Research Article

A COMPARATIVE CLINICAL STUDY IN THE MANAGEMENT OF VATAJA KASA W.S.R. TO TROPICAL PULMONARY EOSINOPHILIA BY SHRINGARABHRA RASA AND SHWASAKASA CHINTAMANI ALONG WITH MRIDU VIRECHANA

Sourabh Gupta¹*, Sridevi. P. Kulkarni²

¹Associate Professor, Department of Kumar bhritya, Guru Nanak Ayurvedic Medical College & Hospital, Sri Muktsar Sahib, Punjab, Hubli.
²PG. Scholar, Department of Post Graduate Studies in Kayachikitsa, Ayurveda Mahavidyalaya, Hubli, India.

ABSTRACT

Background and objectives

Vataja kasa vis-à-vis T.P.E is a disease of Swasanavaha samsthana, is one of the commonest problem in tropical countries like India. India being a tropical country the prevalence of TPE is remarkable. Vatajakasa presents with symptoms like Shuska kasa, Prasakta vega, Uraha shoola, Ksheena bala, Ksheena oja, Kshamana etc. In Ayurveda, researches have been done and Vataja kasa can be compared with TPE. TPE symptoms such as repeated bouts of dry cough, chest pain, weight loss, and Malaise etc may continue for weeks or months with remission and reoccurrence.

Methods: Classical signs and symptoms of Vataja kasa and raised esinophil count >500cells/cumm and 30 patients were selected and randomly allocated in two groups. Firstly, Shunti churna with hot water was given for Amapachana, later patients were given Kantakari ghrita for Snehapana prior to Virechana with Eranda taila in both the groups followed by Shringarabhra rasa in Group A and Shwasa kasa chintamani in Group B for 21 days with follow up of 1 month.

Results: Both Group A and Group B provided highly significant results in all parameters of assessment but group B showed better improvement in the symptoms of the disease Vataja kasa in the present study.

Interpretation and Conclusion: 15 subjects (50%) got marked relief, 5 subjects (16.66%) got moderate relief in subjective parameters; 20 subjects (66.66%) got mild relief and 5 (16.66%) subjects got moderate relief in objective parameter. Hence, the modalities of our treatment can be recommended to all the patients of Vataja kasa without any hesitation.

INTRODUCTION

Kasa seems to be a very simple disease, if neglected or mismanaged; it may result in disease with poor prognostic condition. In Ayurveda Kasa is considered as an independent disease unlike in modern science. It may also occur as a Lakshana or an Upadrava in other diseases.

Though, Kasa has remained only as a minor and neglected common problem in this era, it is related with one’s immunity. Thus, it is a major setback for the affected persons, which has become major hurdle in day-to-day activities of a person.

The vitiated Prana vata along with Udana vata which further gets aggravated, takes an abnormal course through throat and mouth in association with other Doshas and expelled out abruptly with a ‘coughing sound’ malingering the broken-bronze vessel.[1]

The clinical features of Vataja kasa has been described in our classics as Shushka kasa, Prasakta manta, Shushka alpa kapha nishtivana, Swarabedha, Shushka ura kantha vaktrata, Dourbalya etc.[2,3]
Vataja kasa is often compared to Tropical Pulmonary Eosinophilia (TPE) because of similarities of signs and symptoms.

TPE is a syndrome resulting from immunological hyper responsiveness to human filarial parasites Wuchereria bancrofti and Brugia malayi. The filaria are transmitted to humans by mosquitoes and adult worms eventually reside in lymphatics. There they release microfilariae, which travel to the lungs and create an intense inflammatory reaction. [4]

TPE is an occult form of filariasis and is characterized by dry cough, dyspnoea, nocturnal wheezing etc, and marked peripheral blood eosinophilia. This affects males and females at a ratio of 4:1 often during the 3rd decade of life[5],

India being one of the tropical countries, the prevalence of TPE (Vataja kasa) is remarkably high. In India, it is endemic in Maharashtra, Goa, Karnataka, Kerala, coastal areas, Andhra Pradesh, Orissa, Bengal and Bihar[6],

