment Schedule

Month	Treatment advice
15-01-2024	1. *Jayantyadi Churna* 3 gm BD before meals with *koshnajala* (lukewarm water) *anupan* 2. Physical activity – 30 min. daily walk *3. Pathyahara*
14-02-2024	1, 2, 3 Continue
15-03-2024	1, 2, 3 Continue
14-04-2024	1, 2, 3 Continue
14-05-2024	1, 2, 3 Continue
14-06-2024	1, 2, 3 Continue
15-07-2024	1, 2, 3 Continue

Table 4:Diet Schedule

Advised Diet (Moderate Work)

Breakfast	Dosa 2 = 250 kcal (1 = 125 kcal)
	Coconut chutney 2 tbsp = 120 kcal
	Total = 370 kcal
Lunch	2 Phulka = 160 kcal (1= 80 kcal)
	1 Cup Dal Plain = 200 kcal
	Vegetable with gravy ½ cup = 85 kcal
	Tamarind chutney 1 = 1 tbsp = 60 kcal
	Total = 505 kcal
Dinner	Rice 1 cup = 170 kcal
	Phulka 1 = 80 kcal
	½ cup Dry Vegetable = 75 kcal
	Salad (Beetroot + carrot + onion) = (30 + 20 + 25) = 75 kcal
	- Plain dal ½ cup = 100 kcal
	Total = 500 kcal
	370 + 505 + 500 = 1375 kcal / day

Ahara Varga	***Pathya (Suitable)***	***Apathya***
Shuka Dhanya	*Yava,Venuyava,*	*Godhuma,*
Shami Dhanya	*Mudga, Rajmasha,*	*Masha, tila*
Shaka Varga (Vegetables)	*Vrintaka, Patrashaka, Patola*	*Madhuraphala*
Drava (Liquid Stuff)	*Takra, Madhu, Ushnodaka, Dugdha,*	*Ikshu, Navnita, Ghrita, Dadhi*
Mamsa (Meat)	*Rohita Matsya*	*Anupa, Audaka*

Observations

Table 5: Symptoms and Anthropometric Assessment

	0 Follow up	1st Follow up	2nd Follow up	3rd Follow up	4th Follow up	5th Follow up	6th Follow up
Date	15-01-2024	14-02-2024	15-03-2024	14-04-2024	14-05-2024	14-06-2024	15-07-2024
Height (Mtr.)	1.74	1.74	1.74	1.74	1.74	1.74	1.74
Weight (KG)	85	85	84	82	81	79	77
BMI	28.08	28.08	27.74	27.08	26.75	26.09	25.43
Waist (Inch)	38	38	37	37	36	35	34
Symptomatic Assessment							
Sharir vriddhi	++++	+++	+++	+++	++	++	+
Kshud raswasa	++++	+++	+++	+++	++	++	+
Pipas adhikya	++++	+++	+++	+++	++	++	+
Kshud hatimatra	++++	+++	+++	+++	++	++	+
Sweda dhikya	++++	+++	+++	+++	++	++	+

Note :- Grading of overall assessment of symptoms with treatment follow-ups :

1.	No relief	0-25%	++++
2.	Mild relief	25-50%	+++
3.	Moderate relief	50-75%	++
4.	Maximum relief	>75%	+

Follow up and outcome

The study duration was for complete 6 month in which patient was asked to follow the complete treatment protocol positively. We observed that patients body weight, BMI and waist circumference have been reduced efficiently. Also patient general condition got improved and she felt more comfortable to perform her daily activities so easily.

Results

A reduction in weight, BMI and waist circumference were observed along with reduction in all symptoms.

Table 6: Assessment of results before and after treatment

Observation	Before treatment	After treatment
WT.	85kg	77kg
BMI	28.08kg/m2	25.43kg/m2
Ht	1.74mts	1.74mts
W.C	96.52 cm	86.36 cm

Discussion

As per the *samprapti* (pathophysiology) of *Medoroga, medavrutta vayu* is the main culprit of the disease, which results in vitiation of *saman vayu* leads to increase in *Jatharagni* which results excessive hunger.

