

## INTEGRATED AYURVEDIC APPROACH FOR MANAGEMENT OF EXACERBATIONS IN CHILDHOOD BRONCHIAL ASTHMA W.S.R. TO TAMAKA SHWASA – A REVIEW

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### ABSTRACT

**Introduction:** *Tamaka Shwasa* which can be correlated with bronchial asthma is among the most common causes of childhood emergency departmental visits. While Ayurveda is often sought for preventive and controller measures, its potential for fast-acting, integrated management of childhood asthma remains underutilized, largely due to a lack of awareness among parents and caregivers. Notably, *Tamaka Shwasa* is classified as a *Sadhya* and *Yapya Vyadhi*, indicating a favorable prognosis and responsiveness to treatment, even in pediatric patients. Given the need for effective and practical management strategies, this study aims to explore the application of Ayurvedic principles in pediatric practice for the treatment of *Tamaka Shwasa* including management in exacerbation. **Material and method:** A comprehensive review of Ayurvedic classics and online-published articles from Google Scholar and PubMed was conducted to explore the management of exacerbation of *Tamaka Shwasa* in pediatric

patients. **Result and discussion:** *Tamaka Shwasa* can be broadly classified into *Kapha Pradhana* and *Vata Pradhana* varieties. Since, the childhood period is characterized as a *Kapha Pradhana* age; pediatric patients are more susceptible to *Kapha Pradhana Tamaka Shwasa*. Consequently, a two-pronged therapeutic approach is warranted, incorporating both *Shodhana* (purification) and *Shamana* (pacification) therapies. Specifically, *Sadhyo Vamana*

followed by *Dhoomanapana* is recommended as the most effective treatment strategy during this stage. Additionally, *Abhyanga* and *Swedana* applied over the chest region help provide immediate relief. Furthermore, Ayurvedic herbs can serve as a viable alternative to conventional nebulizer medications, while oral administration of *Rasa Aushadhi* in judicious doses can facilitate rapid relief. **Conclusion:** The management of exacerbation of *Tamaka Shwasa* in children is well-documented in Ayurvedic classics. An integrated approach, combining *Lavana Taila Abhyanga*, *Sadhyo Vamana*, *Dhoomapana*, *Swedana*, and Ayurvedic nebulization, offers a comprehensive treatment strategy.

**KEYWORDS:** *Tamaka Shwasa*, Exacerbation, Children, *Shodhana*, *Shamana*.

## INTRODUCTION

Acharya Charaka emphasized that while numerous diseases can be fatal, none are as perilous as *Shwasa* and *Hikka*, which can cause sudden death. *Tamaka Shwasa* is one of the five types of *Shwasa Roga*. Acharya Charaka advises prompt management of *Sadhya* and *Yapya Shwasa*, as neglecting these conditions can rapidly destroy a patient's *Prana*, much like fire quickly consumes dry grass.<sup>[1]</sup> *Tamaka Shwasa* falls under this category as it is a *Yapya Vyadhi*. Childhood is a vulnerable period, with a shorter duration between disease onset and potential death. Moreover, childhood asthma is a leading cause of emergency department visits, hospitalizations, and missed school days.<sup>[2]</sup> Therefore, early and effective management of such childhood illnesses is crucial. Ayurveda is frequently underutilized in the acute management of *Tamaka Shwasa*, with many parents and the society limiting its application to preventive measures and controller therapy only. This stems from a lack of awareness regarding Ayurveda's integrated management strategy for this condition. Notably, *Tamaka Shwasa* is classified as both *Sadhya* and *Yapya Vyadhi*, indicating a relatively lower risk of mortality during asthma exacerbations compared to other emergencies. Consequently, Ayurveda offers a viable treatment option for managing *Tamaka Shwasa* across all age groups, including pediatric patients. The practical application of Ayurvedic management of the same in pediatric practice is essential in the present times.

