

An Evidence Based Novel Treatment Protocol in the Management of *Peenasa* (Allergic Rhinitis) - A Case Report

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Abstract

Peenasa characterized with rhinorrhoea, sneezing, watery nasal discharges and nasal blockage which hinder the health-related quality of life, can be compared with allergic rhinitis due the similarities of clinical manifestation. Allergic rhinitis is an immune reaction of nasal mucosa to allergens like pollen and dust which affects between 10% and 30 % of the population globally. Ayurveda classify *Peenasa* under *Nasagatha roga* (diseases pertaining to nose) while Traditional system of medicine considered it as a *Sarvanga roga* (disease pertaining to whole body). Present study was aimed to find the effectiveness of a novel Ayurveda treatment protocol in the management of *Peenasa*. A 19 years old male patient presented with frequent sneezing, watery nasal discharges, sore-throat and nasal congestion specially in the morning for a time period of two years. Based on the clinical examination, patient was diagnosed with *Peenasa* and was treated internally with *Triphala kwatha*, *Triphala churna* and externally with *Rathulunu thailaya* (RT) as *Shiro abhyanga* (head application) and *Prathimarsha nasya* (errhine therapy) for a period of two months. Evaluated the effectiveness of the novel treatment line on clinical features before and after the treatment. Patient showed significant reduction of clinical features of *Peenasa* within a short period of time. Ingredients of the prescribed drugs were prominent with *Katu rasa* (pungent taste) and *Ushna veerya* (hot potency) which helps to mitigate the pathogenesis of phlegmatic conditions. Further, anti-inflammatory,

anti-oxidant, anti-allergy properties of the ingredients play a major role in pacification of vitiated *Dosha*. Thus, the novel treatment protocol can be considered as safe and effective in the management of *Peenasa* (Allergic rhinitis).

Keywords: *Peenasa*, Allergic rhinitis, *Triphala*, *Rathulunu thailaya*, Anti-inflammatory

Introduction

Ayurveda with its holistic approach offers a complete system to live a long life by maintaining healthiness and rejuvenating the body through diet and herbal medicines¹. Maintaining good health by balancing physical, mental and spiritual aspects are highlighted in order to treat and prevent from diseases. Nowadays much more attention has directed towards treating diseases with this valuable medical system throughout the world. Well prepared, quality herbal drugs following chemical analysis and clinical trials help to add scientific validity and value to this holistic medical system.

According to Ayurveda and Traditional system of medicine in Sri Lanka, *Peenasa* is a phlegmatic disease caused mainly due to vitiation of *Kapha* and *Vata dosha*², which can be correlated with Allergic rhinitis due to the similarities in clinical manifestation³. Both *Kapha* and *Vata dosha* get aggravated with cold as both these *dosha* are associated with cold property (*Sheetha guna*)⁴. Symptoms of Allergic rhinitis include sneezing, rhinorrhea, nasal congestion, anosmia, headache,

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itching of nose, eyes, ears, palate, postnasal drip, tearing, red eyes, drowsiness and malaise⁵. Nasal congestion, itching of nose, eyes, drowsiness, malaise caused with vitiation of *Kapha* due to heavy (*Guru*), slimy (*Mruthsana*) properties whereas symptoms like tearing, sneezing, anosmia and pain are due to vitiation of *Vata dosha*. Vitiating *Pitta* causes dryness of the nose, burning sensation and nasal obstruction in *Peenasa*⁶. By considering the clinical features of *Peenasa*, this can be compared with Allergic rhinitis which occurs due to allergic reactions to foods, hereditary causes, seasonal changes etc. It is one of the commonest respiratory tract disorders⁷. *Susrutha Samhitha* mention *Peenasa* among the 31 types of *Nasagatha roga* (diseases pertaining to nasal area)⁸. Traditional medical system classifies *Peenasa* as a *Sarvangagatha roga* (disease pertaining to the whole body)⁹ and different classifications are documented. In traditional texts it is known as *Diya peenasa*, *Sotu peenasa* or *Sem peenasa*⁹. *Ashtanga Hrda Samhitha*¹⁰ and *Bhava Parakasha*¹¹ mention that both *Peenasa* and *Apeenasa* are a same disease condition. Common signs and symptoms of *Peenasa* are *Nasa srava* (rhinorrhea), *Kshuth* (sneezing), *Anahyathe* (nasal blockage), *Vidhupyathe* (smoky sensation), *Shirah shula* (headache) and *Shirah gaurava* (heaviness of head)⁸.

