EVALUATION OF THE EFFICACY OF VACHADI GANA YOGA VASTI IN STAULYA W S R TO OBESITY
Amiya Bhonsle1, Shrinivasa Reddy C M2, Uttam Kumar3, Rajesh Urmale4
1PG Scholar, 2Reader, Panchkarma Deprtt., SJG Ayurvedic Medical College Koppal, Karnataka, India
3Lecturer, Shalya Tantra, 4Reader, Rasa Shastra & Bhaisijya Kalpana, RLAMC, Chandkhuri, Durg, Chhattisgarh, India

ABSTRACT
Obesity is one among the major diseases of modern era, increasing in prevalence. The World Health report of W.H.O. listed Obesity under 10 top selected risks to the health. Sthaulya (Obesity) is well known from the Samhita period and is considered to be one of the eight undesirable conditions (Ashta Nindita). It can be caused due to Mandagni as Agni is considered to be responsible for metabolism. Thus, Ama formed moves within body, further causing Medovruddhi, which produces excessive stoutness. According to modern science, one of the causes for obesity is sedentary lifestyle, where there is more intake of junk food and less physical activity. This also signifies in increased BMI, further leading to obesity. The study is a prospective clinical trial in a single group of 30 patients where all the patients received Vachadi gana vasti for 8 days in yoga vasti krama and as component of yoga vasti schedule Anuvasana vasti with Vachadi taila is used. And follow up was on 24th day. Subjective parameters are the chief complaints of sthoulya. And objective parameters are BMI and Waist hip circumference. Assessments are done before and after the treatment. Keywords: sthoulya; Ashtanidhita Vachadi gana yoga vasti ; BMI ; obesity ; meda doshja

INTRODUCTION
Ayurveda is set to be the most ancient of medical sciences. Ayurveda stands apart from the rest of medical fraternity with its holistic approach to disease management on basis of five elements (Panchamahabhutas) and then we constitute the Tridoshas that governs our health. Sthaulya (Obesity) is one among the major diseases of Modern era. In Modern era with continuous changing life styles and environment, changed dietary habits, man has become the victim of many disease caused by unwholesome dietary habits and Obesity is one of them. Obesity is the only one disease, which is gaining more and more attention of scientists at global level. Many institutions and Medical schools are making efforts to find a perfect remedy for this burning problem. The Obesity is such a physical state where Hypertension, Osteoarthritis, Diabetes Mellitus, Cardio vascular accidents impotency and many other grave complications are invited. Ajirna and Agnimandya are considered to be the main causes that are responsible for the occurrence of digestive problems that further lead to disturbed metabolic rate. Mandagni could be at the level of Jathragni or DhatwagniJanya. According to Sushruta Ama Rasa is produced due to Kaphavardhakaahara, Adhysana, Avyayama, and Divaswapana. The Madhura Bhava Ama Rasa moves within the body, Snigdhansha of this Anna Rasa
causes Medovruddhi and make the person obese\(^1\). Sthaulya is considered to be caused due to Meda Dhatu-Dushti\(^2\). Sthaulya has been mentioned under ‘Ashtanindita Purusha’\(^3\).

So in order to treat Sthaulya, lekhan and vaat kapha nashan is required and it is an attempt to do so with vachadi gana vasti. vachadi gana contains devdaru, Shunthi, vacha, haritaki, ativisha, nagarmotha, is indicated in vata kaphaja vikara like shthoulya in shodhanadi gana adhyaya in asthanga hridaya \(^4\).

**AIMS AND OBJECTIVES OF STUDY:**
- Evaluation of efficacy of vastikarma in Sthoulya.
- Evaluation of efficacy of Vachadi gana yoga vasti in Sthoulya

**MATERIALS & METHODS:**
Patient attending O.P.D & I.P.D of S.J.G. Ayurvedic Medical College & Research Center, Koppal, will be randomly selected for study.

