A Clinical Efficacy of Dashanga Guggulu in Sthaulya w.s.r. to Dosha Dushya Lakshana

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ABSTRACT

Charaka has quoted Sthaulya under the eight varieties of impediments which are designated as Astau-Nindita Purusha, Ati-Sthaulya comprises one of them. Charaka also listed this problem under Santarpanajanita Vyadhi. According to Charaka in the case of fatty person, other Dhatus doesn’t grow to the extent. He listed eight defects underlying Sthaulya Purusha they are Ayuhrasa, Javoparodha, Alpa-Vyavayita, Daurbalya, Daurgandhya, Swedabhadha, Ati-Trisha, Ati-Kshudha. It was observed in this study that the parameters like Sharira Bhara (Weight), BMI and Dosa Dhatu Dushti Lakshana of Vata, Pitta and Kapha are extremely significant statistically except Ashti and Majja. Overall it was observed that, percentage of relief in each patient of Sthaulya in experimental group was observed as 59.86% while 33.82 % in control group. On an average, in both group 46.84% relief was observed in each patient of Sthaulya. No side effects of the therapy were observed.

Key words: Sthaulya, Obesity, Dashanga Guggulu, Astau Nindita Purusha.

INTRODUCTION

In Ayurveda, so many types of the diseases described there and among them disease happens in Astaninditya Purusha (eight despicable personalities) has of prime importance because now a days due to the change in the life style of people, they have no time to maintain their health and to follow Dinacharya and Ritucharya. Charaka has quoted Sthaulya under the eight varieties of impediments which designated as Astau-Nindita Purusha, Ati-Sthaulya comprises one of them. Charaka also listed this problem under Santarpanajanita Vyadhi.[1] Obesity has reached epidemic proportions in India in the 21st century, with morbid obesity affecting 5% of the country’s population.[2] In today’s fast life incongruous food habit and relatively less exercise can be taken as major cause of obesity. Unhealthy, processed food has become much more accessible following India’s continued integration in global food markets. This, combined with rising middle class income, is increasing the average caloric intake per individual among the middle class and above income households. To prevent these hazards there is need of time to return with our old roots which are very much healthier. Ayurveda has a unique concept about preventing these hazards with the theories of Nidana Parivarjana and Pathya-Apathya. According to Charaka in the case of fatty person, other Dhatus doesn’t grow to the extent.[3]

Vagbhata opines that derangement of Agni or digestive power leads to production of Ama, which disturbs tissue fire of fatty tissues and blocks the proper formation of further tissues. Improperly formed fatty tissue accumulates in the body causing obesity. Accumulated fats causes disturbance to movement of Vata which turned increases appetite,
due to Chala Guna of Vata. Patients therefore its more an entire food is then converted into improper fatty tissues.[4]

Sthaulya (obesity) is such a disease, which provides the platform for so many hazards like Hypertension, cardiovascular diseases, diabetes and osteoarthritis infertility, impotency as well as psychological disorders like stress, anxiety, depression etc. Thus, the mortality and morbidity are more in obese person compared to others. Many theories have been put forward with many new hypotheses describing this disorder in Ayurveda as well as in modern science; still there is enough scope to work out on its aetiopathological and management aspect of the Sthaulya, because in modern medical science its management aspect remains symptomatic with troublesome side effects.

**OBJECTIVE**

To study the effect of Dashanga Guggulu on the management of Sthaulya (obesity) with focus on Dosha Dushya Lakshanas.

**Etiology of Obesity as per Ayurveda**[5-8]

Acharya Charaka has mentioned the Nidana of Sthaulya analytically in most of them is exogenous types of causes. Endogenous types of causes have been mentioned by Acharya Sushruta and Vagbhata.

Nidana

The etiological factor known for a disease is called ‘Nidana’ for that particular disease. Hetu, Ayatana, Karta, Nimitta, Samutthana, Pratyaya are the synonyms of Nidana. Nidana is the root cause for the origin of disease. Therefore Sushruta said that, “Sankshepataha Kriyayogo Nidana Parivarjanam”. [9]

All the Nidana (causative factors) mentioned in Ayurvedic classics can be classified into 4 groups - Aharatmaka Nidana, Viharatmaka Nidana, Manas Nidana and Anya Nidana.

1. **Aharatmaka Nidana** - Anupa Rasa Sevan, Atisampurana (over eating), Guru Ahara Sevana (excessive consumption of food), Mamsa Sevana (Excessive use of meat), Ikshu Vikara Sevana (sugarcanes preparations), Payas Vikara Sevana (milk and its preparations), Sleshmala Ahara Sevana (Kapha increasing food)

2. **Viharatmaka Nidana** - Avyayama (Lack of physical exercise), Sukha Shayya (Luxurious sitting), Bhojanottara Nidra (sleep after meal), Alpavyayava (reduced sex life), Gandhamalayana Sevana (use of perfumes and garlands).