Worldwide, allergic rhinitis affects between 10% to 30 % of the population. Most people with allergic rhinitis have mild symptoms that can be easily and effectively treated⁷. Though there are many documented and practiced Ayurveda treatments available for *Peenasa*, lack of scientific evidence is a major problem in the health sector. Hence, it's a timely necessity to find effective treatment protocols for the management of *Peenasa* to improve the Ayurveda medicinal system. Thus, the present study was focused to observe the effectiveness of a novel Ayurveda treatment protocol in the management of *Peenasa* (Allergic rhinitis).

Materials and Methods

Case report

A nineteen (19) years old male patient visited the Ayurveda Teaching Hospital, Borella with the clinical features of frequent sneezing with watery nasal discharge, sore-throat, on and off headache and nasal congestion specially in the morning for nearly two (02) years. As a student he had experienced disturbance in his studies and he had got allopathic treatments time to time during past 2 years. According to the patient he had relief only when taking the prescribed tablets and the nasal spray. No any other complaints were recorded other than indigestion and flatulence time to time. Past history of Bronchial asthma (BA) in childhood was present and no any related family history of allergic rhinitis was reported. Home-made food was mainly consumed and the patient has not taken cool drinks as it increases his rhinitis condition. No any habits and addictions were reported. Patient had a sound sleep and sometimes evening bath was reported. There was no evidence of drug allergy, but had experienced itchy skin rash after intake of pineapple. Written consent was taken from the patient to follow the novel treatment protocol and for the publication of data without disclosing the identity.

Clinical examination

In *Ashtavidha pareeksha* (eightfold examination), it was observed that *Nadi* (pulse) was 72bpm and no any abnormalities in urination [frequency D/N- 6-7/1-2], bowel moments [frequency D/N- 1-2/0, No hard stools]. *Jihva* (tongue) was slightly coated (*Ama*), *Shabdha* (sound) persistent mouth breathing was observed, Wheezing was not present but slight rhonchi was noted in auscultation. *Sparsha* (touch), *Drik* (vision) and *Akruthi* (body structure) was normal. In *Dashavidha pareeksha* (tenfold examination), it was observed that patient's *Prakruthi* (constitution) was *Vata-kapha*, state of disease are frequent sneezing with watery nasal discharge, nasal congestion, sore-throat and headache. *Sara* (systemic strength), *Samhanana* (compactness), *Sathmya* (suitability), *Sathva* (mental status) was normal. *Ahara shakthi* (digestive capacity) was normal with

normal appetite and bowel moments without constipation or diarrhea. But history of indigestion was present time to time. *Bala* (strength) was moderate to the *Vaya* (age) and *Vyayama shakthi* (power of exercises) was normal.

Nasal and oral Examination

Nasal polyps were not observed in nasal examination, but reddish appearance of nasal mucosa was present. Bilateral swollen tonsils were observed in throat examination.

Diagnosis of the patient

Considering the patient's history and the clinical examination the disease was diagnosed as *Peenasa* (Allergic rhinitis).

Treatment protocol

Internal and external treatments given to the patient are listed in Table 1 and Table 2. Patient was asked to avoid food with cold potency as cucumber, watermelon, ice-cream, cool drinks, cool water, curd. Also advised to take warm water and to avoid bathing in evening/night, awakening at night etc.

Triphala can be administered using different drug preparation methods and in the present study, *Triphala kwatha* (preserved form of decoction) and *Triphala churna* (medicinal powder) (Figure 1) was administered internally in the treatment protocol. *Triphala kwatha* was given 15ml (01 table spoon) twice a day, before meal in morning and evening for four (04) weeks. *Triphala churna* was given 2.5g (1/2 tea spoon) twice a day after meal, morning and evening for six (06) weeks.