**EXCLUSION CRITERIA:**
1. Patients below the age of 15 years and above 60 years.
2. Patients with Endocrinal disorder & other systemic diseases.
4. Pregnant & lactating mother.
5. The patient having B.M.I. >40 will also be excluded.

**INCLUSION CRITERIA:**
1. The patients age between 15-60 years irrespective of their caste, race, and sex etc.
2. The patients having clinical signs and symptoms of Sthaulya.

**COMPOSITION OF TRIAL DURG:**
1) **Drugs for Vachadigana taila:**

The drugs Atiushna, Teekshna, Ugrah & Visha properties will be taken 1/2 part and as Ativisha is toxic in nature and hence given through rectal route it is taken only 1/4 parts.

<table>
<thead>
<tr>
<th>S.No</th>
<th>INGREDIENTS</th>
<th>BOTANICAL NAME</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vacha</td>
<td>Acarus calamus</td>
<td>1/2 part</td>
</tr>
<tr>
<td>2</td>
<td>Devadaru</td>
<td>Cedrus deodara</td>
<td>1 part</td>
</tr>
<tr>
<td>3</td>
<td>Musta</td>
<td>Cyperus rotundus</td>
<td>1 part</td>
</tr>
<tr>
<td>4</td>
<td>Shunthi</td>
<td>Zingiber officinale</td>
<td>1/2 part</td>
</tr>
<tr>
<td>5</td>
<td>Haritaki</td>
<td>Terminalia chebula</td>
<td>1 part</td>
</tr>
<tr>
<td>6</td>
<td>Ativisha</td>
<td>Aconitum heterophyllum</td>
<td>1/4 part</td>
</tr>
</tbody>
</table>

**ASSESSMENT OF RESULT:**

Subjective & objective parameters of base line data and after treatment data are compared to assess the result with paired T test by using SPSS software.

**SUBJECTIVE PARAMETER:**
1. Kshudati matra\(^5\)
2. Dourbalya\(^5\)
3. Javoparodha\(^5\)
4. Pipasati\(^5\)
5. Chala sphika\(^6\)
6. Chala stana\(^6\)
7. Chala udara\(^6\)
8. Udarevridhi\(^7\)

**OBJECTIVE PARAMETER:**
1. Body Mass Index (k.g/m\(^2\)).
2. W.H.R. i.e. waist hip circumference ratio.
3. Skin fold thickness by using Harpenden Calipers.

**METHOD OF COLLECTION OF DATA:**
A) **Study design:** Simple Randomized open clinical trial.
B) Sample size: A minimum of 30 patients will be taken for the Vachadi gana yoga vasti in a single group.

CRITERIA OF DIAGNOSIS: The symptoms mentioned in classics and modern texts will be the base of diagnosis.

STUDY DURATION: 8 days Vachadi gana yoga vasti + 16 days parihara kala = Total 24 days.

FOLLOW-UP: Follow-up for 8 days after treatment.

POSOLOGY:
1. Niruha Vasti Dravya Dose - 576 ml (3 kudava) Saindhavam- 1/2 aksha, Makshika- 1 prasruti, Sneha- 1 1/2 prasruti, Kwatha- 2

POSOLOGY:
2. Anuvasana Vasti Taila Dose 72 ml (1 1/2 Pala) Saindhavam & Satahava- 2 masha

INVESTIGATIONS:
1. C.B.C
2. R.B.S
3. Lipid profile
4. Urine routine

RESULT: Table No. 1: Showing Individual study of the parameters to show significance effect before and after the treatment

