Review of evidence based study on *Vyaghri Haritaki Avaleha* with special reference to certain respiratory disorders.

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ABSTRACT

BACKGROUND

Respiratory disorders are leading cause of morbidity and mortality that induces an economic and social burden worldwide. In today's world, finding preventive methods and cure from these enormous challenges should be one of the priorities in the global health sector. Vyaghri haritaki avaleha is a potential Ayurveda polyherb formulation used for treating Kasa, Shwasa, Rajyakshma, Peenasa and its Rasayana properties ensures better quality of life of the patient.

AIM AND OBJECTIVE

Overview on Vyaghri haritaki avaleha

To conduct a review on evidence-based study of Vyaghri haritaki avaleha in the management of symptoms of respiratory disorders.

METHODS

To conduct this study, Ayurveda research articles were obtained from **Google Scholar**. Total 6 studies were yielded, which included only Clinical and Pre-Clinical studies.

RESULT

- Out of the 6 articles found (n=6), 1 article was an In-Vivo study and other 5

articles were Clinical studies on Vyaghri haritaki avaleha.

- Among the 5 Clinical studies, 1 study was found to be a comparative analysis between Vyaghri haritaki avaleha and Ashtang avaleha. 1 study was found, where Anu taila Nasya was used as an adjuvant along with Vyaghri haritaki avaleha.
- Out of the 5 Clinical studies on Vyaghri haritaki avaleha, 3 studies were conducted on children.

CONCLUSION

This review on Vyaghri haritaki avaleha provides a better understanding of this formulation and showcases its effectiveness in treating all types of Kasa roga, Tamaka shwasa, Chronic bronchitis and Dusht Pratishaya. This review throws light on extensive use of Vyaghri haritaki avaleha in children for treating the symptoms of respiratory disorders.

KEYWORDS

Vyaghri haritaki avaleha, In Vivo, Clinical study, Respiratory disorders, Immunomodulatory activity, Tamaka Shwasa, Chronic Bronchitis.

INTRODUCTION

Current outbreak of pandemic COVID 19 and the other pre-existing respiratory disorders are causing havoc to the respiratory health of the entire mankind across the globe. Prevention, control, cure of these diseases and promotion of respiratory health must be a top priority in global decision-making in the health sector.¹

Ayurveda is a repository of innumerable formulations that have potential action on respiratory disorders. Ayurveda emphasizes on Prevention first and hence many Rasayana formulations are mentioned in various classical texts of Ayurveda. Rasayana formulations prevent diseases from becoming chronic and also accelerate the recovery. It enhances tissue strength by improving its functions and provides protection against diseases.

Vyaghri haritaki avaleha is an excellent polyherb formulation described in Chakradutt, Bhav Prakash, Yog Ratnakar, Bhaishajya Ratnawali under Kasarogadhikar Prakarnam and has been tilted as Rasayana by Acharya Bhruhu. It is indicated in Swasa, Kasa, Kshaya, Kshata, Peenasa, and Rajyakshma.

This formulation consists of two main ingredients Kantakari (Solanum xanthocarpum) and Haritaki (Terminalia

chebula). Kantakari is known for its anti-inflammatory, immunostimulatory, cough relieving properties and found to be very effective in controlling mild to moderate bronchial asthma.^{2,3} Haritaki is known for its Anti-oxidant, Free radical scavenging, Cyto-protective, Immuno-modulatory, Anti-inflammatory and Anti-allergic activity.⁴ Trikatu an Chaturjat are the Prakshepa Dravya that helps in the bioavailability of the formulation. Trikatu also possesses

immunomodulatory, antiviral, expectorant, carminative, hypolipidemic, hypoglycaemic, antiemetic, and anti-inflammatory potential.⁵ Chaturjat improves appetite, digestion and palatability of herbal formulations, also corrects respiratory and renal disorders.⁴ Guda has Shwashara, Kasahara properties and Madhu has Swasa, Kasa, Daahahar properties, and both increases the palatability of the formulation.

METHOD OF PREPARATION OF VYAGHRI HARITAKI AVALEHA

Table no. 1 Ingredients of Vyaghri haritaki avaleha

SANSKRIT NAME	BOTANICAL NAME	PARTS USED	QUANTITY API
KANTKARI	Solanum xanthocarpum	Whole plant	4.8kg
HARITAKI	Terminalia chebula	Fruit	100 in no.
SHUNTHI	Zingiber officinalis	Rhizome	96gm
PIPPALI	Piper longum	Fruit	96gm
MARICHA	Piper nigrum	Fruit	96gm
TWAK	Cinnamomum zeylanicum	Stem Bark	48gm
ELA	Elettaria cardamomum		48gm
TEJPATRA	Cinnamomum tamala	Leaf	48gm
NAGKESAR	Mesua ferrea	Stamen	48gm
GUDA	-	-	12.288 litres
MADHU	-	-	288gm

- **Kwath dravya-** Kantakari Panchang, Seedless Haritaki and Water.
- **Madhur dravya-** Guda.
- **Prakshepa dravya-** Madhu, Trikatu, Chaturjat.

