The efficacy of Haridra Khanda on Vataja Pratishyaya

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Abstract

Allergic rhinitis is one of the most common and most prevalent ailments, with an equal distribution more or less throughout the world, rather without any exception to the developed and underdeveloped countries. Bronchial asthma is the main complication of allergic rhinitis as; patients with nasal allergy are four times at risk of developing bronchial asthma. In allopathic medical system a wide range of antibiotics and decongestants are available, but these drugs give only symptomatic relief. So it is need of hour; to develop a treatment protocol, which helps the patients to overcome this pathetic condition. Hence this problem was selected for the study taking all these points into consideration. In this present study Denibadi Phanta, Seetarama Vati and Haridra Khanda were selected as oral drugs. All the (30) patients were registered and randomly divided into two groups. In group A, Denibadi Phanta, Seetarama Vati and in group B Denibadi Phanta, Seetarama Vati along with Haridra Khanda were administered for a period of one month. The effect of therapy in both groups was assessed by a specially prepared proforma. In both groups, an apparent change in all the signs and symptoms was observed. After enrolment of the patients, vital signs and symptoms of Vataja Pratishyaya such as nasal discharge, headache and nasal blockage were studied before and after the treatment. The results of the study indicated that the group B was bestowed with a significant relief in almost all the signs and symptoms of Vataja Pratishyaya (allergic rhinitis). Group A also exhibited encouraging results.

Keywords: Vataja Pratishyaya, Allergic rhinitis, Bronchial asthma

Introduction

Ayurveda is one of the world’s oldest approaches to medicine. The Sanskrit word Ayurveda means; the knowledge for long life or the science of healthy living. Shalakya Tantra is one of the branches of Ashtanga Ayurveda, specifically for the diagnosis, treatment and prevention of all the diseases occurring above the clavicle bones, such as eyes, nose, mouth, ears and head region. Shalakya Tantra, while dealing with the diseases of the nose, has paid maximum attention to the disease Pratishyaya. Vata, Pitta and Kapha with Rakta accumulated in the region of the head and get vitiated due to several aggravating factors, give rise to the disease Pratishyaya. According to various Acharya, the disease Pratishyaya has been classified as five types; Vataja, Pittaja, Kaphaja, Rakta and Samnipataja. Vataja Pratishyaya is the type caused by the aggravation of Vata with the prominent features of Vata Dosha. In Pratishyaya produced by Vata, the symptoms are bloated and obstructed nose, release of thin fluid, dryness of the throat and lips, constant pain in the temples and disorders of voice⁴. All the signs and symptoms of Vataja Pratishyaya are similar to allergic rhinitis in allopathic medicine. So the allergic rhinitis could be able to be compared with the disease Vataja Pratishyaya. Allergic rhinitis is an extremely common condition affecting approximately 20% of population. It affects 10-30% of adults and 40% children worldwide, estimated at 400 million people by World Health Organization. Allergic rhinitis is an inflammation of the nasal air ways caused by allergens. It occurs when an allergen

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such as pollen, dust is inhaled by an individual with a sensitized immune system. Immunoglobulin E (IgE) bound to mast cells are stimulated by pollen and dust, causing the release of inflammatory mediators such as histamine. This usually causes sneezing, itching and watery eyes, swelling and inflammation of the nasal passage and an increase in mucus production. It is difficult to treat and is seldom cured, but it may improve. Bronchial asthma is the main complication of allergic rhinitis. Allergic rhinitis is never a fatal illness. But it greatly disturbs day to day activities. In allopathic medicine, steroids, antihistamines, decongestants, cromolyn are used to treat allergic rhinitis. These drugs give only symptomatic relief and they can have undesirable side effects too[2]. So, it is need to develop an effective treatment for this wide spread disease condition. Taking all these points into consideration, this problem was selected for the study.

Many preparations have been mentioned in Ayurveda texts for the treatment of Vataja Pratishyaya. Haridra Khanda is one of the best medicine used to treat skin diseases such as Sheetapitta, Udarda, Kotha and it is a main formulation for controlling the allergic conditions, which acts on immunity. In Ayurveda texts, Haridra Khanda does not come under the treatments of Vataja Pratishyaya. But in practice, it has been used often to treat Vataja Pratishyaya.