Rathulunu thailaya (RT) (Figure 2) was prescribed to apply on head twice a day for 2 months and *Prathimarsha nasya* using 2 drops of RT for each nostril with the dropper in morning in 2nd and 4th week of the treatment plan.

Follow up

After completion of the treatment protocol, the patient was followed for 08 weeks at intervals of 07 days. Patient was completely free from the previous

signs and symptoms of the disease and new complaints were not reported during the follow up.

Results

Research was mainly carried out to assess the efficacy of the novel treatment protocol used to treat the patient suffering from *Peenasa* (Allergic rhinitis). Results were analyzed according to the clinical manifestation of *Peenasa* before and after the treatments, during the phases of follow up (Table 3). Pharmacological properties and chemical composition of ingredients of the drug formulae are mentioned in Table 4 and Table 5.

After following the treatment plan for two (02) months, patient was free from signs and symptoms. Other complaints like flatulence, indigestion had also reduced with the treatment.

Pharmacodynamic properties of used medicines according to Ayurveda

Triphala kwatha and Churna

In analysis of Ayurveda pharmacological properties of the ingredients, it was observed that *Triphala* was prominent with *Kashaya rasa* (astringent taste) [100%], *Laghu* (light) [67%], *Ruksha* (rough) [33%] properties, *Ushna veerya* (hot potency) [67%] and *Madhura vipaka* (sweet final digestive taste) [100%]¹³. *Ushna veerya* is important in pacifying vitiated *Kapha dosha* and no *Prabhava* (special potency) was identified (Table 6).

Rathulunu thailaya

It was observed that eleven ingredients of *Rathulunu thailaya* was prominent with *Katu* (pungent), *Thiktha* (bitter), *Kashaya* (astringent) *rasa* (tastes), *Laghu* (light), *Theekshna* (sharp) *guna* (properties), *Ushna veerya* (hot potency) and *Katu vipaka* (pungent final digestive taste)¹³.

All the specific properties of *Triphala* and *Rathulunu thailaya* are important in pacifying vitiated *Kapha*, *Vata* and *Pitta dosha* which are responsible in developing *Peenasa*.

Analysis on chemical composition of Triphala and Rathulunu thailaya (RT)

Ingredients of Triphala (*Kwatha* and *Churna*) and RT possess with anti-inflammatory, anti-infective, antimicrobial and anti-cancerous properties. Antioxidant activity is also present in most of the drug ingredients of RT and *Triphala*^{14,15}. The major constituents of the *Triphala* are the tannins, gallic acid, ellagic acid and chebulinic acid, which are potent antioxidants that may account, at least in part, for the observed immunomodulatory activity of the formula. Tannins are medicinally significant due to the astringent property which promote rapid healing and the formation of new tissues on wounds and inflamed mucosa¹⁵. Eugenol which is also known as clove oil is present in RT and used topically to treat toothache and more rarely to be taken orally to treat gastrointestinal and respiratory complaints¹⁶. Eugenol revealed pharmacological properties such as anesthetic and analgesic effects, antimicrobial, antioxidant, anti-inflammatory, anticarcinogenic and anti-fumigant activities¹⁷. Myristicin is common in nutmeg and is an insecticide and has potent anti-cancer properties¹⁸. Elemicin which is common in Nutmeg also present with anti-inflammatory properties. Zingiberene is effective against sore throat, helminthic and infectious diseases¹⁹ which has medical properties including anti-nausea, anti-inflammation, anti-pyrexia and analgesia in addition to culinary uses. Linoleic acid²⁰ is one of two essential fatty acids for humans which must obtain through diet. Sesame seed is rich with unsaturated fatty acids, mainly linoleic acid (37-47%) and helps to reduce inflammation²¹. These selected ingredients exhibit many positive findings such as ability in reducing inflammation, sneezing, sore throat, carcinogenic activity specially in lungs. It also proves that most of these ingredients such as Retrofractamide – A act specially on lungs¹³.