Excellent results have been obtained with a short course of diethyl carbamazine. A dosage of 8-12mg-1kg/day in three divided doses was given for 21 days. With this treatment there is rapid drop in the eosinophil count, the pulmonary features disappear and patients’ general health improves rapidly. Residual features of TPE may persist after three weeks of therapy simultaneously with development of chronic interstitial disorders. Relapse following treatment occurs in 20% of patients and therefore repeated monthly courses of D.E.C. at 2-3 monthly intervals for a period of 1-2 years is recommended[7] which is difficult for the patients to follow. The desired mode of management should not evoke dependence or adverse drug effects, which are the major concern in the medical field.


Hence, this study is to evaluate the comparative study of efficiency in similar cases has been taken up.

The work on evaluation and comparison of both Shringarabhra rasa and Shwasakasa chintamani along with Sneha virechana had not been taken up which formed the platform for the synopsis of the present study.

In the present study, the scholar has taken pulmonary eosinophilia on line with Vataja kasa. Here an attempt has been made to compare the efficacy of Shringarabhra rasa and Shwasakasa chintamani along with Sneha virechana as prescribed by our Acharyas.

Patients were selected on the basis of classical features of Vataja kasa. From this prospect the study of comparison of efficacy of Shringarabhra rasa and Shwasakasa chintamani along with Sneha virechana in near equal group relating to Vataja kasa symptoms and AEC have been taken into account.

OBJECTIVES OF THE STUDY
1. To study in detail about Vataja kasa, according to Ayurveda and TPE according to modern Science.
2. To assess the efficacy of Shringarabhra Rasa in the management of Vataja Kasa (TPE).
3. To assess the efficacy of Shwasakasa chintamani in the management of Vataja Kasa (TPE).
4. To compare the efficacies of Shringarabhra Rasa and Shwasakasa chintamani in Vataja Kasa.

MATERIALS AND METHODS
Materials
The present study titled A Comparative Clinical Study in the Management of Vataja Kasa w.s.r. to Tropical Pulmonary Eosinophilia by Shringarabhra Rasa and Shwasakasa Chintamani along with Mrudu Virechana was done with following materials.

1. Shunti choorna[12]
2. Kantakari ghrita[13]
3. Karpooradya taila[14]
4. Eranda taila[15]
5. Shringarabhra rasa[16]
6. Shwasakasa chintamani[17]

Sample
The subjects were selected incidentally and randomly placed into two groups.

Sample Size
Total 30 subjects were placed into two groups, 15 subjects in each.

Group A: Mrudu virechana followed by Shringarabhra Rasa internally for 21 days.

Group B: Mrudu virechana followed by Shwasakasa chintamani internally for 21 days.

Study Design: A Comparative Clinical Trial Study.

Inclusion Criteria
1. Subjects presenting with classical clinical features of Vataja kasa (Tropical pulmonary eosinophilia).
2. Subjects of either sex between the age group of 20-50 years.
3. Subjects with chronicity of more than 6 months and less than 5 years.
4. Subjects having increased AEC in the peripheral blood smear.
5. Subjects fit for Virechana.

Exclusion Criteria
1. Subjects with other systemic disorders like CHD, diabetes, hepatorenal complication etc.
2. Subjects with bronchial asthma, pneumonia, bronchitis, pulmonary tuberculosis.

Diagnostic Criteria
After detailed examination, the diagnosis was made based on the signs and symptoms of Vataja kasa explained in Ayurvedic classics along with AEC and ESR.

Investigations
Blood: Hb%, TC, DC, ESR, AEC, RBS
Urinalysis: Albumin Sugar, Micro analysis
Radiological investigation: Chest X-Ray PA-view if required.

Parameters of Study
Parameters of assessment were totally based on the subsidence in the clinical features of Vataja Kasa (TPE). Parameters of study is categorised into two groups as subjective and objective parameters.