The main ingredient of Haridra Khanda is turmeric (Curcuma longa) which is known as an anti-allergic herb[3]. Therefore this medication can be effectively employed in allergic conditions of the respiratory tract. So Haridra Khanda has been selected as an oral drug, to measure its efficacy in Vataja Pratishyaya (allergic rhinitis).

Materials and Methods

Selection of patients

Patients who attended the O.P.D. of Gampaha Wickramarachchi Ayurveda Hospital, Yakkala, were randomly selected irrespectively of their sex, religion, occupation and habitat.

A detailed research proforma was prepared incorporating all the points from Ayurveda and Allopathic medical aspects to study the patient as well as the disease.

Criteria for inclusion

Patients presented with clinical features of Vataja Pratishyaya

Age group - 16-50 years.

Criteria for exclusion

Patients who were suffering from other nasal pathologies or complications of allergic rhinitis were excluded. Other nasal congestion anomalies were also excluded. Patients who were under other drug treatments which can alter the results were excluded.

After selection of the cases, detailed histories of the patients as well as disease were recorded in the specific proforma.

Grouping and posology

Total of 30 patients were randomly selected and divided into two groups as follows-

Group A: 15 patients with Vataja Pratishyaya were administered Denibadi Phanta and Sitarama Vati orally.

Group B: 15 patients with Vataja Pratishyaya were administered Denibadi Phanta, Sitarama Vati and Haridra Khanda orally.

Method of preparation of the research drug

The recipe of Haridra Khanda was taken from Bhaïsajya Ratnavali[4].

375 g of Haridra powder, 280 g of ghee, 3 liters of milk and 2.3 kg of sugar were taken. Then mixed together in vessel and cooked under mild fire. 46 g of powdered Shunthi (Zingiber officinalis Rosc.), Pippali (Piper longum Linn.), Maricha (Piper nigrum), Twak (Cinnamomum verum Presl.), Ela (Elettaria cardomomum Linn.), Patra
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(Cinnamomum tamala), Vidanga (Embelia ribes Burm.), Trivrit (Oreocarpus turpethum Linn.), Haritaki (Terminalia chebula Retz.), Vibhitaki (Terminalia bellirica Roxb.), Amalaki (Emblica officinalis Gaertn.), Keshara (Mesua ferrea Linn.), Musta (Cyperus rotundus Linn.) and Lauha Bhasma were added from each. Then mixed the preparation well and fried. Finally the prepared drug Haridra Khanda was stored in a ghee smeared vessel.

Method of drug application

- **Denibadi Phanta** – One tea spoonful of Denibadi Phanta twice daily for a duration of one month.

- **Sitarama Vati** – 2-4 Vati at a time twice daily for a duration of one month.

- **Haridra Khanda** – 15 g of Haridra Khanda twice daily for a duration of one month.

Follow up period: one month

Criteria for assessment

Criteria for assessment were done on the basis of relief of subjective and objective parameters of allergic rhinitis. The scale was used by rating the symptoms numerically according to the severity of the symptoms. Total effects of the therapy have been assessed in terms of completely cured, markedly improved, improved and unchanged.

General evaluation score for subjective criteria

_Kshavathu_ (sneezing)

0 - No sneezing
1 - Frequency 1-10 sneezes
2 - Frequency 10-15 sneezes
3 - Frequency 15-20 sneezes

_Nasavarodha_ (nasal obstruction)

0 - No obstruction
1 - Inhalation and exhalation with effort of mild obstruction
2 - Inhalation and exhalation with effort of moderate obstruction
3 - Complete blockage with total mouth breathing.

