Evaluation of Efficacy of Jimutaka and Madanaphalavamamana in Tamaka Shwasa- A Comparative Study

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Abstract: Vamana Karma is an important treatment modality in Tamaka Shwasa. Tamaka Shwasa is a condition in which the Vata attains pratilomagati due to Margavaroahdbya Kapha dosha. This study was carried out in the department of panchakarma which was included 30 subjects. To compare the efficacy of Jimutaka and Madanaphalavaman in Tamaka shwasa. Hence Yamana Karma is said to be beneficial in treating Tamaka shwasa by eliminating the obstructing Kapha dosha. Shodhana procedures are the best measures to eliminate the impurities in the body. So Yamana Karma administered properly offers good relief in signs and symptoms of Tamaka Shwasa.

Keywords: Tamaka Shwasa, pratilomagati, Kapha dosha, Vamana

Introduction –
The traditional Indian system of medicine, ‘Ayurveda’ characterizes by the principle of treating not just the symptoms superficially but the actual root cause of the disease which is situated deep inside the body and this task is best accomplished by ‘Panchakarma’, which is the ‘Shodhana chikitsa’ in Ayurveda [1]. The following presented study comprises of one of the best and important procedures of Panchakarma, ‘Vamana Karma’ which is the expulsion of the deep rooted vitiated doshas from the mouth [2]. Vamana karma is specially indicated in Kaphaja disorders [3]. One such disease involving Kapha is Tamaka Shwasa (Bronchial Asthma). The act of respiration is the physiological function of Prana Vayu. When this Prana Vayu is obstructed by Kapha, it gets pratiloma gati and moves upwards, impairing the act of respiration which results into the disease called as Tamaka Shwasa (Bronchial Asthma) [4]. Asthma is a syndrome characterized by airflow obstruction that varies markedly, both spontaneously and with treatment. Asthmatics harbor a special type of inflammation in the airways that makes them more responsive than non-asthmatics to a wide range of triggers, leading to excessive narrowing with consequent reduced airflow and symptomatic wheezing and dyspnea [5]. For the treatment of this dreaded disease, different Vamanashadhis are described in various classical Ayurvedic texts. Out of them Jimutaka (Luffa echinata) is of Katu, Tikta Rasa, Katu Vipaka and Usana Veerya. It is Tridosha shamaka and specially indicated in Kaphaja disorders [6]. According to the GINA (Global Initiative for Asthma) report, it is estimated that there may be an additional 100 million people with Asthma by 2025. It is estimated that Asthma accounts for about 1 in every 250 deaths worldwide. WHO estimates that 235 million people currently suffer from Asthma. India has an estimated 15-20 million Asthmatics [7].

Need of Study –
Tamaka Shwasa is a disease which hampers the basic activity denoting life i.e. ‘Breathing’. So a person suffering from Tamaka Shwasa always lead a compromised life. Tamaka Shwasa is stated as a ‘Yapya’ disease which means it can never be completely cured but can only be controlled [8]. Hence, it’s the need of an hour to do more researches in the management of this dreaded disease. So present study was taken, with Madanaphala, a well known drug used for Vamana and Jimutaka which is Kaphahara, comparing their effects on Tamaka Shwasa by through Vamana.

AIM-
Evaluation of Efficacy of Jimutaka and Madanaphala Vamana in Tamaka Shwasa (Bronchial Asthma) - A Comparative Study

OBJECTIVES-
1) To evaluate the efficacy of Jimutaka Vamana in Tamaka Shwasa
2) To evaluate the efficacy of Madanaphala Vamana in Tamaka Shwasa
3) To compare the effects of Jimutaka and Madanaphala Vamana in Tamaka Shwasa

MATERIALS AND METHODS

Ethical Committee Approval- After approval from institutional ethical committee (with reference number DMIMS (DU)/IEC/2015-16/1324) study was carried out.

1) Selection of Patients-
Patients suffering from Tamaka Shwasa will be selected from Panchakarma OPD and IPD of Mahatma Gandhi Ayurveda College Hospital and Research Centre, Salod (H), Wardha by preset inclusion and exclusion criteria.
Study design-
A randomized standard comparative clinical trial.

