EFFICACY OF TRYUSHANADYA LOHA AND VARADI KASHAYA IN THE MANAGEMENT OF STAULYA W.S.R TO OBESITY

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INTRODUCTION

The World Health Organization estimated that in 2015, approximately 2.3 billion adults will be overweight and more than 700 million will be obese1. In India, statistics point to an increase in overweight or obese citizens by 20% between 1998 and 20052. Obesity has reached epidemic proportions in India in the 21st century, with morbid obesity affecting 5% of the country's dangerously at a staggering 70 million in the nation. The latest obesity statistics shows that 75% of Indian women and 58% of men are obese and one in 6 women and one in 5 men are overweight. Estimated prevalence of overweight and obese females and males (Aged 15+) is 18 and 20% respectively3. This dreaded condition is not threatening only to the adult population but the children are also being equally engulfed by it. Because of the

ABSTRACT

The disease Sthaulya is a well-recognized from the Samhita period. Acharya charaka, included Atisthula purusha under the eight varieties of impediments and has illustrated that Krishata (Lean) is better than Sthula (Obese) because when Sthula affected by disease suffers more than Krishata. According to the modern science, obesity precipitates the diseases like Hypertension, Osteoarthritis, Coronary heart disease, Diabetes mellitus etc. Yogaratnakara mentioned Tryushanadya loha and Sahasrayoga mentioned Varadi kashaya in the treatment of sthaulya. Effort is being made in present study to know the efficacy of Tryushanadya loha and Varadi kashaya. Patients were selected from OPD and IPD fulfilling inclusion criteria and were divided into 2 groups, Group A and Group B with 20 patients in each group. Patients in group A were administered Tryushanadya loha 750mg/day in divided dose and Varadi kashaya 15ml thrice/day and also kept on appropriate pathya ahara and vihara. Patients in Group B were as Control Group on pathya ahara and vihara. None of the patients were found with complete remission and maximum improvement in both the groups. Moderate improvement was found in 14 patients (70%) in Group A and 1 patient (5.0%) in Group B. Mild improvement was found in 6 patients (30.0%) in Group A and 15(75.0%) patients in Group B. In Group A 0(0.0%) and in Group B 4(20.0%) patients were found with no change. It is concluded that Tryushanadya loha and Varadi kashaya along with pathya ahara and vihara has a significant effect in the treatment of sthaulya.

Keywords: Sthaulya, Obesity, Tryushnadya loha, Varadi kashaya
increasing prevalence and costly consequences, obesity (Sthaulya) is now being recognized not only as a risk factor in the clinical setting but also as an important threat to public health. The above statistical data are quite evident of the alarming health effects of the condition called obesity. The management of Sthaulya well in time can, thus, play a significant role in preventing these unfavorable health effects and thereby to improve the expectancy and quality of life of the individuals. Hence an effort has been made here to evaluate the effect of tryushanadya loha and varadi kashaya in the management of Sthaulya w.s.r to obesity.

**Aims and objectives:**
To know the efficacy of Tryushanadya loha and Varadi kashaya in sthaulya.

**METHODOLOGY**

**Methods of collection of data:** Data was collected from patients attending O.P.D and I.P.D fulfilling the clinical criteria for diagnosis of Sthaulya. Patients were randomly selected irrespective of their socio-economic, educational or religious status.

**Inclusion criteria:**
1. Patients having age between 20-60 years.
2. Patients having serum lipid levels more than normal level.
3. Patients with raised BMI i.e. greater than 30 kg/m² as per the WHO standards.
4. Patients fulfilling classical lakshanas of sthaulya.

**Exclusion criteria:**
1. Patients having serious cardiac problems like Myocardial infarction, cardiac failure, and angina pectoris.
2. Patients having severe endocrine disorders.
3. Patients having major illness like IDDM which is poorly controlled.
4. Patients having BMI greater than 45 kg/m².

**Criteria for diagnosis:**
Patients are diagnosed clinically on the basis of signs and symptoms and also through laboratory investigations as mentioned under inclusion criteria.

**Assessment criteria:**
It was made on the basis of the following subjective and objective parameters. Conclusion was drawn on the basis of unpaired student t test and chi square test.

**Subjective parameters:**
1. Chalasphikudarasthana
2. Kshudraswasa
3. Dourbalya
4. Dourgandhyata
5. Swedadhikya
6. Nidradhikyata
7. Alasya utsahahani
8. Angagaurava
9. Kricchravyavaya

**Objective parameters:**
Mainly assessed on the basis of biochemical investigations
1. Lipid profile
2. Body weight
3. Body mass index
4. Skin fold thickness
v. Body circumference-Waist and hip circumference ratio.