_Nasa Srava_ (rhinorrhea)

0 - No discharge
1 - Occasional rhinorrhea with a feeling of running nose without visible fluid
2 - Rhinorrhea with occasional running nose with visible fluid
3 - Rhinorrhea with running nose which needs moping but controllable
4 - Severe rhinorrhea with copious fluid needs continuously moped

_Shirahshula_ (headache)

0 - No headache
1 - Mild headache
2 - Moderate headache
3 - Severe headache, patient restless and able to carry routine work with great difficulty

_Kandu_ (itching)

0 - No itching
1 - Mild itching
2 - Moderate itching
3 - Severe itching

_Swabheda_ (hoarseness of voice)

0 - No change of voice
1 - Occasional hoarseness of voice
2 - Frequent hoarseness of voice more in morning hours
3 - Frequent hoarseness of voice throughout the day
4 - Cannot speak due to hoarseness of voice

_Shiro Gauraya_ (feeling heaviness of the head)

0 - No heaviness of the head
1 - Mild heaviness of the head
2 - Moderate heaviness of the head
3 - Severe heaviness of the head
4 - Very severe heaviness of the head (forced to take medicine)
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Gandhahani (loss of smell)
0 - No loss of smell
1 - Partial and unilateral loss of smell
2 - Partial and bilateral loss of smell
3 - Complete and unilateral loss of smell
4 - Total loss of smell

Criteria for overall assessment
The total effect of the therapy was assessed by considering following criteria.
1) Complete remission: 100% relief in the signs and symptoms
2) Marked improvement: more than 76% and less than 99% relief in the signs and symptoms
3) Moderate improvement: more than 51% and less than 75% relief in the signs and symptoms
4) Mild improvement: more than 26% and less than 50% relief in the signs and symptoms
5) Unchanged: below 25% relief in the signs and symptoms

Data was analyzed by using SPSS 16 statistical package and Ms excel 2007 packages.

Results
It was found that maximum number of patients (40%) belonged to the age group of 16-25 years; followed by 33.33% patients belonging to the age group of 26-35 years. According to the gender distribution, maximum percentage (53.33%) was observed under male predominance. While considering the occupation, results revealed that majority of patients (40%) were students, followed by 26.66% were under office workers category.

Observation under aggravating factors maximum patients (73.33%) were exposed to dusty environment. In addition to other aggravating factors, involving with pets and seasonal changes were observed in 70% and 63.33% respectively (Figure 1).

While considering the symptoms maximum number of patients (36.66%) were accompanied by 40% with unilateral nasal obstruction, 80% with watery nasal discharge, 83.33% with itching in nose and 30% with heaviness of the head.

Considering the effect on cardinal symptoms of group A, highly significant results (p<0.00) were obtained in Kshavathu, Nasa Srava and Kandu. Further, highly significant results were obtained in Nasavarodha at the level of p<0.005, Shirahshoola at the level of p<0.008 and Shiro Gaurava at the level of p<0.001. No any significant effect found on Swarabheda and Gandhahani (Table1 and Figure 2).

When data was analyzed on total effects of therapy group A was shown, 13.33% complete remission and in group B it was 40.00%. Marked improvement was found in 60.00% in group A and 53.33% in group B. Moderate improvement was observed in 26.66% patients in group A and 6.66% patients in group B. For mild improvement and unchanged category none of the patients were observed in both groups.

Table 1: Effect of both therapies on Vataja Pratishayaya (Group A and Group B)

<table>
<thead>
<tr>
<th>Clinical feature</th>
<th>Group A</th>
<th></th>
<th>Group B</th>
<th></th>
<th>P value</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>BT</td>
<td>AT</td>
<td>P value</td>
<td>BT</td>
<td>AT</td>
</tr>
<tr>
<td></td>
<td>Mean ± SE</td>
<td>Mean ± SE</td>
<td></td>
<td>Mean ± SE</td>
<td>Mean ± SE</td>
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<tr>
<td>Kshavathu</td>
<td>29 ± 0.21</td>
<td>3 ± 0.21</td>
<td>p&lt;0.000</td>
<td>27 ± 0.28</td>
<td>2 ± 0.28</td>
</tr>
<tr>
<td>Nasavarodha</td>
<td>19 ± 0.23</td>
<td>6 ± 0.23</td>
<td>p&lt;0.005</td>
<td>20 ± 0.33</td>
<td>1 ± 0.33</td>
</tr>
<tr>
<td>Nasa Srava</td>
<td>29 ± 0.20</td>
<td>2 ± 0.20</td>
<td>p&lt;0.00</td>
<td>29 ± 0.25</td>
<td>0 ± 0.25</td>
</tr>
<tr>
<td>Sirahshoola</td>
<td>13 ± 0.26</td>
<td>1 ± 0.26</td>
<td>p&lt;0.008</td>
<td>15 ± 0.26</td>
<td>0 ± 0.26</td>
</tr>
<tr>
<td>Kandu</td>
<td>30 ± 0.19</td>
<td>6 ± 0.19</td>
<td>p&lt;0.00</td>
<td>28 ± 0.15</td>
<td>2 ± 0.15</td>
</tr>
<tr>
<td>Shiro Gaurava</td>
<td>22 ± 0.3</td>
<td>3 ± 0.3</td>
<td>p&lt;0.001</td>
<td>22 ± 0.31</td>
<td>3 ± 0.31</td>
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<tr>
<td>Gandhahani</td>
<td>7 ± 0.15</td>
<td>3 ± 0.15</td>
<td>p&lt;0.235</td>
<td>8 ± 0.21</td>
<td>1 ± 0.21</td>
</tr>
<tr>
<td>Swarabheda</td>
<td>6 ± 0.12</td>
<td>1 ± 0.12</td>
<td>p&gt;0.069</td>
<td>14 ± 0.28</td>
<td>0 ± 0.28</td>
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</tbody>
</table>