Discussion

Peenasa is a *Vata – Kapha* predominant disease² and with *Pitta dosha* vitiation can be correlated with Allergic rhinitis. It is mentioned in traditional system of medicine as *Diya peenasa*, *Sotu peenasa* or *Sem*

*peenasa*⁹. Allergic rhinitis is an inflammation of the inside of the nose caused by an allergen, such as pollen, dust or flakes of skin from certain animals⁷. Though the main *dosha* involved in *Peenasa* are *Kapha* and *Vata*, involvement of *Pitta dosha* can also be seen. Bhava Prakasha mentions the symptoms of *Peenasa* clearly which can be used in proper diagnosis such as coated like feeling in nose, smoky sensation, dry and wet time to time, no sense of smell and sneezing¹¹. Also, it is known to be a long-lasting disease with hereditary factors. Complications such as sinusitis, headache, hearing loss can be occurred due to untreated allergic rhinitis³. Other than the internal treatments for *Peenasa*, external treatments like application of oils like RT can be used to treat by considering the *Dosha* condition of the disease². In Ayurveda and Traditional medical system, *Peenasa* is treated with both internal and external treatment modalities. Internal drug administration is aimed in systemic effect of medicines while external administration is mainly focused on the local effect of the drug. In the present novel treatment protocol for *Peenasa*, *Triphala kwatha* and *Triphala churna* was used as the internal treatment line and *Rathulunu thailaya* (RT) was used as the external treatment. Application of RT on head (*Sheersha abhyanga*) helps in reducing headaches, stimulating the nervous system, reducing hair fall, hair greying and helps in removing accumulated phlegm in sinuses and in relaxation of mind. Administration of medicinal drugs through nasal cavity is known as *Nasya*, *Shiro virechana*, *Murdha virechana*, *shiro vireka*, *Nasya* or *Navana*¹⁰. *Virechana* means elimination of *Dosha* from body and *Shiro virechana/Murdha virechana* means elimination of morbid *Dosha* particularly from areas above the clavicle including the head region. *Nasya* can be classified under three main categories as *Rechana* (purification), *Tarpana* (nourishing) and *Shamana* (pacification). Charaka Samhitha mentions five types of *Nasya* as *Navana* (inhalation of drugs in form of nasal drops), *Avapeeda* (insufflation of drugs in thin paste form through nasal passage), *Dhmapana* (insufflation of drugs in powder form through nasal passage), *Dhuma* (inhalation of drugs in form of form of smoke) and *Pratimarsha* (application of medicated

Table 1: Internal treatment protocol

Drug	Dose	Route of Administration	Duration
<i>Triphala kwatha</i>	15ml (1 table spoon) b/d before meal morning and evening	Oral	04 weeks
<i>Triphala churna</i>	2.5g (½ tea spoon) b/d after meal morning and evening	Oral	06 weeks

Table 2: External treatment protocol

Drug	Method of administration	Duration	Time
<i>Rathulunu thailaya</i> (RT)	<i>Shiro abhyanga</i> (apply on head)	08 weeks	morning and evening
	<i>Prathimarsha nasya</i> (errhine therapy)	2 nd and 4 th week (14 days)	morning

Table 3: Clinical assessment before, during and after the treatment protocol

Signs and Symptoms	Before treatment	During treatment							
		1 st Week	2 nd Week	3 rd Week	4 th Week	5 th Week	6 th Week	7 th Week	8 th Week
Frequent sneezing	+++	+++	+++	++	+++	++	+	+	----
Watery nasal discharges	+++	+++	++	++	+	+	+	---	---
Nasal congestion	+++	+++	+	++	+	++	+	+	---
Sore throat	+++	+++	++	++	+	++	+	+	---
Headache	++	++	++	+	---	+	---	---	---
Redness of Nasal mucosa	++	++	+	+	++	+	---	---	---
Itching of eyes	---	---	+	---	+	+	---	---	---
Other	Indigestion, flatulence. Pain and itching of nose	Indigestion, flatulence. Pain and itching of nose	Flatulence, Itching of nose	Flatulence, Itching of nose	---	---	---	---	---
Other effects after treatment	---	---	---	---	---	---	Sound sleep	---	Thickening of hair

