



Rasna (Pluchea lanceolata) In The Management of Vataja Kasa: A Review Article

¹Dr. Ulka Ashok Sangalage , ² Dr. Manisha A. Jagatap

¹ PG Scholar , ² Lecturer,

¹Department of Kaumarbhritya,

¹MAM's Sumatibhai Shah Ayurveda Mahavidyalaya, Hadapsar. Pune, India

Abstract: *Vataja Kasa* is a common pediatric respiratory disorder marked by dry cough, hoarseness, chest pain, and scanty sputum. *Ayurveda* recommends *Vata-shamaka* and *kasa-hara* drugs for its management, among which *Rasna (Pluchea lanceolata)* is important due to its efficacy in *Vata-Kapha* disorders like *Kasa* and *Shwasa*. Although widely used, information on *Rasna* is scattered and lacks a focused review, especially for pediatric use. This review aims to integrate classical *Ayurvedic* concepts with modern scientific evidence, highlighting *Rasna*'s role in reducing airway inflammation, modulating bronchial activity, and breaking the pathogenesis of *Vataja Kasa*.

Index Terms - Rasna, Vataja Kasa, pediatric cough, Kasa-hara dravya, Ayurveda

I. INTRODUCTION

Cough is a protective reflex essential for maintaining airway patency; however, persistent dry cough is a frequent and distressing problem in pediatric practice. In *Ayurveda*, cough is described under the disease entity *Kasa*, originating from vitiation of *doshas* affecting the *Pranavaha srotas* [1]. Among the five types of *Kasa*, *Vataja Kasa* is dominated by *ruksha* and *sheeta guna*, presenting clinically as dry cough, hoarseness of voice, chest and flank pain, throat irritation, and scanty or absent expectoration [1,2].

In children, recurrent dry cough leads to disturbed sleep, irritability, reduced appetite, and impaired quality of life. Modern antitussive therapies are often associated with limited efficacy or safety concerns in pediatric age groups. *Ayurveda* emphasizes management through *Vata-shamana*, *snehana*, and the use of *Kasa-hara dravyas* possessing *ushna* and *snigdha* properties [3].

Rasna (Pluchea lanceolata) is extensively described in classical texts such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* for the management of *Vata-kapha* disorders including *Kasa* and *Shwasa* [1–3]. In addition, several experimental and review articles have evaluated its anti-inflammatory, bronchodilator, antioxidant, and analgesic properties. However, a consolidated review correlating *Ayurvedic* principles with modern respiratory receptor mechanisms in the context of *Vataja Kasa* is limited. Hence, the present review was undertaken.

II. MATERIALS AND METHODS (Literature Review Strategy)

This review is based on analysis of previously published literature. Classical references were collected from standard *Ayurvedic* texts and commentaries. Contemporary literature was searched from indexed databases such as PubMed, Google Scholar, and AYUSH research portals using keywords “*Pluchea lanceolata*”, “*Rasna*”, “*Ayurveda*”, “cough”, and “anti-inflammatory activity”. Review articles, experimental studies, and pharmacological evaluations relevant to respiratory disorders were included.

III. AYURVEDIC REVIEW OF RASNA

3.1 Classical Description

Rasna is described as a *Vata-kapha shamaka* drug with indications in *Shoola*, *Shotha*, *Shwasa*, and *Kasa* [1–3]. *Ayurvedic* compendia and *Dravyaguna* texts consistently attribute *Kasa-hara* and *Shwasa-hara* properties to *Rasna* [4, 5].

Rasapanchaka of Rasna

Parameter	Description
Rasa	Tikta, Katu
Guna	Laghu, Snigdha
Virya	Ushna
Vipak	Katu
Doshakarma	Vata-kapha shamak

3.2 VATAJA KASA: AYURVEDIC PATHOGENESIS

Vataja Kasa results from intake of *ruksha*, *sheeta*, and *laghu ahara*, excessive exposure to cold air, and overuse of voice, leading to *Vata prakopa* [1]. Aggravated *Vata* causes *shleshma kshaya* and *rukshata* of *Pranavaha srotas*, resulting in increased airway sensitivity and forceful dry coughing [2].