4) Sample size-
Total 30 patients with minimum of 15 patients in each group irrespective of gender, caste, religion, marital status and economic status were taken in the study.

5) Inclusion criteria-
- Patients having stated lakshanas of Tamaka Shwasa in Ayurvedic classics, irrespective of their gender, religion, economical status and marital status are included in the study.
- Intermittent and Mild Persistent Asthmatics
- Intermittent- Symptom frequency is < once a week
- Mild Persistent- Symptom frequency > once per week but < once per day
- Patients between the age group of 20 to 60 years are included in the study.
- Patients who are fit for Vamana according to Ayurvedic classics are included in the study.
- Patients only on inhalation therapy were included in the study

6) Exclusion criteria-
- Patients on steroids
- Patients having any other Pulmonary disorders
- Patients having any Cardiac disorders
- Patients with Hernia
- Patients who have undergone any kind of operations in past 6 months
- Pregnant and lactating women

7) Criteria of diagnosis-
The signs and symptoms of Tamaka Shwasa mentioned in Ayurvedic texts and objective investigations mentioned in contemporary texts are the criteria for the diagnosis.

Posology-
a) For Deepana-Pachana : Shunthi churna 1gm BD Before meal for 3 days
b) For Snehapana : 1st day- 50 ml Goghrita + 10 gms Saindhava
   2nd day- 100 ml Goghrita + 10 gms Saindhava
   3rd day- 150 ml Goghrita + 10 gms Saindhava
c) For Sarvanga Abhyanga :
   On the previous day of Vamana- 50 ml Tila taila followed by Peti sweda
   On the day of Vamana- 50 ml Tila taila followed by Peti sweda
d) For Vamana :
   Kaphotkleshakara ahara like Curd rice, Sweets and Dahi wada were advised on the previous night of Vamana.
   Akanthapana- 2 Ltrs. of Milk
   Vamana yoga for Group A – Jimutaka churna 3.5 gms + Saindhava 1.75 gms + Madhhu 15 ml
   Vamana yoga for Group B- Madanaphala pippali 3.5 gms + Saindhava 1.75 gms + Madhhu 15 ml
   [The quantity of Madanaphala pippali as stated in Ayurvedic texts is Antarnakhamushthi paramana. To calculate this pramana, a study was undertaken in which 50 random people were considered and their Gender, Age, Height, Weight, BMI and Antarnakhamushtith paramana of each of them were noted. Average was calculated and it was found out to be 3.5 gms ]
   Vamanopaga dravya: 4.5 Ltrs. Yashtimadhu Phanta
   1050 Ltrs. Saindhava jala
e) Dhunapana-
   Dhunapana was given by Dhoomavarti made by using Haridra, Vacha and Shunthi churna. Patient was told to inhale the fumes through each nostril for 3 times and exhale through mouth every time. Then inhale and exhale through mouth for 3 times.

f) Samsarjana Krama-
   Samsarjana karma was advised for 3 days to each patient.

<table>
<thead>
<tr>
<th>Table no.16</th>
<th>Time</th>
<th>Annakala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsarjana krama Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Morning-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Evening-</td>
<td>Peya</td>
</tr>
<tr>
<td>2</td>
<td>Morning-</td>
<td>Vilepi</td>
</tr>
<tr>
<td></td>
<td>Evening-</td>
<td>Kritakrita Yusha</td>
</tr>
<tr>
<td>3</td>
<td>Morning-</td>
<td>Kritakrita</td>
</tr>
<tr>
<td></td>
<td>Evening-</td>
<td>Mamsarasa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sadharana</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bhojana</td>
</tr>
</tbody>
</table>
9) Study duration - 10 days (excluding follow up)
10) Follow up - After 1 month
11) Assessment of results -
Results are assessed from the subjective and objective parameters of the baseline data of before treatment, after treatment and on follow up as discussed in results section.
12) Subjective parameters -
The subjective parameters considered here are -