**Criteria for the total effect of therapy**

**Complete remission:** 100% relief in the signs and symptoms.

**Marked improvement:** 75-99% improvement in signs and symptoms.

**Moderate improvement:** 51-75% improvement in signs and symptoms.

**Mild improvement:** 26-50% improvement in signs and symptoms

**Unchanged:** No change or less than 25% improvement in signs and symptoms

**Scoring criteria:**
- 0- Absent
- 1- Present

Scoring was given before and after the treatment.

**Composition of test drug:**

**Tryushanadyaloha:** Shunthi (*Zingiber officinale*), Pippali (*piper longum*), Maricha (*piper nigrum*), Haritaki (*Terminalia chebula*), Vibhitaki (*Terminalia bellerica*), Amalaki (*Emblica officinalis*), Chavya (*Piper chaba*), Chitraka (*Plumbago zeylanica*), Bidalavana (*Ammonium chloride*), Audbida Lavana (*Sea salt*), Bakuchi (*Psoralea corylifolia*), Saindhava Lavana (*Rock salt*), Sauvarchala Lavana (*Black salt*), Lohabhasma (*Incinerated iron*).

**Varadi Kashaya:** Hareetaki (*Terminalia chebula*), Vibheetaki (*Terminalia bellarica*), Amalaki (*Emblica officinalis*), Asana (*Terminalia tomentosa*), Chitraka (*Plumbago zeylanica*), Loha patra (*Incinerated iron*), Haridra (*Curcuma longa linn*).

**STUDY DESIGN**

**Table no 1: Showing study design**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Method</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Trayushanadya loha and Varadi kashaya with pathya ahara and vihara</td>
<td>60days</td>
</tr>
<tr>
<td>B</td>
<td>Only on pathya ahara and vihara</td>
<td>60days</td>
</tr>
</tbody>
</table>

**Sample size:** Minimum of 40 patients. 20 patients in each group selected for the present study

**Posology:** Tryushanadya Loha – 750mgm/day in divided doses with madhu and ghritha in unequal quantity. Varadi kashaya- 15ml thrice daily with madhu.

**Durations of the Study -** 60 Days and follow up after completion of the treatment

**RESULT**

Total 40 patients were registered for the study and they were randomly distributed in 2 groups. Results of the patients before and after treatment is cited in table no 2

**Table no 2: Showing Result of lakshanas before and after treatment**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Lakshanas Present</th>
<th>Group A</th>
<th>Group B</th>
<th>Significance (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
<td>BT</td>
</tr>
<tr>
<td>1</td>
<td>Chala stana sphik udara</td>
<td>20(100%)</td>
<td>6(30%)</td>
<td>20(100%)</td>
</tr>
<tr>
<td>2</td>
<td>Kshudraswasa</td>
<td>20(100%)</td>
<td>4(20%)</td>
<td>20(100%)</td>
</tr>
<tr>
<td>3</td>
<td>Dourbalya</td>
<td>20(100%)</td>
<td>3(15%)</td>
<td>20(100%)</td>
</tr>
<tr>
<td>4</td>
<td>Dourgandhyata</td>
<td>17(85%)</td>
<td>3(15%)</td>
<td>18(90%)</td>
</tr>
</tbody>
</table>
5  Swedadhikyata 17(85%) 4(20%) 20(100%) 11(55%)  0.048
6  Nidradhikyata 20(100%) 3(15%) 20(100%) 11(55%)  0.019
7  Atipipasa 19(95%) 3(15%) 20(100%) 10(50%)  0.041
8  Atikshudha 20(100%) 4(20%) 20(100%) 10(50%)  0.096
9  Alasya utsahahani 19(95%) 3(15%) 20(100%) 10(50%)  0.041
10  Angagaurava 20(100%) 3(15%) 20(100%) 12(60%)  0.008
11  Krichravyavaya 17(85%) 3(15%) 18(90%) 9(45%)  0.082
12  Weight 83.7±5.45 80.8±5.93 82.7±6.54 81.7±6.72  0.656
13  Body mass index 33.69±1.71 32.51±1.8 33.26±1.84 32.76±1.95  0.672
14  Waist HIP circumference ratio 0.86±0.03 0.84±0.03 0.85±0.02 0.85±0.02  0.262
15  Skin fold thickness of middle of biceps 2.51±0.17 2.24±0.16 2.37±0.17 2.25±0.18  0.820
16  Skin fold thickness of middle of triceps 2.48±0.13 2.25±0.14 2.43±0.16 2.35±0.17  0.037
17  Serumcholesterolmg/dl 216.3±29.74 205.6±27.68 205.7±24.87 200.05±24.28  0.504
18  SerumTriglycerides mg/dl 233.65±42.69 226.05±42.69 225.55±28.27 231.9±57.4  0.717
19  HDL mg/dl 57.7±9.36 61.35±7.93 55±5.68 56.8±5.97  0.047
20  LDL mg/dl 137.25±9.04 130.6±7.51 149.3±10.75 144.2±11.08 <0.001
21  VLDL mg/dl 49.3±8.62 44.75±7.09 57.6±7.58 54.35±7.39 <0.001

