A CLINICAL STUDY ON SHRINGYADI CHURNA WITH AND WITHOUT PRANAYAMA IN THE MANAGEMENT OF TAMAKA SHWAS (BRONCHIAL ASTHMA)

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ABSTRACT

Tamaka Shwasa is very prevalent medical problem in our country. A better and effective therapy is the need of the hour which may be without many side effects and having quick bronchodilator effects and at the same time within the reach of the masses. The present clinical trial was planned to study the effect of an indigenous compound, “Shringyadi Churna” with and without Pranayama in the management of Tamaka Shwasa. After confirming the diagnosis, patients were randomly distributed in three groups, viz. Group I received Shringyadi Churna with Ushnodaka (Warm Water), Group II received the same with Pranayama, and Group III received Placebo with Pranayama. The duration of trial was 12 weeks and the patients were examined weekly for 6 weeks, there after every three weeks up to 12 weeks. The follow up period was of 2 months. The subjective & objective parameters were measured before & after treatment in each group. The result of ‘Shringyadi Churna along with Pranayama’ was found to be significant at the level of P<0.001.

KEYWORDS: Tamaka Shwasa, Shringyadi Churna, Pranayama, Bronchial Asthma

Cite this article:
INTRODUCTION

Tamaka Shwasa (Charaka, 200 BC) or bronchial asthma continues to be a distressing and alarming disease of the present world. Inspite of multidimensional development in the field of medical science, it still remained a challenge which is unconquered. Tamaka Shwasa is a yapya vyadhi (Difficult to treat) (Charaka, 200 BC) being paroxysmal in nature and it can prove fatal. Tamaka Shwasa closely resembles to bronchial asthma, which is manifested by widespread narrowing of the air passage and paroxysm of dyspnoea, cough and wheeze. It is also incurable in the opinion of modern medical science (Davidson’s Principal and Practice of Medicine). However, various drug formulations and prescriptions have been advocated to cure Tamaka Shwasa in Ayurvedic Samhitas (Classical texts), Shringyadi Churna is one of the effective medicine for this dreadful disease-advocated by Acharya Chakrapani datta (1100 A.D.) in Chakradatta (A text authored by Chakrapani datta). The term Pranayama, fourth anga of Astanga yoga (8 levels of Yoga technique), has been derived from the root words- Prana and Ayama. Together they mean expansion or prolongation of life force. In the opinion of Maharishi Patanjali, Shwasa and Prashwasa are meant for inspiration and expiration respectively. The vital force of life i.e Prana is manifested externally by breath. Breath is sthoola (Visible) and Prana is Sukshma (Invisible). Thus Pranayama (Maharshi Patanjali, 200 BC) is breath control at the physical or sthoola level and simultaneously Prana is controlled at Sukshma (Invisible) or subtle level. Hence a study was planned to evaluate the efficacy of Shringyadi Churna with and without Pranayama procedures with the help of modern parameters.

MATERIAL AND METHODS:

After confirming the diagnosis by taking history of every case in detail, physical and clinical examinations and laboratory investigation, 44 patients were selected from the O. P. D. & I. P. D. of Dept. of Kayachikitsa, State Ayurvedic College, Lucknow and were enrolled in the series and the patients were randomly distributed in the three groups, out of which 38 patients were completed the trial duration of 12 weeks and 6 were left the treatment in between the treatment. This trial was done after the approval of the Institutional Ethics Committee (IEC) Ref. no. ECL/AY/105/98, State Ayurvedic College, Lucknow.

Group I: Shringyadi Churna was given in the dose of 2 gm (in capsule forma) T.D.S. with Ushnodak (Warm Water)

Group II: The same Shringyadi Churna was given and patients were made to perform 20 round of Pranayama (Nadi Shodhan Pranayam) in morning and 20 rounds in the evening.