**Subjective parameters**

**Shwasa kashtata (Breathlessness or Dyspnoea)**
The MRC breathlessness scale was adopted for Shwasa kashtata
1- Not troubled by breathlessness except on strenuous exercise
2- Short of breaths when hurrying on a level or walking up a slight hill
3- Walks slower than most people on the level, stops after a mile or so, or stops after 15 min walking at own pace
4- Too breathlessness to leave the house, or breathlessness while undressing

**Kasa (Cough)**-
0- No cough
1- Occasional cough
2- 1-2 times per day
3- 2-5 times per day
4- Throughout day
5- Throughout day and night

**Peenasa**-
0- Half handkerchief required
1- 1 full handkerchief required
2- 2 handkerchief required
3- > 2 handkerchief required

**Kanthodhwamsa**
0- No Kanthodhwamsa
1- Often Kanthodhwamsa
2- Very often Kanthodhwamsa
3- Always Kanthodhwamsa

**Ghurghurakatwam**
0- No Ghurghurakatwam
1- Ghurghurakatwam only during attack
2- Very often Ghurghurakatwam sound
3- Ghurghurakatwam throughout the day

3) Investigations and Objective parameters -
A) Routine Investigations - CBC
B) Specific Investigations (Objective parameters) - Spirometry,
These were done before treatment, after treatment and on follow up.
C) Investigation for exclusion of any other pulmonary disorders like TB - X-Ray Chest PA view

13) Objective parameters -
The objective parameters considered were -
Spirometry FEV1% (FEV1/FVC ratio)

Result and Observations -

**Table no. 01** - Comparison of Percentage improvement in Subjective Parameters After treatment and on Follow up in Group A and B

<table>
<thead>
<tr>
<th>Group</th>
<th>Subjective Parameters</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>Mean FU</th>
<th>% Imp (AT)</th>
<th>% Imp (FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Shwasa Kashtata</td>
<td>1.46±0.51</td>
<td>0.46±0.63</td>
<td>0.53±0.83</td>
<td>68.49%</td>
<td>63.7%</td>
</tr>
<tr>
<td></td>
<td>Kasa</td>
<td>2.40±0.73</td>
<td>1.13±0.63</td>
<td>1.06±0.79</td>
<td>52.92%</td>
<td>55.83%</td>
</tr>
<tr>
<td></td>
<td>Peenasa</td>
<td>1.00±0.81</td>
<td>0.25±0.50</td>
<td>0.25±0.50</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>Kanthodhwamsa</td>
<td>2.25±0.50</td>
<td>1.00±0.00</td>
<td>0.75±0.50</td>
<td>55.56%</td>
<td>66.67%</td>
</tr>
<tr>
<td></td>
<td>Ghurghurakatwam</td>
<td>2.33±0.57</td>
<td>1.33±0.57</td>
<td>1.00±0.00</td>
<td>42.92%</td>
<td>57.08%</td>
</tr>
<tr>
<td>B</td>
<td>Shwasa Kashtata</td>
<td>1.86±0.63</td>
<td>0.93±0.45</td>
<td>1.00±0.65</td>
<td>50%</td>
<td>46.24%</td>
</tr>
<tr>
<td></td>
<td>Kasa</td>
<td>2.80±0.56</td>
<td>2.00±0.75</td>
<td>1.93±0.70</td>
<td>28.57%</td>
<td>31.07%</td>
</tr>
<tr>
<td></td>
<td>Peenasa</td>
<td>1.00±0.57</td>
<td>0.42±0.53</td>
<td>0.42±0.53</td>
<td>58%</td>
<td>58%</td>
</tr>
<tr>
<td></td>
<td>Kanthodhwamsa</td>
<td>1.88±0.64</td>
<td>1.13±0.35</td>
<td>1.13±0.35</td>
<td>39.89%</td>
<td>39.89%</td>
</tr>
<tr>
<td></td>
<td>Ghurghurakatwam</td>
<td>2.20±0.44</td>
<td>1.20±0.44</td>
<td>1.00±0.00</td>
<td>45.95%</td>
<td>54.55%</td>
</tr>
</tbody>
</table>
In Group A, percentage improvement after treatment in Shwasa kashtata was 68.49% and on Follow up was 63.70%. In Kasa, percentage improvement after treatment was 52.92% and on Follow up was 55.83%. In Peenasa, percentage improvement after treatment and on Follow up was 75%. In Kanthodhwamsa, percentage improvement after treatment was 55.56% and on Follow up was 66.67%. Similarly in Ghurghurakatwam, percentage treatment after treatment was 42.92% and on Follow up was 42.92% and on Follow up was 57.08%.