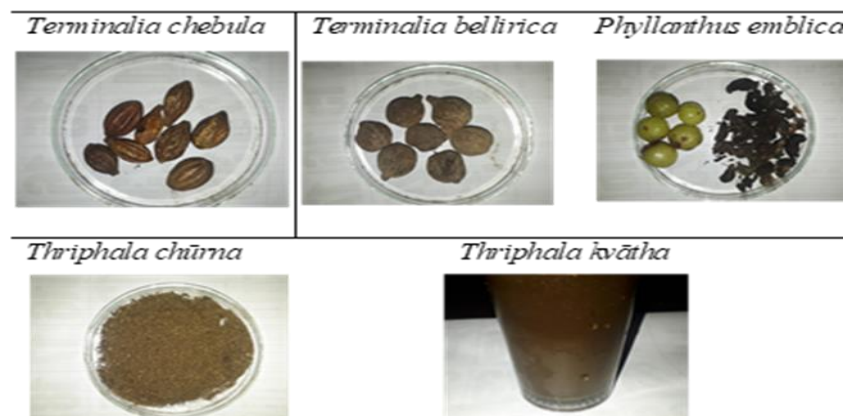
[More - +++, Moderate - ++, Less - +, Absent - ---]

Table 4: Ingredients used to prepare *Triphala kwatha* and *Churna*¹²

Common name, Sinhala and Sanskrit name	Botanical name	Family name	Parts used
Myrobalan (<i>Aralu/ Harithaki</i>)	<i>Terminalia chebula</i> (<i>Gaertn.</i>) <i>Retz.</i>	COMBRETACEAE	Fruit
Beleric (<i>Bulu/ Vibhithaka</i>)	<i>Terminalia bellirica</i> (<i>Gaertn.</i>) <i>Roxb.</i>	COMBRETACEAE	Fruit
Indian gooseberry (<i>Nelli/ Amalaki</i>)	<i>Phyllanthus emblica</i> <i>Linn</i>	PHYLLANTHACEAE	Fruit

Table 5: Ingredients used to prepare *Rathulunu thailaya* (RT)¹²

Common name and Sinhala name	Botanical name	Family name	Part/s used
Red onion (<i>Rathulunu/ Palandu</i>)	<i>Allium cepa</i> <i>L.</i>	AMARYLLIDACEAE	Fruit
Sesame oil (<i>Thala thel/ Thila</i>)	<i>Sesamum indicum</i> <i>L.</i>	PEDALIACEAE	Seed oil
Dried ginger (<i>Wiyali inguru/ Shunti</i>)	<i>Zingiber officinale</i> <i>Roscoe.</i>	ZINGIBERACEA	Rhizome
Pepper (<i>Gammiris/ Krushna</i>)	<i>Piper nigrum</i> <i>L.</i>	PIPERACEAE	Seeds
Long pepper (<i>Thippili/ Pippali</i>)	<i>Piper longum</i> <i>L.</i>	“	“
Nutmeg (<i>Sadikkā/ Jathiphala</i>)	<i>Myristica fragrans</i> <i>Houtt.</i>	MYRISTICACEAE	“
Nutmeg cover (<i>Wasawasi/ Jāthiphala</i>)	“	“	Seed cover
Asafoetida (<i>Perumkāyam/ Hingu</i>)	<i>Ferula foetida</i> <i>Linn.</i>	UMBELLIFERS	Resin
Black cumin (<i>Kalu duru/ Kalajaji</i>)	<i>Nigella sativa</i> <i>L.</i>	RANUNCULACEAE	Seeds
White cumin (<i>Suduru/ Jeeraka</i>)	<i>Cuminum cyminum</i> <i>L.</i>	APIACEAE	“
Clove (<i>Karabu nati/ Lavanga</i>)	<i>Syzygium aromaticum</i> <i>L.</i>	MYRTACEAE	Flower buds