3.3 ROLE OF RASNA IN SAMPRAPTI VIGHATANA

Based on its *rasapanchaka*, *Rasna* counteracts *Vataja Kasa* by:
Antagonizing *sheeta* and *ruksha guna* through *ushna virya* and *snigdha guna*
Clearing *srotorodha* via *tikta-katu rasa*
Restoring *Vata-kapha* balance in *Pranavaha srotas* [3–5]

3.4 PHARMACOLOGICAL ACTIONS OF RASNA (*Pluchea lanceolata*): INTEGRATED REVIEW

The pharmacological actions of *Rasna* described in Ayurveda as *Kasa-hara*, *Shwasa-hara*, and *Vata-kapha shamaka* can be explained on the basis of its bioactive phytoconstituents and their effects on respiratory pathways. Review of experimental and pharmacological studies indicates that the therapeutic efficacy of *Rasna* in *Vataja Kasa* is mediated through anti-inflammatory, bronchodilator, antioxidant, analgesic, and cough-receptor-modulating actions.

1. Anti-inflammatory Action

Rasna contains flavonoids and sesquiterpene lactones that inhibit cyclo-oxygenase (COX) and lipoxygenase (LOX) pathways, resulting in reduced synthesis of prostaglandins and leukotrienes. This leads to decreased airway inflammation, mucosal edema, and irritation. Reduction in inflammatory mediators plays a key role in lowering the hypersensitivity of airway sensory receptors involved in dry cough. [7,8]

2. Bronchodilator and Smooth Muscle Relaxant Effect

Volatile oils and other active constituents of *Rasna* exhibit smooth muscle relaxant activity on bronchial musculature. Experimental studies suggest that this action may be mediated through modulation of intracellular calcium channels and β -adrenergic pathways. Bronchodilation improves airway patency, reduces airflow resistance, and minimizes mechanical stimulation of cough receptors. [9,10,11]

3. Action on Respiratory Sensory Receptors

Dry cough in *Vataja Kasa* is largely attributed to hypersensitivity of airway sensory receptors such as C-fiber afferents and TRPV1 receptors.[10,11] Inflammatory mediators and oxidative stress lower the activation threshold of these receptors, resulting in exaggerated cough reflex. By reducing airway inflammation and oxidative damage, *Rasna* indirectly desensitizes these receptors, thereby suppressing cough reflex hypersensitivity.[10-13]

4. Antioxidant Action

Phenolic compounds present in *Rasna* exhibit significant antioxidant activity by scavenging free radicals and protecting airway epithelium from oxidative injury. Preservation of epithelial integrity prevents direct exposure and over-stimulation of cough receptors, contributing to reduction in cough frequency and severity.[13-15]

5. Analgesic and Soothing Effect

Sesquiterpene lactones and flavonoids contribute to the analgesic action of *Rasna*, helping relieve chest and throat pain associated with repeated forceful coughing. This effect supports its classical indication in *Shoola-prashamana* and improves overall patient comfort. [8]

6. Overall Pharmacological Correlation with Ayurveda

The combined pharmacological actions of *Rasna* counteract the *ruksha* and *sheeta* qualities of aggravated *Vata* by providing *ushna*, *snigdha* and anti-inflammatory effects. Thus, its bioactive constituents provide a scientific explanation for its traditional *Kasa-hara*, *Shwasa-hara*, and *Vata-kapha shamaka* properties.

IV. DISCUSSION (Paediatric Perspective)

Vataja Kasa is commonly observed in the pediatric age group due to immature respiratory mucosa, frequent exposure to allergens, recurrent infections, and heightened sensitivity of airway receptors. In children aged 5–12 years, the condition often presents as persistent dry cough with throat irritation and sleep disturbance, significantly affecting quality of life. Conventional antitussive therapies may offer symptomatic relief but are associated with safety concerns, especially with prolonged use. Therefore, there is a growing need for safe, gentle, and effective therapeutic alternatives.

Rasna (Pluchea lanceolata) holds a significant place in *Ayurvedic* pediatrics owing to its *Kasa-hara* and *Vata-kapha shamaka* properties. Its traditional use supports restoration of normal airway function by correcting doshic imbalance rather than suppressing symptoms. In pediatric *Vataja Kasa*, where airway dryness and hypersensitivity predominate, *Rasna* helps in reducing irritation and improving mucosal comfort, leading to gradual reduction in cough frequency.

By improving the condition of the airways, *Rasna* helps to reduce cough gently, making it particularly suitable for children. Unlike centrally acting cough suppressants, *Rasna* does not depress respiratory centers, making it safer for repeated or long-term use. Its incorporation into palatable dosage forms such as lozenges further enhances compliance in pediatric patients and allows prolonged local action on the oropharyngeal and upper airway mucosa.