In Group B, percentage improvement after treatment in Shwasa kashtata was 50% and on Follow up was 46.24%. In Kasa, percentage improvement after treatment 28.57 % and on Follow up was 31.07%. In Peenasa, percentage improvement after treatment and on Follow up was 58%. In Kanthodhwamsa, percentage improvement after treatment and on Follow up was 39.89%. Similarly in Ghurghurakatwam, percentage treatment after treatment was 45.95% and on Follow up was % and on Follow up was 54.5%.

Graph no. 59-Comparison of Percentage improvement in Subjective Parameters After treatment and on Follow up in Group A and B

Table no. 79- Comparison of Percentage improvement in Objective Parameters After treatment and on Follow up in Group A and B

<table>
<thead>
<tr>
<th>Grp</th>
<th>Parameter</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>Mean FU</th>
<th>% Imp (AT)</th>
<th>% Imp (FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>FEV1/FVC</td>
<td>63.46+4.37</td>
<td>68.93+4.60</td>
<td>70.46+4.30</td>
<td>8.62%</td>
<td>11.03%</td>
</tr>
<tr>
<td>B</td>
<td>FEV1/FVC</td>
<td>65.06+5.32</td>
<td>67.20+5.08</td>
<td>67.60+5.16</td>
<td>3.29</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

In Group A, percentage improvement in FEV1/FVC ratio after treatment is 8.62% and on Follow up is 11.03%.

In Group B, percentage improvement in FEV1/FVC ratio after treatment is 3.29% and on Follow up is 3.9%.

Discussion –
All the Subjective Parameters were found to be highly significant.

1) Shwasa Kashtata-
In Group A, % Decrease in Shwasa kashtata After Treatment is 68.49% and on Follow Up is 63.70%. In Group B, % Decrease in Shwasa kashtata After Treatment is 50 % and on Follow Up is 46.24%.

2) Kasa-
In Group A, % Decrease in Kasa After Treatment is 52.92% and on Follow Up is 55.83%. In Group B, % Decrease in Kasa After Treatment is 28.52% and on Follow Up is 31.07%.

3) Peenasa-
In Group A, % Decrease in Peenasa After Treatment is 75% and on Follow Up is 55%.
In Group B, % Decrease in Peenasa After Treatment is 58% and on Follow Up is 58%.

4) Kanthodhwamsa-

In Group A, % Decrease in *Kanthodhwamsa* After Treatment is 55.55% and on Follow Up is 66.67%. In Group B, % Decrease in *Kanthodhwamsa* After Treatment is 39.89% and on Follow Up is 39.89%.

5) *Ghurghurakatwam* -
In Group A, % Decrease in *Ghurghurakatwam* After Treatment is 42.92% and on Follow Up is 57.08%. In Group B, % Decrease in *Ghurghurakatwam* After Treatment is 45.45% and on Follow Up is 54.55%.

6) *FEV1/FVC Ratio* -
In Group A, % Increase in FEV1/FVC Ratio after Treatment is 8.62% and on Follow Up is 11.03%. In Group B, % Increase in FEV1/FVC Ratio after Treatment is 3.31% and on Follow Up is 3.92%.

**Conclusion** –
It is evident from the Observations and Results that the result of *Jimutaka Yoga* might not be statistically significant but is surely more significant than the result given by the *Madanaphala Yoga*. So, we can conclude that *Jimutaka* has emerged as a better option for *Vamana* in *Tamaka Shwasa* compared to *Madanaphala*.

**References**