Asthma, also known as "struggling for breath," is a common allergic condition in children, synonymous with bronchial asthma.<sup>[3]</sup> This non-communicable, chronic lung disease is characterized by early onset, environmental triggers, and significant psycho-social-economic burdens on families and society. The pathophysiology of asthma is complex, involving airway inflammation, airway obstruction (due to muscle spasm associated with mucosal

edema and accumulation of the mucus), airway hyperactivity (due to aerobiologicals and irritants), and airway remodeling in uncontrolled asthma.<sup>[4]</sup> The interaction of genetics and environment, triggers many inflammatory cells which release a wide range of mediators.<sup>[5]</sup> The common clinical features include recurrent cough, recurrent wheeze and shortness of breath. As a major non-communicable disease (NCD), asthma affects both children and adults, with a significant impact on children. In 2019, asthma affected an estimated 262 million people and caused 4,55,000 deaths, primarily in low- and lower-middle-income countries due to under diagnosis and under treatment.<sup>[6]</sup> Epidemiological studies indicate that the prevalence of asthma is highest among children under the age of 5 (approximately 75%) and decreases with age (around 25% above 5 years).<sup>[7]</sup> Notably, approximately 80% of asthmatic patients experience disease onset before the age of 6.<sup>[8]</sup> Furthermore, a study revealed that 26.9% of children aged 6-16 years suffered from bronchial asthma.<sup>[9]</sup>

## AIM

To explore the application of Ayurvedic principles in pediatric practice for the treatment of *Tamaka Shwasa*, including management during exacerbation.

## MATERIAL AND METHOD

Comprehensive review of Ayurvedic classics sourced from offline materials and online-published articles retrieved from Google Scholar and PubMed. The primary focus of this review was the management of exacerbation of *Tamaka Shwasa* in pediatric patients.

## RESULT AND DISCUSSION

A detailed description of the management of *Tamaka Shwasa*, including exacerbation of asthma, is provided in the Ayurvedic Samhitas. The treatment protocol for *Tamaka Shwasa* is outlined as follows:

**Table No. 1: Line of treatment of *Tamaka Shwasa*.**

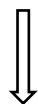
<i>Dosha Pradhanya</i> ( <i>Dosha</i> predominance)	<i>Kapha</i>	<i>Vata</i>
<i>Rogi Bala</i> (physical strength of the patient)	<i>Balavana</i> (strong)	<i>Durbala</i> (weak)
Co-relation	Exacerbation of bronchial asthma	Chronic stage of bronchial asthma
Line of treatment	<i>Vamana</i> (therapeutic emesis) <i>Virechana</i> (therapeutic purging) <i>Pathya Bhojana</i> (dietary regimen) <i>Dhoomapana</i> (Medicated smoking)	<i>Tarpana</i> (Nourishment) <i>Shamana</i> (Pacification)
Suitable dosage form for <i>Shaman</i>	<i>Leha</i> (electuary)	<i>Sneha</i> (medicated oil/fat) <i>Yoosha</i> (soup/broth) <i>Rasa</i> , etc.

According to Acharya Charaka, the principles of *Shwasa Chikitsa* are particularly well-suited for managing exacerbations of childhood asthma. Given that childhood is a *Kapha*-predominant age and the acute stage of *Tamaka Shwasa* is characterized by *Kapha Pradhana Avastha*, *Vamana* (emesis) is considered the most effective treatment approach. Acharya Kashyapa emphasized the importance of *Shodhana* (purification) in children, as well as in their *Dhatri* (wet nurse), to facilitate rapid recovery from illness. This underscores the applicability of *Vamana* in pediatric patients. However, considering that children's *Bala* (physical strength) is still developing, *Sadhyovamana* (a modified form of *Vamana*) is recommended instead of classical *Vamana*. The protocol for *Sadhyovamana* is outlined below.

Local *Abhyanga* (massage) with *Tila Taila* (Sesame oil) mixed with *Saindhava Lavana* (rock salt)



*Nadi Swedana* (hot fomentation by medicated fumes through a tube) - best suitable for children, due to easy administration and facility to control heat, thus preventing the risk of *Atiyoga* (over application of heat).



Prior to administering *Vamana*, *Snigdha Bhojana* consisting of cooked rice with *Ghrita* (Ghee), is recommended. The consumption of unctuous food facilitates *Kapha Utklesha* (aggravation of *Kapha Dosha*), enabling a smoother *Vamana* process. In cases where the child is weak, emaciated, or *Kshira Annada* (exclusively breastfed or in the weaning phase),

*Vamana* should be administered after breastfeeding. For children who are *Annada* (consuming regular food items), *Tanu Peya* (rice gruel) with Ghee is offered before *Vamana*.