Shushka kasa
Grade 0 - No cough
Grade 1 - Mild irritant dry cough but does not disturb the night sleep.
Grade 2 - Moderate irritant dry cough which disturbs the night sleep but subsides after medication.
Grade 3 - Severe irritant dry cough not relieved by any measures and keeps patient awake.

Alpha Kapha Nishtivana (Expectoration)
Grade 0 - Absence
Grade 1 - Occasional expectoration
Grade 2 - Expectoration with persistence of dry cough.

Shushka Urakanthavaktrata (Dryness)
Grade 0 - Absence
Grade 1 - Mild
Grade 2 - Moderate which relieved by home remedies
Grade 3 - Severe is constant dryness of oral cavity

Shoola Hrita/Ura/Parshwa/Udara/Shira/Shakha
Grade 0 - Absent
Grade 1 - Mild and occasional pain during cough
Grade 2 - Moderate pain during cough
Grade 3 - Constant pain

Dourbalya (General weakness)
Grade 0 - Absence
Grade 1 - Mild weakness but doesn’t hamper day to day activities.
Grade 2 - Moderate weakness which alters the routine, but subsides by rest.

Grade 3 - Severe weakness

Swarabedha (Change in Voice)
Grade 0 - Absent
Grade 1 - Present

Nirghosha
Grade 0 - Absent
Grade 1 - Present

Assessment Criteria
The data, which are obtained by the clinical trial was statistically analysed by applying student ‘t’ test.

Statistical Tests
The analysis of the effects of therapy was based on Student’s “t-test” applications. The efficacy of Snehapana, Mridu virechana along with Shringarabhra rasa and Shwasakasa chintamani internally were compared. The significance is discussed on the basis of mean scores, percentages, SD, SE, ‘t’ and ‘p’-values.

Interventions
Group - A
Amapachana: The subjects were given Shunti Churna 5gm /day in 3 divided doses half an hour before food with Ushnodaka as Anupana for Amapachana till Nirma lakshanas were seen.

Snehana: Sadya snehapana By Kantakari ghrita.
On the first day patients were given Hrisiyasi matra of Sneha i.e., 30ml and based on the duration taken for digestion, the dose was calculated for 24hrs and given on second day as Sadya snehapana.

Anupana: Ushnodaka
Abhyanga: Abhyanga with Karpooradi taila was done after Snehapana for 2 days.

Swedana: After Snehana they were subjected to Sarvanga bashpa sweda Sweda prior to Virechana

Virechana: The subjects were given/administered Eranda taila (dose depends on the type of Koshta) for Virechana B/W 8.30am-9.30am

Samsarjana krama: Based on the Shuddhi samsarjana krama was advised.

Shamanoushadhi: Internally Shringarabhra Rasa (250mg, 1 TID) tablet was administered with Ushnodaka as Anupana, thrice daily after food for 21 days.

Duration: 28 days
Follow Up: 1 month

Group B
Amapachana: The subjects were given Shunti Churna 5gm/day in 3 divided doses half an hour before food with Ushnodaka as Anupana for Amapachana till Nirma lakshanas were seen.

Snehana: Sadya snehapana By Kantakari ghrita.
On the first day patients were given *Hrisiyasi matra* of *Sneha* i.e., 30ml and based on the duration taken for digestion, the dose was calculated for 24hrs and given on second day as *Sadya snehapana*.

**Anupana:** *Ushnodaka*

**Abhyanga:** *Abhyanga* with *Karpooradi taila* was done after *Snehapana* for 2 days.

**Swedana:** After *Snehana* they were subjected to *Sarvanga bashpa sweda* sweda prior to *Virechana*.

**Virechana:** The subjects were given/administered *Eranda taila* (dose depends on the type of *Koshta*) for *Virechana* B/W 8.30am-9.30am

**Samsarjana krama:** Based on the *Shuddhi samsarjana krama* was advised.

**Shamanoushadhi:** Internally *Shwasakasa chintamani* (125mg, 1 TID) Tablet was administered with *Ushnodaka* as *Anupana*, 1 thrice daily after food for 21 days.