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean B.T.</th>
<th>Mean A.T.</th>
<th>Reduction %</th>
<th>±SD</th>
<th>±SE</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sthana chalatwa</td>
<td>2.07</td>
<td>1.13</td>
<td>45.16</td>
<td>0.52</td>
<td>0.10</td>
<td>9.82</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Udara chalatwa</td>
<td>2.23</td>
<td>1.13</td>
<td>49.25</td>
<td>0.40</td>
<td>0.07</td>
<td>14.97</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sphik chalatwa</td>
<td>2.27</td>
<td>1.43</td>
<td>36.76</td>
<td>0.38</td>
<td>0.07</td>
<td>12.04</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Udarevridhi</td>
<td>2.13</td>
<td>0.97</td>
<td>54.69</td>
<td>0.59</td>
<td>0.11</td>
<td>10.79</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Dourbalya</td>
<td>2.07</td>
<td>0.90</td>
<td>56.45</td>
<td>0.59</td>
<td>0.11</td>
<td>10.79</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Kshudatimatra</td>
<td>1.43</td>
<td>0.60</td>
<td>58.14</td>
<td>0.65</td>
<td>0.12</td>
<td>7.05</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PIPASATI</td>
<td>1.07</td>
<td>0.50</td>
<td>53.13</td>
<td>0.63</td>
<td>0.11</td>
<td>4.96</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Javoprodha</td>
<td>1.10</td>
<td>0.67</td>
<td>39.39</td>
<td>0.50</td>
<td>0.09</td>
<td>4.71</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>BMI</td>
<td>18.3</td>
<td>15.7</td>
<td>14.55</td>
<td>0.45</td>
<td>0.08</td>
<td>3.25</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

In 30 patients, before administration of vasti, the mean score of B.M.I was 18.3 before treatment, which was brought down to 15.7 kg/m2 after administration of drug with 14.55 % relief reported with the statistically significant (P<0.01) result. The change in B.M.I was statistically significant with “t” value being 3.25 at 1% level of significance. Here p<0.01 which indicate that the drug has significant role on B.M.I.

In 30 patients, before administration of vasti, the mean score of weight: Hip ratio was 1.93, which was brought down to 1.83 after the treatment with 5.17 % of relief showed statistically insignificant (P>0.05) result. The change in weight was statistically insignificant with “t” value being 1.36. Here p>0.05 which indicate that the drug has insignificant role on weight: Hip Ratio.

Table No. 2: Showing Individual study of the Lipid Profile to show significance effect before and after the treatment
### DISCUSSION

Stoulya is a kapha-vata pradhanaya Tridoshaj vyadhi and Acharyas has recommended vataghna and Kaphaghna an-napana and aushadhi for this disease. So we have selected vachadi gana vasti as it has formost action on vata and for proper lekhan karma, we have selected vachadi gana vasti. We have selected vachadi vasti for Sthoulya as it has less risk, safe and easy for Sthoulya as it has less risk, safe and easy for administration in comparision to Vamana and virechana.

**Probable action of lekhan basti:**

Lekhan Basti was prepared by the combination of the taila, madhu, gomutra, lavana, which consist ushna and tikhna guna. Taila has anupravana bhava. Due to that it passes through illiocecal valve and reaches up to Grahani, where it absorbed. Basti inhibits the fat absorption by reaching up to grahami. Hence it pacify Saman vayu and brought Jatharagni to its normal level and activate the vyana vayu to break the Sroto sang and synergize the action of Lekhan therapy at the cellular level. The basti drug consists of Kasaya, tikta and katu rasa, so that properties potentiate the action of lekhan therapy.

### CONCLUSION

In Ayurvedic treatise, the pathology of Sthaulya goes in a way that it is caused due to the manifestation of Ama and Ama is caused because of Jatharagni Daubalya5, hence here we can conclude that Sthaulya is the outcome of Ama which is caused due to Mandagni, so hence it is a vata kaphaja type of santarpanjanya vyadhi. Treatment modalities like Shodhana therapy with Vachadi gana vasti shows good efficacy in relieving both subjective and objective parameters. This can be attributed to fact that most of the drugs of this formulation are mainly Ushna Viryatamaka with Katu Vipaka and predominantly Ushna and Tikta Ganas and possessing Lekhana, Karshana, and Bhedana properties. Amongst the biochemical values, besides the HDL, all other values showed reasonable decrease in their respective values. This proves the action of the drug on the lipid profile.