Figure no. 1 Flow chart of Vyaghri haritaki avaleha preparation.

*Haritaki, after removing from the decoction can also be grinded into a smooth paste and

then added to the Guda & Kwath mixture for easy consumption.

Table no. 2 Ras Panchak of Vyaghri Haritaki Avaleha Ingredients

Dravya	Rasa	Guna	Veerya	Vipaka
Kantakari	Katu, Tikta	Laghu, Rooksha	Ushna	Katu
Haritaki	Madhur, Amla, Katu, Tikta, Kashaya	Laghu, Rooksha	Ushna	Madhur

Shunthi	Katu	Laghu, Snigdha	Ushna	Madhur
Maricha	Katu, Tikta	Laghu, Rooksha, Tikshana	Ushna	Katu
Pippali	Katu, Madhur, Tikta	Laghu, Snigdha	Anushna	Madhur
Twak	Katu, Tikta, Madhur	Laghu, Rooksha, Tikshana	Ushna	Katu
Ela	Katu, Madhur	Laghu	Sheeta	Madhur
Tejpatra	Madhur, Katu	Laghu, Picchila, Tikshana	Ushna	Katu
Nagkesar	Katu, Kashaya, Tikta	Rooksha, Laghu	Ushna	Katu
Guda	Madhur	Laghu, Ishatkshariya	NatiSheeta	Madhur
Madhu	Madhur, Kshaya	Ruksha, Laghu, Sukshma	Sheeta	Katu

METHODOLOGY

This study aims to provide a review on evidence based studies for the assessment of Vyaghri haritaki avaleha in certain respiratory disorders. For this study, a review of Pre-Clinical and Clinical studies evaluating the efficacy of Vyaghri haritaki avaleha in the management for treating certain respiratory disorders was carried out. This was done with help of Ayurveda Journals in **Google Scholar**.

Keywords used for the purpose of this review included were Vyaghri haritaki avaleha, In Vivo, Clinical study, Respiratory disorders, Immunomodulatory activity, Tamaka Shwasa, Chronic Bronchitis.

RESULT: Out of the 6 articles found (n=6), 1 article was an In-Vivo Immunomodulatory study of Vyaghri haritaki avaleha and other 5 articles were Clinical studies on Vyaghri haritaki avaleha.

- Among the 5 Clinical studies, 1 study was found to be a comparative analysis between Vyaghri haritaki avaleha and Ashtang avaleha; 1 study was found where Anu taila Nasya was used as an adjuvant along with Vyaghri haritaki avaleha.
- Out of the 5 Clinical studies on Vyaghri haritaki avaleha, 3 studies were conducted on children.
- Among the 5 Clinical studies, 2 studies on Kasa, 1 study on Chronic Bronchitis, 1 study on Tamaka shwasa and 1 study on Dusht Pratishaya were found.

Table no. 3- CHARACTERISTICS, METHODOLOGY AND OUTCOMES OF STUDIES

AUTHORS PUBLICATIONS YOP	TYPE OF STUDY	STUDY MODEL	DOSES	OUTCOMES
Roshy Joseph C, Ilaanchezhian R, Ashok B.K et.al ⁷ Ayurpharm - International Journal of Ayurveda and Allied Sciences,2014	In -Vivo study	Wister strain albino rats of either sex	1.8 gm/kg of VHA for rats	VHA showcased enhanced antibody titre indicating the presence of moderate immunostimulant activity. Significant decrease in eosinophil and Monocyte counts in SRBC control group was noted. Histopathological observation of this organ shows increased cellularity in the treated group.
Dr Deepshikha, Dr B.M. Singh, Dr P.S. Upadhyay ⁸ World Journal of Pharmaceutical Research, 2015.	Single Arm Trial	No. of children=49 Age group=1 to 12yrs	150mg/kg/dose every 6 hour, orally for seven days	VHA is found to be more effective by subsiding- Peenasa, Ghana kapha & white sputum in Kaphaja Kasa. Highly significant in subsiding Mukha-kantha shushkta, shushka kasa in Vataja cases. Highly significant result in Kanth-kandu, Pitta Nishthivan of Pittaja kasa VHA is effective in all three types of Kasa i.e. Vataja, Pittaja and