**Duration:** 28 days

**Follow Up:** 1 month

### RESULTS

**Effect of therapies on Subjective Parameters:**

1. *Shushka kasa*
2. *Alpa kapha nishtivana*
3. *Shushka urah kantha* and *Vaktra*

#### Table 1: Showing the effect of *Snehapana* on *Shushka kasa*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>2.3</td>
<td>1.6</td>
<td>31.42%</td>
<td>0.59</td>
<td>0.15</td>
<td>4.78</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B</td>
<td>2.4</td>
<td>1.53</td>
<td>36.11%</td>
<td>0.35</td>
<td>0.09</td>
<td>9.53</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

#### Table 2: Showing the effect of *Virechan* on *Shushka kasa*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>2.3</td>
<td>1.2</td>
<td>48.57%</td>
<td>0.35</td>
<td>0.09</td>
<td>12.47</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B</td>
<td>2.4</td>
<td>1.13</td>
<td>52.77%</td>
<td>0.45</td>
<td>0.11</td>
<td>10.71</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

#### Table 3: Showing the effect of therapy after *Shamanoushadi* on *Shushka kasa*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>2.3</td>
<td>0.4</td>
<td>80%</td>
<td>0.74</td>
<td>0.19</td>
<td>9.72</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B</td>
<td>2.4</td>
<td>0.3</td>
<td>86.11%</td>
<td>0.45</td>
<td>0.11</td>
<td>17.48</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

#### Table 4: Showing the effect of *Snehapana* on *Alpa kapha nishtivana*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=9)</td>
<td>0.8</td>
<td>0.73</td>
<td>15.38%</td>
<td>0.35</td>
<td>0.09</td>
<td>1.46</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>Group B (n=10)</td>
<td>0.8</td>
<td>0.73</td>
<td>15.38%</td>
<td>0.35</td>
<td>0.09</td>
<td>1.46</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
</tbody>
</table>

#### Table 5: Showing the effect of *Virechan* on *Alpa kapha nishtivana*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=9)</td>
<td>0.8</td>
<td>0.6</td>
<td>30.76%</td>
<td>0.45</td>
<td>0.11</td>
<td>2.25</td>
<td>&gt;0.05</td>
<td>N.S</td>
</tr>
<tr>
<td>Group B (n=10)</td>
<td>0.8</td>
<td>0.46</td>
<td>46.15%</td>
<td>0.5</td>
<td>0.13</td>
<td>3.05</td>
<td>&gt;0.01</td>
<td>S</td>
</tr>
</tbody>
</table>

#### Table 6: Showing the effect of therapy on *Alpa kapha nishtivana*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=9)</td>
<td>0.8</td>
<td>0.33</td>
<td>61.53%</td>
<td>0.51</td>
<td>0.13</td>
<td>4</td>
<td>&lt;0.01</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B (n=10)</td>
<td>0.8</td>
<td>0.26</td>
<td>69.23%</td>
<td>0.63</td>
<td>0.16</td>
<td>3.67</td>
<td>&lt;0.01</td>
<td>H.S</td>
</tr>
</tbody>
</table>

#### Table 7: Showing the effect of *Snehapana* on *Shushka urah kantha* and *Vaktra*

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=13)</td>
<td>1.4</td>
<td>0.53</td>
<td>61.90%</td>
<td>0.51</td>
<td>0.13</td>
<td>6.5</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B (n=14)</td>
<td>1.7</td>
<td>0.8</td>
<td>53.84%</td>
<td>0.25</td>
<td>0.06</td>
<td>14</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>
Table 8: Showing the effect of Virechan on Shushka urah kantha and Vaktra

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=13)</td>
<td>1.4</td>
<td>0.4</td>
<td>66.66</td>
<td>0.45</td>
<td>0.11</td>
<td>7.89</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B (n=14)</td>
<td>1.7</td>
<td>0.53</td>
<td>69.23</td>
<td>0.56</td>
<td>0.14</td>
<td>8.29</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Table 9: Showing the effect of therapy on Shushka urah kantha and Vaktra