Following *Vamana*, *Mridu Dhumapana* (mild medicated smoking therapy) is administered to the child to facilitate the *Nirharana* (elimination) of any remaining imbalanced *Dosha*.

In the management of acute exacerbations of *Tamaka Shwasa* in children, oral medications should ideally possess properties such as *Kapha Vataghna* (*Kapha* and *Vata* alleviation), *Ushna* (warming), and *Vatanulomana* (*Vata* normalizing). Examples of such medications are listed in the table.

**Table no. 2: Oral medicine for management of acute exacerbation of *Tamaka Shwasa* in children.**

<b><i>Choorna</i></b>	<b><i>Vati</i></b>	<b><i>Kwatha</i></b>	<b><i>Asava</i></b>
<i>Shringyadi Choorna</i>	<i>Lavangadi Vati</i>	<i>Bharangyadi Kwatha</i>	<i>Kanakasava</i>
<i>Shatyadi Choorna</i>	<i>Marichyadi Vati</i>	<i>Dashmoola Kwatha</i>	
<i>Bibhitaki Choorna</i>	<i>Khadiradi Vati</i>	<i>Vasadi Kwatha</i>	

**Role of *Rasa Aushadhi* (mineral/ herbo mineral medicines):** Contrary to common misconceptions, *Rasa Aushadhi* (mineral/herbo-mineral medicines) can be safely prescribed to pediatric patients. In fact, certain *Rasa Aushadhi*, such as *Suvarna Prashana*, are indicated for use immediately after birth, while others, like *Kumara Kalyana Rasa*, are specifically mentioned for pediatric use. *Rasa Aushadhi* is designed to manage emergency conditions and offer several advantages over *Kashtha Aushadhi* (herbal medicines). These benefits include:

- Lower required doses
- Improved palatability
- Faster onset of action

*Rasa Aushadhis* are considered a valuable asset in traditional pharmaceutical sciences due to their rapid action, reduced dosage requirements, and extended shelf life.<sup>[10]</sup> These characteristics make *Rasa Aushadhi* an ideal choice for managing pediatric emergencies, including exacerbations of bronchial asthma. Suitable *Rasa Aushadhi* for managing bronchial asthma includes *Kumara Kalyana Rasa*, *Shwasa Kuthara Rasa*, *Shwasa Kasa Chintamani Rasa*, *Muktadi Choorna*, *Abhraka Bhasma*, and *Godanti Bhasma*. These medicines can be prescribed as single agents or in combination with *Kashtha Aushadhi*. It is essential to exercise caution and ensure quality assurance before administering *Rasa Aushadhi* to pediatric patients.

#### **Ayurvedic nebulization: An innovative approach to managing pediatric asthma**

Nebulization is a preferred method for managing asthma exacerbations in children. However, conventional nebulization medications are often associated with adverse effects. Here, Ayurvedic medicine offers a promising alternative. Aromatic *Vata Kaphahara* herbs can be utilized in *Arka* form (distilled liquid preparation) for nebulization. Suitable options include *Bharangi Arka*, *Sunthi Arka*, and *Tambula Patra Arka*. Clinical studies have demonstrated the efficacy and safety of *Bharangimoola Arka* Nebulization in adults, showing significant improvement in symptoms such as breathlessness, wheeze, and moderate effectiveness in alleviating cough, chest tightness, and speech difficulties.<sup>[11]</sup> So, it is now imperative to

establish the efficacy and safety of Ayurvedic nebulization in pediatric patients experiencing asthma exacerbations.

## CONCLUSION

The management of acute exacerbations of childhood asthma presents a formidable challenge. Fortunately, Ayurveda offers a comprehensive and integrated approach to addressing this condition. The management principles of *Tamaka Shwasa*, as outlined in Ayurvedic texts, can be effectively applied to pediatric patients, taking into account the individual child's *Dosha* predominance, age, *Kaal* (seasonal influences) and *Yukti* of *Vaidhya* (treating physician's logical thinking for drug selection) in selecting appropriate therapies. An integrated Ayurvedic approach, incorporating therapies such as *Lavana Taila Abhyanga* (salt-based oil massage), *Swedana* (sudation), *Sadhyo Vamana* (modified emesis), *Dhoomapana* (medicated smoking therapy), nebulization with Ayurvedic herbs, and oral medication, offers a promising strategy for managing exacerbations of asthma in children.

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