

**Case Study****A CASE STUDY TO EVALUATE THE EFFICACY MUSTAK (CYPERUS ROTUNDUS) IN STHOULYA (OBESITY)****Majumder Madhumita**

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KEYWORDS: *Sthoulya*, Obesity, *Mustak*, *Cyperus Rotundus*.**ABSTRACT**

Obesity is the world's oldest metabolic disorder. Now a days it is common growing life style disorder. Globally one in six adults is obese & nearly 2.8 million individuals die each year due to overweight or obesity. According to WHO, BMI more than 25 kg/m² and 30 kg/m² is considered as overweight and obese respectively. It is mentioned in Ayurveda in term of *Sthoulya* or *Atisthoulya*. The *Nidan*, *Samprapti*, *Chikitsa* sutra all are mentioned in detail in Ayurveda. The main pathology of this disease is formation of *Ama* which produce *Sanga* or *Avarana* of all the *Srotas* of the body, so there is deficiency of *Rasadi Dhatus* except *Medadhātu*. Untreated cases of *Sthoulya* may develop various types of diseases like *Prameha*, *Prameha Pidaka*, *Vataroga* etc. & ultimately proceed towards death, So proper diagnosis & therapeutic management is needed to treat the disease as well as to prevent the complications also. Hence in this present case study *Mustak (Cyperus rotundus)* is selected to treat *Sthoulya*. The drug is given at the dose of 6 gm twice daily for consecutive two months, follow up was done one month interval. level. The sign and symptoms and the BMI level were observed before and after treatment. The result shows marked improvement of sign and symptoms along with decrease in BMI, lipid profile level. According to Charak, *Mustak* is included in *Lekhaneeya mahakashaya* which possess *Katu*, *Tikta*, *Kashaya rasa*, *Ama Pachak* property. By this phenomenon it causes digestion of *Amadosa*, *Kshaya* of excess *Medadhātu*. So from this present case study it can be concluded that *Mustak* is very much effective to treat *Sthoulya* as a single drug therapy.

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INTRODUCTION

Sthoulya (obesity) is the common growing health problem. Dietary imbalance and over nutrition may lead to obesity. Obesity is defined as an excess of adipose tissue that imparts health risk, a body weight of 20% excess over ideal weight for age, sex and height is considered as a health risk. The most commonly used method to gauge obesity in BMI which is calculated by weight in kg/height in m². A BMI value more than 30 is considered as obesity in both sexes⁽¹⁾. The incidence of obesity is increasing worldwide due to sedentary life style, lack of physical exercise, undisciplined to pursue the daily regimen, dietetic rules and regulation, which results in obesity. Obese patients are prone to develop various systemic disorders like diabetes mellitus, hypertension, coronary heart diseases, osteoarthritis, respiratory disease, fatty liver etc. Obesity is nicely explained in *Ayurveda* by the name of *Sthoulya* or *Atisthoulya*. The term *Atisthoulya* is mentioned by Charak in the context of *Atinindaneeya Purusha*⁽²⁾. Now a day's several work has been carried out to detect the efficacy of *Lekhaneeya Mahakashaya* in the management of obesity⁽³⁾. In the *Lekhaneeya Mahakashaya* the drug *Mustak* is included.

The etiology, pathogenesis, sign and symptoms, complications, line of management of *Sthoulya* all are mentioned in detail in *Ayurveda*.

Nidan⁽⁴⁾***Aharaja Nidan***

1. Intake of *Guru*, *Madhura*, *Sita*, *Snigdha* & *Kaphavardhakahara*
2. *Adhayan* (taking food before the digestion of the previous food)

Viharaja Nidan

1. *Diva swapana* (day dreaming)
2. *Avyayma* (devoid of physical activities)
3. *Avyavaya* (devoid of sexual intercourse)

Mansik Nidan

1. *Achinta* (devoid of mental attention)

Others*Beejaswabhav* (genetical cause)***Samprapati***

1. All these *Nidan* causes formation *Ama*. The *Ama* due to its *Snigdha* causes only formation of *Medadhātu* and due to *Abhishyandaguna* it obstructs the channels of *Uttaruttardhatus* means

the *Dhatus*, comes after the *Medadhatu* like *Asthi*, *Majja*, *Sukradhatus* chronologically.