Group III: Placebo (Glucose in the dose of 2 gm in capsule form) was given T.D.S. with 20 round of Pranayama in the morning and 20 rounds in the evening.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Inclusion Criteria</th>
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<tbody>
<tr>
<td>1</td>
<td>Patient aged between 13–40 yrs</td>
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<tr>
<td>2</td>
<td>Patient with classical symptoms of Tamaka Shwasa</td>
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<tr>
<td>3</td>
<td>Patient not taking any other medicine for Tamaka Shwasa</td>
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<tr>
<th>Sl.No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Patient below age 13 yrs</td>
</tr>
<tr>
<td>2</td>
<td>Pregnant women &amp; lactating mother</td>
</tr>
<tr>
<td>3</td>
<td>Patients with uncontrolled Hypertension/Cardiac problem/ Diabetes mellitus.</td>
</tr>
<tr>
<td>4</td>
<td>Patients already under modern medications for Bronchial asthma</td>
</tr>
</tbody>
</table>
Assessment Criteria:

Clinical Assessment:

Patients were assessed on different parameters for obtaining the effect of therapy some clinical sign and symptoms like Shwasavega (Dyspnoea), Peenas (Coryza), Ghur-Ghur shabda (Wheezing sound), Kasa (cough), Kastena Shleshma Nirharana (Difficulty in Expectoration), Kanthodhwansa (Hoarseness of Voice), Bhasna Krichata (Difficulty in speech), Parshva avagahana (tightness in chest), Lalat swedata (Sweating on forehead) were assessed on the basis of their presence and absence.

Laboratory Assessment:

a) Blood - T.L.C., D.L.C., Haemoglobin, E.S.R.

b) Pulmonary function test-PEFR

Trial Drug review

Shringyadi Churna has been described by Chakrapani dutta (1100 AD) in his renowned text “Chakradutta” (Hikka Shwasa Chikitsa 12/9). The contents of drug are Karkatashringi (Pistacia integrima), Triphala [Haritaki (Terminalia Chebula), Bibhitak (Terminalia bellirika) and Amalaki (Phyllanthus emblica)], Trikatu [Shunthi (Zingiber officinale), Pippali (Piper longum) and Maricha (Piper nigrum)], Pushkarmoola (Inula racemosa), Kantakari (Solanum surattense), Bharangi (Clerodendrum serratum) and Panchalavan (five types of salt)

Source of Drug

Shringyadi Churna is prepared in the pharmaceutical division of State Ayurvedic College, Lucknow. All the drugs were taken in equal amount and pulverized and mixed well. Then the prepared drug was filled in capsules.

RESULTS

To observe the effect of the trial drug, 10 major signs and symptoms were considered and the changes were recorded and calculated on thirty eight patients who completed the study period. The facts observed are presented in table no.1.

Pulmonary Function Test

Changes in PEFR (Peak Expiratory Flow Rate)

In this study to measure the bronchodilator effect of drug and for the assessment of effect of Pranayama, PEFR (Peak Expiratory Flow Rate) (Davidson’s Principal and Practice of Medicine) was assessed during the trial period. In group-I, ‘t’ value was found 3.46 and P<0.01, in group-II, ‘t’ value was found 3.55 and P<0.001 and in group-III, ‘t’ value was found 2.29, P>0.05.

Laboratory Investigation

a) Total Leucocyte Count (T.L.C.)

No significant changes after the trial of 12 weeks in all the three groups.

b) Differential Leucocyte Count (D.L.C.)

Polymorphs: No significant changes were observed after the trial of 12 weeks in all the three groups.

Lymphocyte: No significant changes after 12 weeks trial duration in all the three groups.

Eosinophils: All the three groups showed reduction in mean eosinophil count with highest significance for group II. (In Group I ‘t’ value was 2.81 and P<0.05), In Group II ‘t’ value was 2.97 and P<0.01 and In Group III ‘t’ value was 2.3 and P=0.05)

(c) Haemoglobin:

All the three groups showed increase in mean hemoglobin value with highest significance in group II. (In group I t-value = 2.47, P<0.05, in group II t-value = 2.51, P value <0.05, and is group III t-value = 2.16, P=0.05)
(d) Erythrocytic Sedimentation Rate (ESR)

All the three groups showed reduction in mean ESR value, with highest significance in group II. (In group I t-value = 4.57, P<0.001, in group II t-value = 4.76, P value<0.001, and in group III t-value = 3.71, P<0.01)

The clinical study on “Shringyadi Churna with and without Pranayama” has given a relief in the patients of Tamaka Shwasa. On the basis of comparison of before and after trial observations, in the three groups, the fore most symptoms in 44 patients were Shwasa Vega (Paroxysmal dyspnoea) which was noted in 100% patients. After that Peenasa (Coryza), shabda (wheezing sound), slehsma vimokshante sukham (relief on expectoration) and nirbalata (weakness) were reported in 84% cases each.