Jayantyadi churna was significantly efficacious in reducing body weight and also it was useful in normalizing Agni.

As there was predominance of *Kapha vataj prakruti* because *Kaphadosha* is involved in the *samprapti* (pathophysiology) of *medoroga Kapha* possesses *Ashrayashrayee Sambhandha*, (interrelatedness) with *Medodhatu*, hence *Medoroga* is included in *Sleshma Nanatamaj Vyadhi*. Probable Mode of action of *Jayantyadi Churna* in *Medoroga* – *Jayantyadi churna* has four ingredients- *Amalaki, Agnimanth, Kutaj, Haritaki*.

Amalaki (Embellica officinalis) – It is extensively used in Indian traditional system of medicine for the treatment of various disorders. The study conducted by Ryuei sato et al. indicated that Emblica officinale normalized adipose mRNA expression of nuclear transcription factor, peroxisome proliferator-associated receptor gamma (PPARγ). Bioactive- guided fractionation of EO demonstrated that aqueous extract was more effective in inhibiting lipid accumulation in 3T3-L1 mouse adipocytes treated during differentiation. (7).

Oral feeding of the aqueous E. officinalis extract (20 mg/kg) to HFD-induced obese rats for a period of 42 days resulted in significant reduction in body weight gain, insulin, leptin, lipids as compared to rats fed HFD alone. Further, the extract also showed significant increase in high density lipoprotein (HDL-C) levels.(8)

Agnimanth (Premna mucronata) – It is having *katu, tikta rasa, ruksha guna*, and *ushna veerya* and *katu vipak*. Due to predominance of *Akash*, *Vayu* and *Agni*, the *kapha* gets subsided. *Ushna veerya* also encounter *sthaulya* directly. The previous study showed significant result in reduction of body weight.(9)

Kutaj (Holareena antidysentrica) - *Tikta Rasa* has *Khara* property which is opposite to *Meda* and also it has *Akasha Mahabhuta* in dominance. According to the principle of *Ayurveda*, *Tikta Rasa* increases body constituents having *Khara* property and *Vayu Akasha Mahabhuta* in dominance. *Katu rasa* is also having a property to digest and absorbed oil and water component of the body along with strong *Deepana, Pachana* property. Hence it may digest the *Ama* & reduce the increased *Kleda* in the body. Also *Kashaya* rasa is *Rukshaguna* in dominance so it being *Meda, Kleda Upashoshaka* properties.

Jayantyadi Churna has dominance of *Laghu Guna* followed by *Ruksha Guna* & *Tikshna Guna. Laghu Guna* is a *Vayu, Agni* and *Akasha Mahabhuta Pradhana*. It causes *Krishata* and *Dhatukshaya. Ruksha Gunahas Vayu* & *Agni Mahabhuta* dominance, it has the property of *Shoshana* hence does the *Kledanashana* in the body. Due to *Tikshnata* it causes more than one *Vega* in most of the instances thus significantly reducing the *Kleda* of the body by an action similar to purgation. Thus the weight reduction was seen more apparently.

Ushna Virya is dominated by *Agni Mahabhuta* which has *Laghu* and *Tikshna Guna. Ushna Virya* is responsible for the *reduction* of *Meda*. It also has *Deepana - Pachana* and *Kapha - Vata Shamaka* properties. By the virtue of *Deepana Pachana Karma Basti Dravya* increases *Agni* at all levels and it reduces *Ama* and corrects *Medo Dhatvagnimandya*.