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=13)</td>
<td>1.4</td>
<td>0.26</td>
<td>80.95</td>
<td>0.63</td>
<td>0.16</td>
<td>6.85</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B (n=14)</td>
<td>1.7</td>
<td>0.33</td>
<td>80.76</td>
<td>0.63</td>
<td>0.16</td>
<td>8.57</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Table 10: Effect of Therapy on other subjective parameters w.r.t. no. of subjects before and after treatment

<table>
<thead>
<tr>
<th>General Symptoms</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B.T</td>
<td>A.T</td>
</tr>
<tr>
<td>Shoola</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Dourbalya</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Swarabhedha</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Nirghosa</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Objective Parameter

Table 11: Showing the effect of therapy on AEC

<table>
<thead>
<tr>
<th>Groups</th>
<th>BT mean</th>
<th>AT mean</th>
<th>% of Relief</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>623.33</td>
<td>373.3</td>
<td>40.1%</td>
<td>179.28</td>
<td>46.29</td>
<td>5.40</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
<tr>
<td>Group B</td>
<td>610</td>
<td>356.66</td>
<td>41.53%</td>
<td>126.01</td>
<td>32.53</td>
<td>7.78</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Effect of therapy on ESR

Comparative Efficacy of the Therapies In Group A and Group B

Table 12: Showing the Comparative efficacy of Snehapana on Subjective Parameters in Group A and Group B

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Parameters of assessment</th>
<th>No.of pts</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shushka kasa</td>
<td>30</td>
<td>0.005</td>
<td>5.31</td>
<td>0.02</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>2</td>
<td>Alpa kapha nishtivana</td>
<td>19</td>
<td>0.2</td>
<td>0.09</td>
<td>0</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>3</td>
<td>Shushka urah kantha and Vaktra</td>
<td>27</td>
<td>0.17</td>
<td>0.02</td>
<td>3.5</td>
<td>&lt;0.01</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Table 13: Showing the Comparative efficacy of Virechan on Subjective Parameters in Group A and Group B

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Parameters of assessment</th>
<th>No.of pts</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shushka kasa</td>
<td>30</td>
<td>0.14</td>
<td>0.14</td>
<td>0.92</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>2</td>
<td>Alpa kapha nishtivana</td>
<td>19</td>
<td>0.22</td>
<td>0.1</td>
<td>1.4</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>3</td>
<td>Shushka urah kantha and Vaktra</td>
<td>27</td>
<td>0.2</td>
<td>0.02</td>
<td>13.5</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Table 14: Showing the Comparative efficacy of Therapy on Subjective Parameters in Group A and Group B

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Parameters of assessment</th>
<th>No.of pts</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shushka kasa</td>
<td>30</td>
<td>0.06</td>
<td>0.06</td>
<td>3.33</td>
<td>&lt;0.01</td>
<td>H.S</td>
</tr>
<tr>
<td>2</td>
<td>Alpa kapha nishtivana</td>
<td>19</td>
<td>0.24</td>
<td>0.11</td>
<td>0.7</td>
<td>&gt;0.10</td>
<td>N.S</td>
</tr>
<tr>
<td>3</td>
<td>Shushka urah kantha and vaktra</td>
<td>27</td>
<td>0.22</td>
<td>0.03</td>
<td>9</td>
<td>&lt;0.001</td>
<td>H.S</td>
</tr>
</tbody>
</table>

Table 15: Showing the Comparative efficacy of Therapy in Group A and Group B by using unpaired 't' test

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Parameters of assessment</th>
<th>No.of pts</th>
<th>SD</th>
<th>SE</th>
<th>'t'</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A.E.C</td>
<td>30</td>
<td>3.30</td>
<td>1.20</td>
<td>2.77</td>
<td>&lt;0.01</td>
<td>H.S</td>
</tr>
</tbody>
</table>
Table 16: Showing overall effect of therapy on Subjective parameters