**Figure 1: Ingredients of *Triphala kwatha* and *Churna***

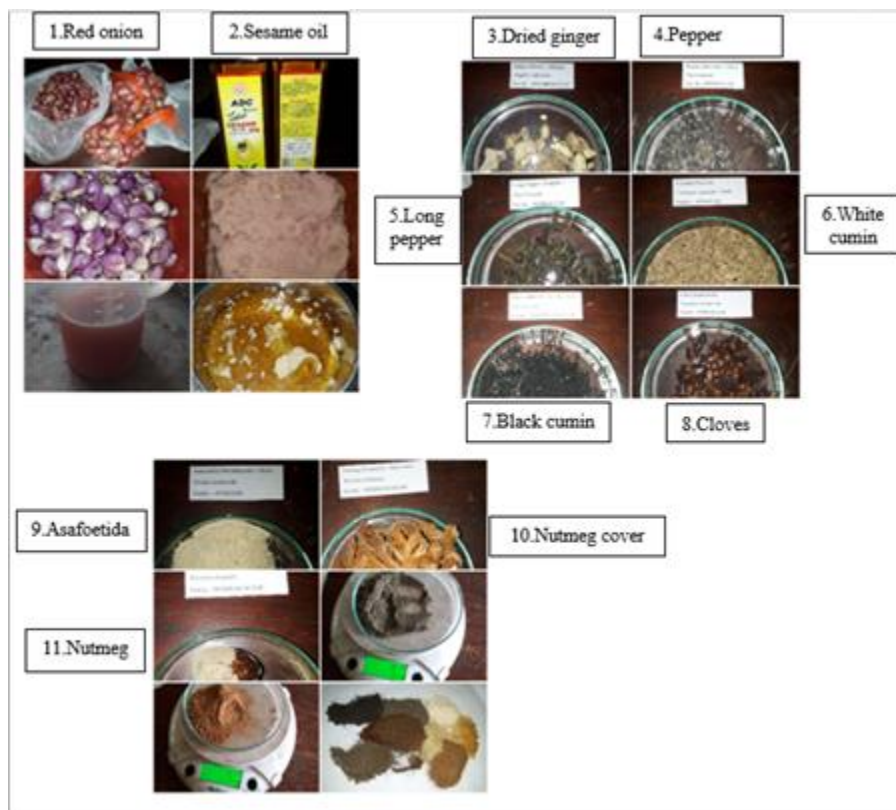


Figure 2: Ingredients of *Rathulunu thailaya* (RT)

Table 6: Pharmacodynamic properties of *Triphala* according to Ayurveda ¹³

Ingredient	Ayurveda pharmacological properties (<i>Rasadi panchakaya</i>)				
	<i>Rasa</i> (taste)	<i>Guna</i> (quality)	<i>Virya</i> (potency)	<i>Vipaka</i> (final taste after digestion)	<i>Prabhava</i> (specific potency)
<i>Terminalia chebula</i> (Gaertn.) Retz. (Aralu)	<i>Kashaya</i> (astringent), <i>Amla</i> (sour), <i>Katu</i> (pungent), <i>Thiktha</i> (bitter), <i>Madhura</i> (sweet),	<i>Laghu</i> (light), <i>Ruksha</i> (rough)	<i>Ushna</i> (hot potency)	<i>Madhura</i> (sweet final transformation of digestion)	---
<i>Terminalia bellirica</i> (Gaertn.) Roxb. (Bulu)	<i>Kashaya</i> (astringent)	<i>Laghu</i> (light), <i>Rūksha</i> (rough)	<i>Ushna</i> (hot potency)	<i>Madhura</i> (sweet final transformation of digestion)	---
<i>Phyllanthus emblica</i> Linn (Nelli)	All 5 tastes except <i>Lavana</i> (salty taste)	<i>Laghu</i> (light), <i>Ruksha</i> (rough)	<i>Sheetha</i> (cold potency)	<i>Madhura</i> (sweet final transformation of digestion)	---

