A CASE STUDY TO EVALUATE THE EFFICACY MUSTAK (CYPERUS ROTUNDUS) IN STHOULYA (OBESITY)

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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 Dhatu except Medadhatu. 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. The signs 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 rasas, Ama Pachak property. By this phenomenon it causes digestion of Amadosa, Kshaya of excess Medadhatu. So from this present case study it can be concluded that Mustak is very much effective to treat Sthoulya as a single drug therapy.

**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 Lekhneneeya Mahakashaya in the management of obesity (3). In the Lekhaneneeya 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)**

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

Viharaja Nidan
1. Diva swapana (day dreaming)
2. Avayama (devoid of physical activities)
3. Avayavya (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 Snigdhaguna causes only formation of Medadhatu 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 Atisthoullya persons are considered as the most Nindaneeyapurush among the Astavindaniyapurusha (eight despicable person).

**Rupa (signs & symptoms)**

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. Kricchavyayayata (difficulty in sexual activities)
3. Javoporodhi (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 6months.

**Past history:** nothing significant

**Family history:** nothing significant.

**Personal history**

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

**Menstrual history:** Oligomenorrhoa.

**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 -110/70 mm of Hg
- Tongue – clear

**Systemic examination**

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

**Dashavidhapariksha**

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

**Probable diagnosis:** Shoulya

**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>
<thead>
<tr>
<th>Table 1: Pathyapathya Ahara</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aharavarga</strong></td>
</tr>
<tr>
<td>Shukadhanya (food grain)</td>
</tr>
<tr>
<td>Shamidhanya (pulses)</td>
</tr>
<tr>
<td>Shak &amp; Phalavarga (veg. &amp; fruits)</td>
</tr>
<tr>
<td>Dravya</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Pathyapathya Vihara</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathya</strong></td>
</tr>
<tr>
<td>Vyayam (physical exercise)</td>
</tr>
<tr>
<td>Ratrijaigran (night awakening)</td>
</tr>
<tr>
<td>Vyavaya (sexual activity)</td>
</tr>
<tr>
<td>Chintan (thinking)</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Criteria</th>
<th>BT on 11/10/16</th>
<th>Review after 1 month on 10/11/16</th>
<th>Review after 2 months on 15/12/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fatigue</td>
<td>present</td>
<td>Moderate relief</td>
<td>Absent</td>
</tr>
<tr>
<td>2</td>
<td>Weakness</td>
<td>Present</td>
<td>Mild relief</td>
<td>Moderate relief</td>
</tr>
<tr>
<td>3</td>
<td>Excessive sweating</td>
<td>Present</td>
<td>Mild relief</td>
<td>Moderate relief</td>
</tr>
<tr>
<td>4</td>
<td>BMI</td>
<td>30.85kg/m²</td>
<td>30.27kg/m²</td>
<td>29.29kg/m²</td>
</tr>
</tbody>
</table>

**Table 4: Investigation table**

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

**DISCUSSION**

Obesity is one of the most common lifestyle disorder now a days. In Ayurveda it is correlated with AtiShthoulya. According to Acharya Charak Ati Shthoulya Purush is considered as the most undesirable person. Shthoulya 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 Dhatus due to Margaaborodh. Hence in this present case study Mustak is selected. In Charak Samhita The Mustak is included in Lekhanaeya Mahakashay(6). The term Lekhanaeya is well defined in Sarangadhar Samhita. The Dravyas which causes Soshan karma of Dhatus and Malas are known as Lekhanaeya Dravyas(7). According to Bhav Prakash the drug Mustak possess following qualities, Rasa- Katu, Tikta, Kashaya; VeeyaSheeta; Vipaka- Katu and has Grahi, Agnideepak, Pachak, Kaphapittaghna properties(8). Hence Mustak is very effective to do Samprapti Vighatan of Shthoulya Roga. The action of Mustak in Shthoulya is showed in the following table.

**Table 5: Shows the action of Mustak on Shthoulya**

<table>
<thead>
<tr>
<th>Sthoulya</th>
<th>Mustak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosa- Kapha, Vata</td>
<td>Katu, Tikta, Kashya rasa and Katu Vipak pacify the Kapha Dosa.</td>
</tr>
<tr>
<td>Dushya- Meda, MamsaDhatu</td>
<td>The Lekhanaeya property of Mustak causes Uposohan of Mamsa and Meda Dhatu.</td>
</tr>
<tr>
<td>Agni Dusti- Dhatwagni</td>
<td>The Agnideepak, Pachak property enhance the Dhatwagni which help in formation of all Dhatus equally.</td>
</tr>
<tr>
<td>Srotadusti- Sanga</td>
<td>The &amp; Agnideepak property causes Pachan Pachak of Ama which is the main causative factor of Sanga or Maroaborodh of Srotas.</td>
</tr>
</tbody>
</table>

**CONCLUSION**

The management of Shthoulya 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 Shthoulya 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.

**REFERENCES**


Cite this article as:

Source of support: Nil, Conflict of interest: None Declared