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Figure 1: Aggravating factors of Vataja Pratishyaya according to distribution of patients

Figure 2: Effect of both therapies on Vataja Pratishyaya (Group A and Group B)

Discussion

Considering the age group, majority of patients were reported in 16-25 age group. This is the age group where individuals are active and enjoying their life in their own ways. Therefore, they are often exposed to dust. Intake of cold drinks and cold water is also a causative factor among this age.

Maximum number of patients was males. This is because males have maximum exposure to dusts

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and smoke at outdoors. Dust is one of the main allergen which is responsible for this disease. It can be said that various habits and occupations are also responsible for the male patients. Females are lesser affected persons from these types of precipitating factors.

Reasons for students are; highly affected poor hygiene, polluted weather, dust, and their fast and changing life style. This adolescent period is also one, which marks the change in a person from childhood to adulthood. This is the period wherein hormones are unstable and subtle changes start occurring in the body. As a result, the immunity is also challenged and the person is exposed to infections and allergies easily. Also often exposure to air conditioner can be a reason.

Better relief was found in group B (92.59%) than in group A (89.65%) in sneezing. Both are statistically highly significant (p<0.00). 68.42% relief was found in group A and 95% in group B in nasal obstruction. Statistically it is highly significant (p<0.005) in group A and (p<0.001) group B. Even though all these values are statistically highly significant, group B showed better result than group A. 100% relief was found in group B and 93.1% in group A in rhinorrhea. Statistically it is highly significant (p<0.00) in both groups. Headache reduced 92.1% in group A (p<0.008), 100% in group B (p<0.001). Both these values are statistically highly significant, but group B showed better results than group A. Almost equal relief was observed in group A (86.36%) and group B (86.36 %) in heaviness of the head. Both are statistically highly significant (p<0.001). Itching reduced 80% in group A (p<0.00) and 92.85% in group B (p<0.00).

Two patients were found with complete remission in group A (13.33%) and 06 patients were found in group B (40%). Marked improvement was found in 09 (60%) patients in group A and 08 (53.33%) patients in group B, 04 (26.66%) patients were observed with moderate improvement in group A and 01 (6.66%) in group B. No one was found with mild improvement or without any change in both groups. As a whole total among 30 patients which has been studied, a total of 08 (26.66%) patients showed complete remission, 17 (56.66%) patients showed marked improvement, 05 (16.66%) patients showed moderate improvement. The effect of therapy was statistically highly significant at the level of p<0.005 in all cardinal symptoms except for the Gandhahani in group B. While group A, was highly significant at the level of p<0.005 in all cardinal symptoms except for Gandhahani and Swarabheda.

When considering all the above observations it is evident that Haridra Khanda combined with Seetarama Vati and Denibadi Phanta (group B) showed better response in patients than Seetarama Vati and Denibadi Phanta without Haridra Khanda (group A).

Also in the follow up study, it was clear that the persistence of relief in signs and symptoms were better in group B than group A.