**Total effect of Therapy:** None of the patients were found with complete remission and maximum improvement in both the groups. Moderate improvement was found in 6 patients (30.0%) in group A and 15 (75.0%) patients in group B. In group A 0 (0.0%) and in group B 4 (20.0%) patients were found with no change.

| Table No 3: Showing Total effect of therapy in patients Group A and Group B |
|------------------|------------------|------------------|------------------|
| Overall effect   | Group A (n=20)   | Group B (n=20)   |
|                  | Number | %      | Number | %      |
| Completely cured (100.0%) | 0 | 0.0 | 0 | 0.0 |
| Max improvement (75-99%) | 0 | 0.0 | 0 | 0.0 |
DISCUSSION

Sthaulya is kapha pradhana and meda pradoshaja vikara, based on clinical features it is considered with obesity. Tryushanadya loha contains Shunthi, pippali, maricha, haritaki, vibhitaki, amalaki, chavya, chitraka, bidalavana, audbida, bakuchi, saindhava Lavana, sauvarchala lavana, loha bhasmaand Varadi Kashaya contains hareetaki, vibheetaki, amalaki, asana, chitraka, lohapatra, Haridra. All these drugs are having kapha-vatagna, anulomana, srrotovishodhaka, deepana and pachana properties. All ingredients having common properties like katu rasa, katuvipaka, and katu virya so they act on Kapha vata of Sthaulya.

The symptom Chalaspik udarasthana after the treatment the improvement was better clinically i.e 25% in Group A than Group B. In Kshudraswasa the improvement was better clinically i.e 35% in Group A than Group B. Better clinical outcome may be due to kaphavahara, deepana, srotoshodhaka karma of dravyas. In Dourbalya the improvement was better clinically i.e 35% in Group A than Group B. Better clinical outcome may be due to dhatupośhaṇa by the enhanced dhatvagni and cleared srotorodha. In Dourgandhyata the improvement was better clinically i.e 35% in Group A than Group B. In swedadhikya the improvement was better clinically i.e 20% in Group A than Group B. Better clinical outcome may be because of deepana, pachana, kaphavahara karma drug, dhatvagni mandya is corrected and the normal metabolism process is re-established so that medo dhatu is formed qualitative with normal sweda. In Nidradhikyata the improvement was better clinically i.e 40% in Group A than Group B. In Atipipasa, Atikshuda and Alasyautsahahani the improvement was better clinically i.e 30%. Better clinical improvement may be due to deepana and Pachana. In Angagaurava the improvement was better clinically i.e 45% in Group A than Group B. In Kricchravyayavayautsahahani the improvement was better clinically i.e 35%. Group A showed significant result in circumference, skin fold thickness and lipid profile than Group B.

CONCLUSION

Sthaulya is kapha pradhana and medo-pradoshaja vyadhi, mainly caused due to excess intake of guru, madhura ahara, ayyayama, etc. It is one of the most effective diseases which affect someone’s social, physical and mental features, The incidence of sthaulya is increasing day to day in more percentage due to sedentary lifestyle and fast food habits, Statistical analysis of the data obtained leads to the conclusion that Tryushanadya loha and varadi kashaya along with Pathya ahara and vihara is highly effective in Sthaulya. It can also be concluded that Pathya ahara and vihara (Group B) alone doesn’t produce results comparable to Pathya ahara and
vihara along with Tryushanadya loha and varadi kashaya (Group A). It can therefore be concluded that Tryushanadya loha and varadi kashaya along with Pathya ahara and vihara has a significant effect in the management of Sthaulya.

REFERENCE

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