Table 7: Pharmacodynamic properties of *Rathulunu thailaya* (RT) ¹⁴

Rasadi panchakaya (Pharmacodynamic properties)	Percentage
<i>Rasa</i> (taste)	<i>Katu</i> (pungent) - 90.90%, <i>Tiktha</i> (bitter) - 45.45%
<i>Guna</i> (quality)	<i>Laghu</i> (light) – 81.81%, <i>Theekshna</i> (sharpness) - 63.63%
<i>Virya</i> (potency)	<i>Ushna</i> (hot) - 100%
<i>Vipāka</i> (final taste after digestion)	<i>Katu</i> (pungent) - 72.72%
<i>Prabhāva</i> (specific action)	<i>Keshya</i> (good for hair) – 1/11 = 9.09% [<i>Thila</i> / sesame]

oil in nostrils²². RT was prescribed for the patient as *Prathimarsha nasya* which can be considered as a *Shamana nasya* in curing the disease. *Nasya* has also been mentioned as a *Dina charya* (daily routine) to maintain healthy life in Ayurveda²³.

Triphala is a drug formulation which can be used in different preparation methods like *Kwatha*, *Churna* etc. as a single drug regimen and said to be having the ability of pacifying the vitiated *Tridosha*, in *Peenasa*. RT had been used for many years since antiquity in treating *Peenasa* by Ayurveda and traditional medical practitioners of Sri Lanka. Due to the effectiveness in treating *Peenasa*, the oil is known as *Peenas thailaya*. In the present study, two (02) preparations of *Triphala* formulation as *Triphala kwatha* (preserved form of decoction) and *Triphala churna* (medicinal powder) was administered internally. Analysis of *Rasadi panchakaya*, of both these drug formulae revealed that most of the ingredients were having *Katu* (pungent), *Thiktha* (bitter) tastes, *Laghu* (light), *Theekshna* (sharp) properties, *Ushna veerya* (hot potency) and *Katu vipaka* (pungent final taste after digestion)¹³ which help to pacify vitiated *Kapha dosha*. Although literature mentions RT can be used as an internal medicine¹², in this study RT was applied on head (*Sheersha abhyanga*) and Errhine therapy (*Prathimarsha nasya*) which showed the effectiveness.

Literature search on chemical constituents of *Triphala*²⁴ and *Rathulunu thailaya*¹⁴ revealed many medicinal properties like anti-inflammatory, anti-infective, anti-microbial and anti-cancerous effects and presence of anti-oxidants which are useful in treating diseases like *Peenasa*. The study showed the effectiveness of this novel treatment protocol in managing *Peenasa* (Allergic rhinitis) within a short period of time like two (02) months. Further, the patient disclosed about the healthiness and thickness of hair after the application of RT. *Keshya prabhava*¹³ of sesame is the probable reason for the healthiness and increased thickness of hair at the end of the treatment.

Though there are many commonly practiced drugs in managing *Peenasa*, the novel treatment plan which consisted *Triphala kwatha*, *Triphala churna* and of *Rathulunu thailaya* (RT) was utilized in the management of *Peenasa* in the present study. Although usage of *Triphala* drug formulation is not commonly practiced in the management of *Peenasa*, along with the external application of *Rathulunu thailaya* (RT), novel treatment protocol gave successful results in the management of *Peenasa* without reporting any adverse effects.

Conclusion

Peenasa can be correlated with Allergic rhinitis according to Allopathic medicine and *Diya peenasa*, *Sotu peenasa* or *Sem peenasa* according to Traditional system of medicine in Sri Lanka. Reduction and pacification of phlegmatic condition along with other complaints like flatulence and indigestion was recorded as added findings in this study. Even though the novel treatment protocol was different to the normally practiced treatment plans in Ayurveda, successful results were obtained for the management of *Peenasa* within a short duration without any reported side effects. Hence, the novel treatment protocol proved the safety and effectiveness in reducing clinical features of *Peenasa* (Allergic rhinitis).

Suggestions

Chemical analysis can be done to isolate active ingredients and secondary metabolites to analyze pharmacological properties and actions of the drugs used in the study. Advanced clinical trials as Randomized control trials (RCT) can be done to scientifically test the therapeutic efficacy of this novel treatment protocol in the management of *Peenasa*.

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