Table No.1 STATISTICAL ANALYSIS OF EFFECT OF THERAPY

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Group I</th>
<th></th>
<th></th>
<th>Group II</th>
<th></th>
<th></th>
<th>Group III</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>X²</td>
<td>P value</td>
<td>Mean</td>
<td>X²</td>
<td>P value</td>
<td>Mean</td>
<td>X²</td>
<td>P value</td>
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<tr>
<td></td>
<td>BT AT</td>
<td></td>
<td></td>
<td>BT AT</td>
<td></td>
<td></td>
<td>BT AT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shwasvega (Dyspnnea)</td>
<td>100% 76.92%</td>
<td>13.16</td>
<td>0.01</td>
<td>100% 80%</td>
<td>16.81</td>
<td>0.01</td>
<td>100% 50%</td>
<td>4.27</td>
<td>0.05</td>
</tr>
<tr>
<td>Peenas (Coryza)</td>
<td>76.92% 70%</td>
<td>5.54</td>
<td>0.05</td>
<td>86.66%</td>
<td>76.92%</td>
<td>6.89</td>
<td>0.1</td>
<td>80% 37.5%</td>
<td>88</td>
</tr>
<tr>
<td>Ghur Ghur shabda (Wheezing sound)</td>
<td>92.3% 91.6%</td>
<td>15.38</td>
<td>0.001</td>
<td>88.66%</td>
<td>92.3%</td>
<td>18.53</td>
<td>0.01</td>
<td>80% 62.5%</td>
<td>3.33</td>
</tr>
<tr>
<td>Kasa (Cough)</td>
<td>84.6% 63.6%</td>
<td>5.67</td>
<td>&lt;0.05</td>
<td>80%</td>
<td>75%</td>
<td>13.36</td>
<td>&lt;0.001</td>
<td>100% 40%</td>
<td>0.20</td>
</tr>
<tr>
<td>Kastena Sleshna Nirharn (Difficulty in expectoration)</td>
<td>84.6% 72.72%</td>
<td>7.58</td>
<td>&lt;0.01</td>
<td>86.66%</td>
<td>84.6%</td>
<td>7.58</td>
<td>0.01</td>
<td>70% 57.6%</td>
<td>1.80</td>
</tr>
<tr>
<td>Kanthodhwansa (Hoarseness of voke)</td>
<td>38.46%</td>
<td>60%</td>
<td>.78</td>
<td>&gt;0.05</td>
<td>26.66%</td>
<td>100%</td>
<td>2.6</td>
<td>&lt;0.05</td>
<td>40%</td>
</tr>
<tr>
<td>Blasan Krichchata (Difficulty in speech)</td>
<td>69.23%</td>
<td>88.88%</td>
<td>7.96</td>
<td>&lt;0.01</td>
<td>80%</td>
<td>91.66%</td>
<td>13.57</td>
<td>&lt;0.001</td>
<td>40%</td>
</tr>
<tr>
<td>Parshva avagrahan (Tightness of chest)</td>
<td>76.92%</td>
<td>70%</td>
<td>5.54</td>
<td>&lt;0.05</td>
<td>60%</td>
<td>77.77%</td>
<td>5.17</td>
<td>&lt;0.05</td>
<td>80%</td>
</tr>
<tr>
<td>Lalat Swedata (Swelling on forehead)</td>
<td>61.5%</td>
<td>100%</td>
<td>8.85</td>
<td>&lt;0.001</td>
<td>60%</td>
<td>88.88%</td>
<td>7.35</td>
<td>0.01</td>
<td>60%</td>
</tr>
<tr>
<td>Ronchi</td>
<td>92.30%</td>
<td>66.66%</td>
<td>5.49</td>
<td>&lt;0.05</td>
<td>92.33</td>
<td>85.71%</td>
<td>16.21</td>
<td>&lt;0.001</td>
<td>90%</td>
</tr>
</tbody>
</table>