2. According to *Charak*, in *Sthoulya* patient there is only *Upchaya* (nutrition) of *Medadhatu* in compare to other *Dhatus*. Due to this phenomenon there is gradual loss of immunity and the patient is prone to develop various disease like *Prameha*, *Pramehapidika*, *Bhagandar*, *Vidardhi*, *Vatarog* etc. & ultimately proceeds towards death.
3. That's why *Atisthoulya* persons are considered as the most *Nindaneeyapurush* among the *Astav-nindaniyapurusha* (eight despicable person).

Rupa (signs & symptoms)⁽⁵⁾

Excessive accumulation of *Meda* and *Mamsadhatu* in *Sphiga* (buttocks), *Udar* (abdomen), *Stana* (breasts). They have the following characteristic features:

1. *Ayuharash* (decreased span of life)
2. *Kricchavyavayata* (difficulty in sexual activities)
3. *Javoporodh* (less enthusiasm)
4. *Dourbalya* (weakness)
5. *Dourgandhya* (bad body smell)
6. *Swedabadha* (excessive sweating)
7. *Atikshuda* (excessive appetite)
8. *Atipipasha* (excessive thirst)

Therefore a definite therapeutic management is needed to control obesity as well as to prevent complications also. Hence in this present case study *Mustak* (*Cyperus rotundus*) is selected to detect the efficacy of the said drug in *Sthoulya*.

Materials and methods

The present study is a single case study conducted on a patient suffering from *Sthoulya*. The patient having the subjective of symptoms of *Sthoulya* and BMI level more than 25 kg/m² was included in the study.

Case history

A 45 year old female patient came in the OPD of Gaur Brahman Ayurvedic College with the chief complaint of gradual weight gain for 1 year & feeling of fatigue, weakness & excessive sweating since 6 months.

Past history: nothing significant

Family history:- nothing significant.

Personal history

Appetite: good
Sleep : normal
Bowel : regular
Bladder : normal

Menstrual history: Oligomenorrhoea.

General examination

- Build – medium 5 feet 3 inch
- Nutrition – Good
BMI = wt in kg/height in m²
= 79/2.56 = 30.85 kg/m²
- Pallor/jaundice/cyanosis/pigmentation/oedema = normal
- Pulse – 82/min regular
- BP -110/70mm of Hg
- Tongue – clear

Systemic examination

CNS/CVS/Respiratory system/ G. I system – No abnormality detected.

Dashavidhpariksha

- *Prakriti* – Kapha, Vata
- *Vikirti* – Kapha
- *Sara* – Meda Sara
- *Samhanan* – Pravar
- *Satmya* – Madhyam
- *Sattwa* – Madhyam
- *Praman* – Madhyam
- *Ahara Shakti* – Pravar
- *Vyayam Shakti* – Avar
- *Vaya* – Madhyam

Probable diagnosis: *Sthoulya*

Investigations to be done : Lipid Profile

Treatment Plan

6 gm of *Mustakmulachurna* was given twice daily with lukewarm water before meal for consecutive 2 months. Follow up was done 1 month interval.

Table 1: Pathyapathya Ahara

Aharavarga	Pathya	Apathya
<i>Shukadhanya</i> (food grain)	<i>Yava, Shyamak, Kodravya</i>	<i>Godhum, Navannali</i>
<i>Shamidhanya</i> (pulses)	<i>Mudga, Kulattha, Masur, Arhar</i>	<i>Masha, Tila</i>
<i>Shak & Phalavarga</i> (veg. & fruits)	<i>Vrintak, Patrasak, Patol</i>	<i>Madhuraphal</i>
<i>Dravya</i>	<i>Takra, Madhu, Usnoudak, Kaphahara arista</i>	<i>Ikshu, Navneetghrita, Dadhi</i>

Table 2: Pathyapathya Vihara

Pathya	Apathya
<i>Vyayam</i> (physical exercise)	<i>Avyayam</i> (no physical exercise)
<i>Ratrijagran</i> (night awakening)	<i>Divaswapna</i> (day dreaming)
<i>Vyavaya</i> (sexual activity)	<i>Avyavaya</i> (no sexual activity)
<i>Chintan</i> (thinking)	<i>Achintan</i> (no mental activity)

Observations & Result

The signs & symptoms were gradual weight gain, fatigue, weakness & excessive sweating, which were observed before & after treatment & BMI was computed before and after treatment also.