Sthoulya is a vata kaphaja type of vyadi due to santarpajanya. Sthoulya is a Dushya Dominant Vyadhi. Nidanas of Sthoulya mentioned in classics are now changing. Increasing stress, faulty

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Change in %</th>
<th>±SD</th>
<th>±SE</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B.T.</td>
<td>A.T.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.cholesterol ↓</td>
<td>198.02</td>
<td>183.26</td>
<td>7.46</td>
<td>15.69</td>
<td>2.86</td>
<td>5.15</td>
</tr>
<tr>
<td>S.TRIGLY ↓</td>
<td>137.78</td>
<td>133.97</td>
<td>2.76</td>
<td>8.88</td>
<td>1.62</td>
<td>2.35</td>
</tr>
<tr>
<td>HDL ↑</td>
<td>41.01</td>
<td>43.31</td>
<td>-5.62</td>
<td>6.65</td>
<td>1.21</td>
<td>-1.90</td>
</tr>
<tr>
<td>LDL ↓</td>
<td>130.04</td>
<td>113.28</td>
<td>12.89</td>
<td>16.39</td>
<td>2.99</td>
<td>5.60</td>
</tr>
</tbody>
</table>
dietary habits and decreased awareness regarding exercise are becoming the prominent causative factors for Sthaulya. Thus remaining in the Kostha Vata causes Atikshudha, this increases gravity of the disease and make the Sthaulya Krichhrsadhaya. Obesity occurs more in female than male and specially increases after marriage, light nature of work, use of IUCD, contraceptive pills, after delivery and in menopausal period etc. The plus point observed in case of Ayurvedic management is absence of any hazardous effect, which is really a great benefit to the patients and is of vital importance in view of the global acceptance of Ayurveda.

➢ Vasti karma plays a major role among the shodhana karmas, as it is praised as Ardhachikitsa.

➢ Treatment modality like shodhana in the form of Vachadi gana yoga Vasti shows better efficacy in reliving subjective features as well as objective features. Karshana and lekhana property of this vasti probably responsible for the karshana of medadhatu, leading to srotoshodhana thus reliving the avarana.

➢ Most of the laxanas mentioned in the sthoulya in Ayurveda are subjective symptoms but some of the objective features mentioned in Ayurveda and allied sciences together can help to diagnose its severity.

➢ It is common misbelief that all hyperlipidaemic (like hypercholesteremia etc) are commonly associated with sthoulya. But factually it is not true only less proportion of obese may present with hyperlipidaemia.

➢ Sthoulya can be undoubtedly compared with that of obesity on its etiopathogenesis and symptom otology. And the samprapti and laxana can be understood with the help of modern pathophysiology of obesity.

➢ Objective parameters like weight, BMI, and body circumference in the trail cases have reduced considerably. The vasti schedule tried was yoga vasti krama, if the same is tried with kala or karma vasti schedule results may be still encouraging.

➢ In the biochemical values also there was some mild reduction in lipid values were observed. This shows the action of this vasti over lipid values.

➢ In modern methods the procedure known as bariatric surgery has been recently introduced but it has many complications like vomiting, diarrhea, abdominal hernia, infections, pneumonia etc.

➢ Women’s are having higher incidence of obesity and they need more medical care than the man.

➢ By keeping above things ayurveda teaches us and safety less cost remedies in the management of sthoulya where the complications arises out of these treatments are minimal.

➢ By keeping the ideology of ayurveda in the diet principles and applying the shodhana therapies like vamana, virechana, and vasti etc the desire effect can be achieved in sthoulya rogi.

➢ By extensive literary research, it can be concluded that sthoulya chikitsa includes Satatha karshana, shodhana, and also shamana aushadhis. In addition to this following Pathyapathya are also plays an important role.

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CORRESPONDING AUTHOR
Dr. Uttam Kumar
Email: druk01508@gmail.com

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