				Kaphaja kasa but has better effect in Vatika kasa.
<p>Suhas A. Chaudhary, Patel KS, Kori VK, et.al⁹</p> <p>Ayurpharm - International Journal of Ayurveda and Allied Sciences, 2014</p>	Randomized open ended Clinical Trial	<p>No. of children=23</p> <p>Age group=3 to 12yrs</p>	8gm-15gm of VHA as per age (divided into 2 doses) for 4 weeks	<p>100% relief in Sweta Kaphanishthivana (white cough expectoration) & 92.30% of relief in Peeta Nishthivana (yellow cough expectoration) were found in Kaphaja Kasa and Pittaja Kasa respectively.</p> <p>In Vataja Kasa it provided 89.47% relief in Shushka Kasa (dry cough), 94.11% relief in Parshwashoola (pain in side of chest), 88.88% relief in Shirashoola (headache), 88.88% in Swarabheda (hoarseness of voice) and 94.44 % relief in Daurbalya (weakness).</p> <p>Kaphaja Kasa it provided 88.88% in Mandagni (low digestive power), 90.90% in Peenasa (rhinitis), 86.95% in Aruchi (loss of taste/appetite) and 83.33 % relief in Kaphapoornavaksha (fullness of chest with cough). All the changes were</p>

				statistically highly significant.
Jaiprakash Ram M.S. Baghel. ¹⁰ AYU 2015	Single Arm Trial	No. of patients= 66 Age group =16 -70yrs	10 gm of VHA twice a day with lukewarm water before meals for 12 weeks	Wheezing, Chest pain and Sore throat- 100% result was found, Nasal congestion- 97.62% relief, Dyspnoea- 83.3% relief and 68.9% relief in productive cough. This improvement is statistically highly significant ($P < 0.001$)
Arvind Kumar Dubey, S. Rajagopal, et al. ¹¹ AYU 2014	Randomized Clinical Trial Comparative study between two Ayurvedic Formulation Ashtanga Avaleha and Vyaghri haritaki Avaleha in Children	Total no. of children=100 Age group: 2-16yrs	5-15gm of VHA and Ashtanga avaleha in divided doses for 8 weeks	Marginal better efficacy of Ashtanga Avaleha (66.66%) in comparison to Vyaghri Haritaki Avaleha (63.15%) on the overall evaluation of the patients. Vyaghri Haritaki Avaleha more significant (<0.01) in reducing <i>Kasa</i> than Ashtanga Avaleha.
Parth P Dave, Kunjai H Bhatta, Vaghela DB, et.al ¹² International Journal of Ayurvedic Medicine, 2016	Multi Arm Trial Study of two Ayurveda management: Vyaghri haritaki avaleha along with Anu taila Nasya &only	Total no. of Patients=30 Age group: 12-70yrs	Oral. Dose: 5 - 10gm of VHA/Two times a day after food with lukewarm water for 2 months. Anutaila Nasya Drug. Route of Administration:	Group A (VHA &Anu taila nasya)- Nasasrava reduced in 80.77 % patients while in Group B (only VHA) it reduced in 88.22 % patients Nasaavarodha was reduced in 66.46 % patients in Group A, while 84.21 % patients in Group B.

	Vyaghri haritaki avaleha (VHA)		Nose. Dose: 8 drops in each nostril followed by Dhumpana. Duration: Nasya was given once daily for continue 7 days. This was repeated thrice with interval of 7 days in between.	Shirashoola was reduced in 72.73 % patients in Group A, while 75.86 % patients in Group B. In Gandhagyanata 50 % relief was observed in Group A & 42.86 % relief was found in Group B. In associated symptoms like Kasa and Jwara 100 % relief was observed in both the groups.
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*VHA- Vyaghri haritaki avaleha

DISCUSSION

This study aimed to conduct an evidence-based review for the assessment of Vyaghri haritaki avaleha on certain respiratory disorders. This formulation was selected because of its Kasa, Shwashara activity along with Rasayana properties. In this study the, In vivo study of Immunomodulatory activity of this formulation provided enhanced antibody titre indicating the presence of moderate immunostimulant activity hence scientifically supporting the Rasayana effect of Vyaghri haritaki avaleha.

The two studies on Kasa roga in children showcased highly significant results in subsiding major symptoms like Kaphanishthivana (white cough expectoration) & Peeta Nishthivana (yellow cough expectoration) found in Kaphaja Kasa and Pittaja Kasa respectively, Daurbalya

(weakness), Mukha-kantha shushkta, shushka kasa in Vataja cases, and Kanth-kandu.

Chronic bronchitis study of Vyaghri haritaki avaleha also proved to be highly significant in improving the major symptoms like Wheezing, Chest pain and Sore throat (100% result), Nasal congestion (97.62% relief), Dyspnoea (83.3% relief) and 68.9% relief in productive cough.

In the Comparative study between Ashtanga Avaleha and Vyaghri haritaki Avaleha in Children for treating Tamaka Shwasa exhibits marginal efficacy between the two formulations Ashtanga Avaleha (66.66%) & Vyaghri Haritaki Avaleha (63.15%) on the overall evaluation of the patients.

The effect of Vyaghri haritaki avaleha on treating Dusht Pratishaya along with Anu Taila has also proved to be beneficial in significantly reducing the symptoms of

Nasasrava, Nasaavrodha, Shirashool and Gandha agyanta.

STRENGTH AND LIMITATIONS

This kind of study helps to determine the potential of drugs in treating various diseases. During this study, very few Clinical and only one Pre-clinical articles were found on Vyaghri haritaki avaleha. Hence, a systematic review on the same could not be done.

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