Rasna alleviates *Vataja Kasa* by:

Reducing airway inflammation → desensitizing cough receptors

Protecting airway epithelium → decreasing receptor exposure

Producing bronchodilation → reducing mechanical irritation

Providing *snigdha* and *ushna* effects → correcting *Vata*-induced dryness

Thus, *Rasna* serves as a rational therapeutic component in pediatric formulations like *Bhrangyadi* lozenges, addressing both the systemic and local aspects of *Vataja Kasa* while maintaining safety and tolerability.

V. CONCLUSION

Rasna is a valuable herbal drug in the management of *Vataja Kasa* in the pediatric age group due to its ability to alleviate airway irritation, reduce cough hypersensitivity, and correct underlying doshic imbalance. Its traditional indications are supported by emerging scientific evidence, highlighting its relevance in contemporary pediatric practice. Use of *Rasna* in child-friendly formulations such as lozenges offers a safe, effective, and acceptable approach for managing dry cough in children. Further clinical studies are warranted to establish standardized dosing and validate its therapeutic efficacy in pediatric respiratory disorders.

REFERENCES

- [1] Acharya YT. Charaka Samhita with Chakrapani Commentary. Varanasi: Chaukhambha Surbharati Prakashan; 2011. Chikitsa Sthana 18 (Kāsa Chikitsa), p. 532–534.
- [2] Acharya YT. Sushruta Samhita with Nibandhasangraha Commentary. Varanasi: Chaukhambha Orientalia; 2010. Uttara Tantra 52, p. 781–783.
- [3] Murthy KRS. Astanga Hridaya. Varanasi: Chaukhambha Krishnadas Academy; 2014. Chikitsa Sthana 3, p. 324–326.
- [4] Sharma PV. Dravyaguna Vijnana. Vol 2. Varanasi: Chaukhambha Bharati Academy; 2012. Rasnā Varga, p. 512–514.
- [5] Gupta AK, Tandon N. Reviews on Indian Medicinal Plants. New Delhi: Indian Council of Medical Research; 2004. Vol 3, p. 428–432.
- [6] Kumar S, Malhotra R, Kumar D. Anti-inflammatory activity of *Pluchea lanceolata* in experimental models. *Journal of Ethnopharmacology*. 2003; 88(2–3):215–218.
- [7] Tripathi YB, Sharma M. The interaction of phytochemicals with inflammatory mediators in respiratory diseases. *Phytotherapy Research*. 2006;20(10):819–824.
- [8] Chaudhary AK, Singh N. Bronchodilator activity of medicinal plants used in traditional medicine. *Indian Journal of Pharmacology*. 2011;43(4):403–407.
- [9] Barnes PJ. Neurogenic inflammation and cough. *Pulmonary Pharmacology & Therapeutics*. 2007;20(4):347–351.
- [10] Canning BJ, Chou YL. Cough receptors and their pharmacological modulation. *American Journal of Physiology – Lung Cellular and Molecular Physiology*. 2009;297(4):L627–L637.
- [11] Srivastava P, Shanker K. *Pluchea lanceolata* (Rasana): Chemical and biological potential of Rasayana herb used in traditional system of medicine. *Fitoterapia*. 2012;83(8):1371–1385. (This review covers phytochemicals and traditional uses including bronchitis and cough.) PubMed
- [12] Pandey PS. *Pluchea lanceolata* – An Overview. *International Journal of Pharmaceutical Sciences Review and Research*. 2018;52(1):133–141. (Traditional indications include treatment of respiratory problems such as bronchitis, cough, pleuritis and chest pain.) globalresearchonline.net
- [13] Anu Joy, Smitha Francis, Sandhya VR, Ambili KS. Comparative Pharmacognostic and Phytochemical Analysis of Three Market Samples of Rasna: *Pluchea lanceolata*, *Alpinia officinarum*, and *Alpinia calcarata*. *Journal of Ayurveda and Integrated Medical Sciences*. 2025;9(12):81–90. (Contains phytochemical profiling aiding understanding of compounds relevant to respiratory effects.) jaims.in
- [14] International Journal of Novel Research and Development (IJNRD). Comprehensive review of Rasnā in respiratory conditions (respiratory infections, Shvasa, Kasa) in the context of quercetin and cytokine modulation. *IJNRD*. 2025;10(1):c86–c95. (Highlights mechanisms of quercetin (a Rasnā constituent) in managing respiratory inflammation including cytokine modulation.) IJNRD
- [15] Bhowmik D, Sampath KP, Yadav A. Herbal antitussives: A review. *Journal of Chemical and Pharmaceutical Research*. 2010;2(4):708–716.
- [16] Satheesh Madhav NV, Upadhyaya K. Herbal drugs in respiratory disorders. *International Journal of Ayurveda Research*. 2010;1(3):180–186.