<table>
<thead>
<tr>
<th>Assessment criteria</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25% no relief</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26-50% mild relief</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>51-75% moderate relief</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Above 75% marked relief</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 17: Showing overall effect of therapy on Objective parameters

<table>
<thead>
<tr>
<th>Assessment criteria</th>
<th>A.E.C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25% no relief</td>
<td>Group A</td>
</tr>
<tr>
<td>26-50% mild relief</td>
<td>2</td>
</tr>
<tr>
<td>51-75% moderate relief</td>
<td>1</td>
</tr>
<tr>
<td>Above 75% marked relief</td>
<td>0</td>
</tr>
</tbody>
</table>

DISCUSSION

Deha Prakruti

In this study the effect of treatment was assessed on the basis of changes observed after the treatment in subjective and objective parameters. The results are discussed based on subjective and objective parameters as follows.

Shushka kasa

Effect of snehapana

The severity of Shushka kasa was markedly decreased upto 31.42% in group A and 36.11% in group B just after Snehapana and the result was statistically highly significant in both the Groups (p<0.001).

The effect of Snehapana on Shushka kasa was statistically insignificant when the result was compared in between the groups (P>0.10). As the same Ghritha was used in both the groups there was no much difference in the effect of Snehapana in both the groups.

Effect of Virechana

The severity of Shushka kasa was markedly decreased upto 48.57% in group A and 52.77% in group B after Virechana and result was statistically highly significant in both the Groups (p<0.001).

The comparative efficacy of Group A with Group B showed statistically insignificant result (P>0.10).

After completion of therapy

The severity of Shushka kasa was markedly decreased upto 80% in group A and 86.11% in group B after the Shamanoushadi for 21 days. And result was statistically significant in both the groups (p<0.001).

When the effects of total therapy are compared, group B showed statistically significant improvement in Shushka kasa when compared with group A, with p value (p<0.01).

This means that the Shamanoushadis, Shringarabhra rasa and Shwasakasa chinamani are effective in reducing Shushka kasa.

Alpa kapha nishtivana

The total number of subjects having Alpa kapha nishtivana were 09 subjects in group A and 10 subjects in group B.

Effect of Snehapana

The effect of Snehapana was statistically insignificant in both the groups on the parameter Alpa kapha Nishtivana. Both the group showed 15.38% relief with P value >0.10.

The comparative efficacy of Group A with Group B showed statistically insignificant result (P>0.10). This shows that Sadyasnehapana is not effective in reducing Alpa kapha nishtivana.

Effect of Virechana

The severity of Alpa kapha nishtivana markedly decreased upto 30.76% in group A and 46.15% in group B after Virechana and result was statistically not significant in group A with P>0.05 and statistically significant in group B with P value <0.01.

The comparative efficacy of Group A with Group B showed statistically insignificant result (P>0.10).

After completion of therapy

The severity of Alpa kapha nishtivana was markedly decreased upto 61.53% in group A and 69.23% in group B after the Shamanoushadi for 21 days. And result was statistically significant in both the Groups (p<0.01).
The comparative efficacy of Group A with Group B showed statistically insignificant result (P>0.10). This is because of the difference in the sample size. Even though the comparative efficacy of therapies was statistically not significant, the percentage relief was more in Group B.

**Shushka ura kantha and Vaktrata**

The total number of subjects having Alpa kapha nishtivana were 13 subjects in group A and 14 subjects in group B.

**Effect of Snehapana**

The severity of Shushka ura kantha and Vaktrata was markedly decreased upto 61.90% in group A and 53.84% in group B just after Snehapana and the result was statistically highly significant in both the Groups (p<0.001). The comparative efficacy of Group A with Group B showed statistically significant result (P<0.01).

**Effect of Virechana**

The severity of Shushka ura kantha vaktrata was markedly decreased upto 66.66% in group A and 69.23% in group B after Virechana and result was statistically highly significant in both the Groups (p<0.001).