The causative factors for Pratishyaya are the abnormalities of Agni, Dhatu, Dosha and reduction of Vyadhishkamata Shakti. So the ultimate aim of the treatment should be correcting all these involved factors. The concept of Agni is of paramount interest in Ayurveda. Disturbances of Agni results in Ama formation which by itself may culminate various ailments or by thwarting absorption and assimilation impeding the efficacy of the drug used in treatment.

In Haridra Khanda, most of the drugs have Agnivardhaka, Deepana and Pachana properties which provoke the Agni. Another important concept forwarded by the Ayurveda system of medicine is Rasayana. However, there were no direct references found in Ayurveda classics outlining the exact mode of Vyadhipshamata Shakti. Haridra Khanda having Rasayana, Jeevaniya, Balya, Vruthaniya, Ojovardhaka, Ayurvedhaka, Dhatuposhaka properties, indirectly increases the Vyadhishtmahata shakti.

On the other hand, when reviewing the available Ayurveda literature of Rasayana, Jeevaniya, Balya and Ojovardhaka drugs it reveal that most
of these drugs carry Prithvi and Vayu Bhuta predominance. Considering the Bhautika (physical) composition of Haridra Khandha, it is seen that the compound is having Vayu (35%), Prithvi (23%), and Agni (18%) predominance. Thus, the process of Rasayana invariably involves regeneration of the Dhatu. Hence Haridra Khandha may undoubtedly augment the process of tissue resistance or repair.

To sketch the mode of action of a drug it is also imperative to look into the Rasapanchaka or the properties of the drug.

When screening the Rasa of the ingredients of Haridra Khandha; Katu (30%), Tikta (23%) Rasa, and Katu Vipaka (44%), subsides the Nasa Kandu, Kasa, Ghana Nasa Srava, Agnimandhya, and Jwara. The drug on dominant of its Madhura Rasa is found 25% and 56% is Madhura Vipaka. It has Snigdha, Guru properties and also elevates Vata. Among the functions ascribed to Madhura Rasa are Vrumhana, Jeevana and Balya. These properties are very much in favor of building up tissues and may increase the Vyadhikshamatva and alleviates Kshavathu, Shirahshoola by its Vatapittahara property.

The Guna present in the ingredients of the selected drug are Laghu (30%), Ruksha (28%) and Tikshana (14%) which alleviate Nasa Srava and Kasa symptoms whereas Snigdha (12%) and Guru (9%) acts as Balya, Tarpana and Vrumhana. Virya is dominated by Ushna (55%), which has been also mentioned as Vata Kapha Shamaka, Pachana and Dipana actions.

Pratishyaya results from the vitiation of Vata and Kapha. Various ingredients of Haridra Khandha having Vata Kapha Shamaka (34%), Tridosha Shamaka (33%) properties help to bring the affected Dosha back to the normal level.

Haridra Khandha is prescribed as an ideal drug in choice selected for managing allergic condition in oral administration.

The main content of this drug is Haridra; having Laghu, Ruksha Guna, Katu Vipaka, and Ushna Virya helps in digesting the vicious Kapha and thus reduce nasal obstruction. Haridra having Shothahara, Kandughna, Vishaghna, and Raktashodhaka Karma helps in relieving the symptoms of the disease.

Goghrita, Godagdha and Sita are Madhura in Rasa, Guru, Snigdha in Guna, Sheeta in Virya and Madhura in Vipaka. They also have Rasayana, Ojovardhaka, Balya, Vrumhana properties that may increase Vyadhikshamatva and decrease the chance of recurrence.

Prakshepa Dravyas like Trikatu, Trijata, Triphala have Deepana, Pachana, Vatanulomana, Shothahara, Shleshmahara, Jwara, Kaphanissaraka, Rasayana, Balya properties.

Anti-inflammatory, analgesic, antipyretic, antioxidant, immuno-modulatory, anti-allergic, anti-histaminic activities of ingredients of Haridra Khandha are scientifically proven.

Conclusion

It is concluded that oral administration of Denibadi Phanta and Seetarama Vati, and oral administration of Denibadi Phanta, Seetarama Vati and Haridra Khandha, are both effective in treatment of Vataja Pratishtaya (allergic rhinitis). Out of these, oral administration of Denibadi Phanta, Seetarama Vati and Haridra Khandha is the most effective treatment.

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