3. **Manasika Nidana** - Harshnityatvat, (uninterrupted cheerfulness), Achintanat (Lack of anxiety), Manasonivritti (relaxation from tension), Priyadarshana and Saukhyena.

4. **Anya Nidana** - Amarasa, Snigdha Madhura Basti Sevana (administration of unctuous and sweet enema), Tailabhyanga (massaging of oil), Snigdha Udgartana (unctuous unction) Bijadoshaswabhavat (heredity).

Apart from several other medical illnesses that increase obesity risk include, hypothyroidism, Cushing’s syndrome, growth hormone deficiency along with certain medications may cause weight gain includes insulin, sulfonylureas, thiazolidinediones etc.

**MATERIALS AND METHODS**

A written consent of all patients included in the trial in the language best understood by them were taken before screening them for the trial, ethical clearance was also obtained prior to the trial. Obese patients were selected from the OPD and IPD, Department of Kayachikitsa, GAC, Nagpur.

**Inclusion Criteria**

1. Patients fulfilling diagnostic criteria and signs and symptoms of Sthaulya.
2. Age between 20 to 60 yrs age group.

**Exclusion Criteria**

1. Patients not willing for trial.
2. Patients having BMI less than 25

A) Management of groups:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Trial Group</th>
<th>Controlled Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>Dashanga Guggulu</td>
<td>Triphala and Musta Churna</td>
</tr>
</tbody>
</table>

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**ORIGINAL ARTICLE** Jan-Feb 2017

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Dose  500mg  3g
Anupana  Koshnajala  Koshnajala
Frequency  Twice a day  Abhaktakala  Twice a day  Abhaktakala
Duration  3 months  3 months

**Diagnostic Criteria**

It was mainly based on the specially prepared proforma, including all clinical signs and symptoms of the disease in which detailed history was taken and physical examination were done.

1. Standard height - weight chart were included.
2. The value of BMI were used.(>25)
3. Waist and Hip circumference
4. Waist / Hip ratio

**Observations and Results**

In this study 60 patients of *Sthaulya* were studied and selected randomly as per criteria of selection irrespective of religion, socio-economic status. All these patients were diagnosed with the help of criteria of diagnosis. Specially designed Case Report Form (CRF) was used to fill the all information of subjects.

Table 1: Showing percentage of relief (objective criteria) in each parameters of 60 Patients of *Sthaulya*.

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameters</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT Mean AT Mean Dif f Mean % of Relief</td>
<td>BT Mean AT Mean Dif f Mean % of Relief</td>
</tr>
<tr>
<td>A</td>
<td>Objective Criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Sharira Bhara</td>
<td>71.00 63.13 07.86 11.76 71.88 68.17 03.73</td>
<td>05.19</td>
</tr>
<tr>
<td>2</td>
<td>BMI</td>
<td>28.88 25.67 03.20 11.10 28.52 27.04 01.47</td>
<td>05.17</td>
</tr>
</tbody>
</table>

Percentage of relief (objective criteria) in 60 patients of *Sthaulya*.

In experimental group the mean weight (*Sharira Bhara*) before treatment (BT) was 71 which reduced after treatment (AT) to 63.13, the percentage relief was 11.76%. In parameter like BMI (Body mass Index) the mean BMI before treatment was 28.88 reduced to 25.67 after treatment and the percentage relief was 11.10%.

In control group the mean weight (*Sharira Bhara*) before treatment (BT) was 71.88 which reduced after treatment (AT) to 68.17, the percentage relief was only 05.19%. In BMI (Body mass Index) the mean BMI before treatment was 28.52 reduced after treatment to 27.04 and the percentage relief was 05.17%.

Table 2: Showing effect of therapy on objective parameters of 30 Patients of *Sthaulya* of control group. (Paired T –Test))

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameters</th>
<th>Mean ± SD</th>
<th>±S Ed</th>
<th>t value</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharira Bhara</td>
<td>71.9±5.71 68.16±5.60</td>
<td>1.04 1.02</td>
<td>29.26</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>2</td>
<td>BMI</td>
<td>28.51±2.16 27.04±1.97</td>
<td>0.39 0.35</td>
<td>28.72</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

In Control Group, regarding *Sharira Bhara* the Mean ± SD before treatment was 71.9±5.71 which was changed to 68.16±5.60 after treatment, the mean difference observed is 3.74 with t value 29.26 at degree of freedom 29 p value obtained was <0.01 which was extremely significant statistically. In BMI the Mean ± SD before treatment was 28.51±2.16 which was changed after treatment to 27.04±1.97, the p value obtained was <0.01 which was extremely significant statistically.

Table 3: Showing symptoms score for *Dosha* and *Dhatu Dushti Lakshana* of 60 patients of *Sthaulya*.