Table 3: Sign & Symptom wise Observation

Sl no.	Criteria	BT on 11/10/16	Review after 1 month on 10/11/16	Review after 2 months on 15/12/16
1	Fatigue	present	Moderate relief	Absent
2	Weakness	Present	Mild relief	Moderate relief
3	Excessive sweating	Present	Mild relief	Moderate relief
4	BMI	30. 85kg/m ²	30. 27kg/m ²	29. 29kg/m ²

Table 4: Investigation table

Lipid Profile	Value BT on 11/10/16	Review after 1 month on 10/11/16	Review after 2 months on 15/12/16
Cholesterol	240 mg/dl	225 mg/dl	190 mg/dl
Triglyceride	200 mg/dl	170 mg/dl	140 mg/dl
HDL	45 mg/dl	50 mg/dl	60 mg/dl
LDL	170 mg/dl	143 mg/dl	130 mg/dl

DISCUSSION

Obesity is one of the most common life style disorder now a days now a days. In Ayurveda it is correlated with *AtiSthoulya*. According to *Acharya Charak Ati Sthoulya Purush* is considered as the most undesirable person. *Sthoulya* is caused by over intake of heavy, sweet, fatty diet, indulgence in day sleeping, lack of physical and mental activities. These etiological factors cause production of *Ama* which obstructs the channels of the body. There is only formation of *Meda Dhatu Kshaya* of other *Dhatu*s due to *Margaaborodh*. Hence in this present case study *Mustak* is selected. In *Charak Samhita* The *Mustak* is included in *Lekhaneeya Mahakashaya*⁽⁶⁾. The term *Lekhaneeya* is well defined in *Sarangadhar Samhita*. The *Dravyas* which causes *Soshan* karma of *Dhatu*s and *Malas* are known as *Lekhaneeya Dravyas*⁽⁷⁾. According to *Bhav Prakash* the drug *Mustak* possess following qualities, *Rasa- Katu, Tikta, Kashaya; Veerya-Sheeta; Vipaka- Katu and has Grahi, Agnideepak, Pachak, Kaphapittaghna* properties⁽⁸⁾. Hence *Mustak* is very effective to do *Samprapti Vighatan* of *Sthoulya Roga*. The action of *Mustak* in *Sthoulya* is showed in the following table.

Table 5: Shows the action of Mustak on Sthoulya

<i>Sthoulya</i>	<i>Mustak</i>
<i>Dosa- Kapha, Vata</i>	<i>Katu, Tikta, Kashya</i> rasa and <i>Katu Vipak</i> pacify the <i>Kapha Dosa</i> .
<i>Dushya- Meda, MamsaDhatu</i>	The <i>Lekhaneeya</i> property of <i>Mustak</i> causes <i>Upososhan</i> of <i>Mamsa</i> and <i>Meda Dhatu</i> .
<i>Agni Dusti- Dhatwagni</i>	The <i>Agnideepak, Pachak</i> property enhance the <i>Dhatwagni</i> which help in formation of all <i>Dhatu</i> s equally.
<i>Srotadusti- Sanga</i>	The & <i>Agnideepak</i> property causes <i>Pachan Pachak</i> of <i>Ama</i> which is the main causative factor of <i>Sanga</i> or <i>Margoaborodh</i> of <i>Srotas</i> .

CONCLUSION

The management of *Sthoulya* described in Ayurvedic text comprising of *Ousadh, Anna, Vihara* as per *Samprapti* of this disease resulted as a effective treatment plan. From this case study it can be concluded that *Mustak* is very much effective and beneficial in *Sthoulya* as a single drug therapy in combination with proper diet and regimen. Further study is needed to establish the efficacy of the said drug in larger sample.

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