When the effects of Virechana was compared, group B showed statistically significant improvement than group A, with p value (p<0.001)

**After completion of therapy:**

The severity of Shushka ura kantha vaktrata was markedly decreased upto 80.95% in group A and 80.96% in group B after the Shamanoushadi for 21 days and result was statistically significant in both the Groups (P <0.001).

The comparative efficacy of Group A with Group B showed statistically highly significant result (P<0.001).

Even though there is no significant difference in percentage relief the comparative efficacy showed statistically significant result, this may be due to the unequal sample size.

**Other subjective symptoms**

As there were less subjects recorded in the remaining subjective parameters like Shoola in Ura/ Udara/ Parshwa/ Shira/ Shanka & Hrit Pradesha, Dourbalya, Swarabheda, Nirghosha the efficacy was not statistically analysed. They were assessed in terms of number of subjects present before and after the treatment and percentage relief. It is discussed as follows.

**Shoola in Ura/ Udara/ Parshwa/ Shira/ Shanka & Hrit Pradesha**

There were 6 subjects with Shoola in Ura/ Udara/ Parshwa/ Shira/ Shanka & Hrit pradesha before treatment and it was reduced to 2 subjects after treatment with 66.6% relief in both the groups.

**Dourbalya**

There were 5 subjects with Dourbalya before treatment and it was reduced to 4 subjects after treatment with 20% relief in group A.

There were 6 subjects with Dourbalya before treatment and it was reduced to 2 subjects after treatment with 66.6% relief in group B.

**Swarabheda**

There were 6 subjects with Swarabheda before treatment and it was reduced to 1 subject after treatment with 83.3% relief in group A.

There were 6 subjects with Swarabheda before treatment and all the subjects were relieved of Swarabheda after treatment with 100% relief in group B.

**Nirghosha**

There were 3 subjects in each group before treatment and 100% result was observed in this parameter.

**Objective Parameters**

**Effect on Absolute Eosinophil Count after completion of therapy**

40.1% improvement was observed in Group A while in Group B 41.53% improvement was observed. The results of these groups were statistically highly significant, with p value (p<0.001).

While comparing the two groups by unpaired ‘t’ test, both the group showed statistically significant improvement in the reduction of A.E.C values when compared with p value (p<0.01).

This shows that both the groups were effective in reduction of A.E.C.

**Total Effect of Therapies in the Study**

Mild Relief 0 (26- 50%) was seen in 4 subjects in group A and 1 subject in group B.

Moderate Relief (51 – 75%): was seen in 02 subjects in Group A, 03 subjects in Group B.

Above 75% relief was seen in 07 subjects in group A and 08 subjects in group B.

Even though the comparative effect of therapies in between the groups were statistically not significant in most of the parameters the average subject wise improvement was more in Group B. It could be said that both the modalities of treatment have beneficial effects on all the parameters.
CONCLUSION

_Vataja kasa_ can be compared to Tropical Pulmonary Eosinophilia of modern science purely based on similarities in _Nidana panchaka_ and _Chikitsa_. It is found that the relief was highly significant in both the groups after _Sadya snehapanapraka_ and _Mridu Virechana_. The therapy was highly significant on _Shushka kasa_ and _Shushka urah kantha vaktra_ in both the groups. The effect of therapy on A.E.C is highly significant in both the groups but however it was found non-significant in ESR values in both the groups. The therapy is more effective in group B as compared to group A in both subjective and objective parameters.

REFERENCES

5. Ibid
6. Ibid
7. Ibid

Cite this article as:
https://doi.org/10.47070/ijraps.v5i3.105

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

*Address for correspondence*
Dr. Sourabh Gupta
Associate Professor,
Department of Kumar bhritya,
Guru Nanak Ayurvedic Medical College & Hospital, Sri Muktsar Sahib, Punjab, India.
Email: sourabh.gupta32@gmail.com

Disclaimer: IJRAPS is solely owned by Mahadev Publications - A non-profit publications, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAPS cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJRAPS editor or editorial board members.