Katu Vipaka due to its *Laghu Ruksha Guna,* uses *Dhatu Kshaya* and reduces excessive *Meda Dhatu*. Moreover, it pacifies the increase in *Kapha*.(10)

Haritaki (Terminalia chebula) - *Haritaki* is having properties like *Kaphaghna*, *Medoghna*, *Deepana*, *Pachana, Ruksha*, *Laghu Guna, Katu, Tikta Rasa* and *Ushna Veerya*, it does the *Sthaulya Samprapti Vighatana.* Various studies also suggested that *Haritaki* possesses an anti obesity and hypolipidemic effects based on *Kaphanashak* and *Medoghna* properties and presence of its biologically active components like saponins, phytosterols, chebulinic acid and corilagin. Therefore, *Haritaki* can be useful as an adjuvant therapy for Obesity. The previous study showed significant result in reduction of body weight. (11).

Here *Jayantyadi Churna with* diet and physical activity may break the pathology of *Medoroga* through its strong and effective property of *Rasapanchanka* along with its *Agni Deepan* and *Pachan* property. *Jayantyadi churna* with diet and physical activity treatment normalized the *Jatharagni* with their *Medodhatvagnivardhan* and *Medopachan* property, leads to normalization of *Kshudha* may result in decreasing BMI, BMR and Waist circumference.

The ingredients of *Jayantyadi churna* have *Lekhan* property. Ingredients of *Jayantyadi churna* like *Kutaj* & *agnimantha* possess *katu, tikta, kshaya rasa*, *katuvipaka* & *ruksha guna* which gives excellent effect as *Kapha Vata shamak*, *Agnivardhan, Medoghna, lekhana, Sthaulyakarshana* & *Rasadhivishodhana* in *medoroga*. *Amalaki* and *Haritki* show *Agnidipan* & *Lekhana karma* in *Medoroga* due to their *Katu, Tikta Rasa,* and *Laghu, Rukshaguna*.

Jayantyadi churna overall restores the *Medodhatvagni*, normalizes vitiated *Meda* there by effective in *Medoroga*.

Alcohol and energy-dense snacks should be avoided. Low calorie diet has been shown in 34 randomized trials to reduce body weight by 8% during 3–12-month period. (12) According to a meta- analysis of 16 trials, low-fat diet used over2–12 months resulted in mean weight loss of 3.2 kg and improved cardiovascular risk factors (Table 1).(13) A meta-analysis of five trials found that weight loss at 6 months favoring low-carbohydrate over low-fat diet is not sustained at 12 months. (14) In a meta-analysis of 80 weight loss studies, mean weight loss of 5 to 8.5 kg (5–9%) was observed during the first 6 months from interventions involving a reduced- energy diet and/or weight loss medications with weight plateaus at approximately 6 months, with maintenance of 3 to 6 kg (3–6%) of weight loss at 48 months. (15).

Remarkable result was observed in this case moreover showing significant results in lowering body weight with the similar diet. The diet chart that was prepared and given to the case.

Physical activity alone is not an effective method for achieving initial weight loss, although most overweight or obese people tend to choose exercise as the first interventional option.[16] Without calorie restriction, weight loss through exercise alone is quite small, about 0.1 kg/week.[17] A meta-analysis showed that exercise alone did not result in significant weight loss attempts, although no further weight gain was observed after 12 months.[18] Meta- analyses of 493 studies have shown that people who diet and exercise maintained their weight loss better than those who relied on diet alone.[19]

In this study 30 minutes brisk walk was given to case as per her capacity. Excellent result was observed and moreover case showing significant results in lowering body weight.

Conclusion

In order to prevent *Medoroga* and its complication, it should be timely managed with diet, physical activity along with *Shamana* Medication. In this present case study *Jayantyadi Churna* used as a *Shaman* Medication. These ayurvedic treatment modalities have shown excellent results in management of *Medoroga*.

Informed consent

Informed consent for the publication of the data was taken from the patient.

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Author's contribution

Sandesh Goje- Concept, Design and Manuscript Preparation. Rajkumar Gupta Manuscript editing, Vaishali Kuchewar - Manuscript review

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