<table>
<thead>
<tr>
<th>No.</th>
<th>Dosha and Dhatu Dushti Lakshana</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BT A T Dif f % of Reli</td>
<td>BT A T Dif f % of Reli</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Graph 1. Showing Relief in symptoms score for Dosha and Dhatu Dushti Lakshana of 60 patients of Sthaulya.

Table 4: Showing comparison between two group w.r.t Dosha and Dhatu Dushti Lakshana of 60 patients of Sthaulya. (Wilcoxon-Mann-Whitney Test)

<table>
<thead>
<tr>
<th>N o</th>
<th>Dosha and Dhatu Dushti Lakshana</th>
<th>Mean ± SD</th>
<th>Gr-A</th>
<th>Gr-B</th>
<th>U'</th>
<th>U</th>
<th>S Ed</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Dosha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Vata</td>
<td>1.6 ± 0.6</td>
<td>1.7</td>
<td>0.8</td>
<td></td>
<td></td>
<td>615</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>2</td>
<td>Pitta</td>
<td>1.7 ± 0.9</td>
<td>0.9</td>
<td>0.7</td>
<td></td>
<td></td>
<td>681</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

Percentage of Relief Dosha and Dhatu Dushti Lakshana of 60 patients of Sthaulya

In experimental group among Vata Dushta Lakshana score of before treatment (BT) was 43 which reduced after treatment (AT) to 08 with difference 35, the percentage relief was 81.40%. In Pitta Dushta Lakshana before treatment score was 61 reduced after treatment to 09 and the percentage relief was 85.24%, while in Kapha Dushta Lakshana score before treatment was 213 and reduced after treatment to 97 and percentage of relief was 54.46%.

In Dhatu Dushti Lakshana the percentage of relief in Rasa was 62.50%, in Meda it was 60.24%, in Asthi it was and 69.23%, and in Majja Dhatu Dushti Lakshana the relief was 80%.

In control group among Vata Dushta Lakshana score of before treatment (BT) was 46 which reduced after treatment (AT) to 26 with difference 20, the percentage relief was 43.47%. In Pitta Dushta Lakshana before treatment score was 58 reduced after treatment to 29 and the percentage relief was 50%, while in Kapha Dushta Lakshana score before treatment was 213 and reduced after treatment to 159 and percentage of relief obtained was 23.35%.

In Dhatu dushti lakshan the percentage of relief in Rasa was 27.86%, in Meda it was 32.72%, in Asthi it was and 30%, and in Majja dhatu dushti lakshan the relief was 28.57%.

Graph 1. Showing Relief in symptoms score for Dosha and Dhatu Dushti Lakshana of 60 patients of Sthaulya.
The Difference between before treatment (BT) and after treatment (AT) score of Dosha and Dhatudushti Lakshana for both group was compared by ‘Wilcoxon-Mann-Whitney Test’.

It was found that the sum of rank of experimental group for Vata Dosha Lakshana was 615, Test statistic (U) was 285, where the test statistic U was between Population Mean ±1.96 SD which was very significant at 5% level of significance. (P<0.05) Therefore the difference between symptom score of Vata Dosha Lakshana of Experimental group is statistically very significant, so therefore we can conclude that in the symptom Vata Dosha Lakshana trial drug has effective statistically.

In Pitta Dosha Lakshana sum of rank was 888 and U statistics was 12 and p value obtained was <0.0001 where the test statistic U was between Population Mean ±1.96 SD which was considerably extremely significant as p < 0.05.

In Dhatu Dushti Lakshana Rasa and Meda p value was <0.001 in both which was extremely significant while in Asthi and Majja Dhatu Dushti Lakshana it was not significant as p value >0.05.

From above description of statistics we can conclude that experimental drug was effective in reducing Vata, Pitta and Kapha Dushti Lakshana and it was statistically significant.

In Dhatu Dushti Lakshan of Rasa and Meda p value obtained was significant that means drug of experimental group was effective compare to control drug, while in Asthi and Majja Dhatu Lakshana it was not significant, means both group treatment was equally effective.

CONCLUSION

It was observed that result obtained in the parameters like Sharira Bhara (weight), BMI, Dosha Dhatu Dushti Lakshana are extremely significant statistically except Asthi and Majja. Dashanga Guggulu, Triphala Churna and Musta are easily available as well as is cost effective.

In Dhatu Dushti Lakshana the percentage of relief in Rasa was 62.50%, in Meda it was 60.24%, in Asthi it was 69.23%, and in Majja Dhatu Lakshana the relief was 80%. In Dhatu Dushti Lakshana the percentage of relief in Rasa was 27.86%, in Meda it was 32.72%, in Asthi it was 30%, and in Majja Dhatu Dushti Lakshana the relief was 28.57%.

Overall it was observed that, percentage of relief in each patient of Sthaulya in experimental group was observed as 59.86% while 33.82 % in control group. On an average, in both group 46.84 % relief was achieved in each patients of Sthaulya from the symptoms they suffered. No side effects of the therapy were found.

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