DISCUSSION:

Tamaka Shwasa is primarily a disease of Prana vaha Srotas (respiratory system) and is produced by vitiation of Vata and Kapha, in which vitiated Kapha obstructs the Prana vaha Srotas causing hindrance in the path of vayu, which then spreads in different directions causing disorders of respiration. Acharya Charaka specifically mentioned the Samprapti (Pathogenesis) of Tamaka Shwasa has said that “Pratilome vayu”. As a result of airway
obstruction due to *Kapha* involving the head and neck. There will be increase in the *shleshma* secretion and produces *Shwasa* vega (dyspnoea), *Peenasa* (coryza) and *Ghur-ghur Shabda* (wheezing sound) (*Charaka*, 200BC).

Further, five varieties of *Shwasa* roga namely *Maha Shwasa*, *Urdhwa Shwasa*, *Chhinna Shwasa*, *Kshudra Shwasa* and *Tamaka Shwasa* have been described by *Acharyas*. *Tamaka Shwasa* can lead to *Pratamaka* and *Santamaka* if *Pitta Dosha* also gets vitiated in these patients (*Sushrut*, 2000BC). These could be considered as further stages of *Tamaka Shwasa*. In *Ayurvedic* texts various methods and Formulations have been described in the management of *Tamaka Shwasa* roga. Two types of *chikitasa* i.e. *Shodhana* and *Shamana Chikitsa* have been dealt in detail with description. In *Ayurvedic* literature no description of *Prana yama* has been mentioned but involvement of *Pranvayu* (inhaled air) in various respiratory disorders has been described.

So, the present clinical trial was planned to study the effect of an indigenous compound, *Shringyadi Churna* with and without *Pranayama* in the management of *Tamaka Shwasa*. The duration of trial was 12 weeks and the patients were examined weekly for 6 weeks, there after every three weeks upto 12 weeks and he follow up period was of 2 months. On the basis of comparison of before and after trial in three groups following point have emerged:

a) 7 (58.85%) cases in Group I, 10 (66.67%) cases in Group II were cured and 4 (30.76%), 3 (20%) and 4 (40%) cases in Group I, II, III respectively showed improvement.

b) No any toxicity or untoward side effects has been noted during the trial period.

c) On the basis of Statistical test, it can be concluded that *Pranayama* has shown excellent improvement in PEFR of the patient of Group II with maximum no. of patients achieving a PEFR value between 90–100% of their normal predicted value according to height and age.

d) The drug has shown effectiveness in lowering the raised eosinophils and ESR in the patients of *Tamaka Shwasa*.

e) Statistically the *Shringyadi Churna* with *Pranayam* (in group II) was highly significant. (*P*<0.001). Then the result of treatment with *Shringyadi Churna* without *Pranayama* (in group I) was significant (*P*<0.01). The Placebo with *Pranayama* (in group III) was less significant (*P*<0.005) as compare to other groups.

**CONCLUSION**

The therapeutic efficacy of *Shringyadi Churna* with and without *Prana yama* was studied on 38 cases with *Tamaka Shwasa* in this series. This compound is well accepted, well tolerated, and easily available and does not have any side effect. Therapeutic efficacy of “Trial drug along with *Pranayama*”, on clinical and pathological investigations which were given above and in table no.1 has shown highly significant improvement. Peak expiratory flow rate assessment before and after trial duration reveals that the best achievement of normal predicted PEFR according to their height and age. The clinical work was a time bound study, so to obtain a better result and satisfactory therapeutic response, the trial must be taken in large number of cases for a long duration of time and the follow up period must be long. Therefore, the drug ‘*Shringyadi Churna* along with *Prana yama*’ may prove a valuable contribution from *Ayurveda* and *Yoga-shastra* (*Gherand Samhita*), to the ailing humanity.
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