



ORIGINAL RESEARCH PAPER

Ayurveda

MANAGEMENT OF PEDIATRIC ASTHMA: A CASE REPORT

KEY WORDS: *Asthma; Swasa; Tamaka swasa; Pranavaha srotas*

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ABSTRACT

Asthma is a disease of chronic inflammation, airway hyper responsiveness, and chronic structural changes known as airway remodelling. Ayurveda considers *swasa roga* as a disease of *Prana, anna and udakavaha srotas* with *amashaya* as its origin and *uras* as its site of manifestation, where the normal movement of *prana vayu* is impaired by the vitiated *kapha* causing respiratory distress and other symptoms. While modern medicine management of asthma include quick relievers, preventers and long-term symptoms relievers ayurvedic management aims at improving the general health of the patient to prevent further disease. This case report depicts ayurvedic management of a pediatric case of chronic respiratory illness where the child was under long term use of inhaler to prevent episodes of asthma. With proper ayurvedic management the quality of life improved and child was completely weaned off modern medicines. The main aim of the treatment was to improve the health of the child and to strengthen the *srotas* to prevent occurrence of disease.

INTRODUCTION:

Asthma is the most common chronic lower respiratory tract disease among children characterised by increased responsiveness of the tracheobronchial tree to a multiplicity of stimuli. Asthma can begin at any age but most often it begins in the early years of life, especially before 10. An episode of asthma is usually manifested physiologically as widespread narrowing of airways which relieve either spontaneously or by medication. There is always an interplay of genetics and environmental factors in asthma that leads to a chronic inflammatory condition in the airway system. It's an episodic disease usually with a symptom free period in-between. Acute episodes of airway narrowing are initiated from an interaction between the resident and infiltrating inflammatory cells of the airway epithelium, other inflammatory mediators and cytokines causing combination of changes in the airway like oedema, mucus hypersecretion, smooth muscle contraction, and epithelial desquamation. The inflammatory mediators further cause activation of cholinergic reflexes and sensory nerves, which lead to amplification of the continuing inflammatory response. Mast cells, lymphocytes, eosinophils etc are thought to play an important role in this inflammatory response. These initial changes are largely reversible with proper medications. As the disease progression occurs, airway narrowing may become irreversible. Structural remodelling of the airways occur which is characterised by hyperaemia with increased vascularity of sub epithelial tissue, thickening of basement membrane and sub epithelial deposition of various structural proteins, and loss of normal distensibility of the airway. As a result the airways of a chronic asthmatic patient becomes oedematous and shows signs of mild inflammation even when asymptomatic. Once the airway remodelling occurs the changes are rather irreversible.

Diagnosis of asthma in children is mainly by history and physical examination. Early diagnosis and management is essential to prevent airway remodelling, to improve the quality of life and to educate about the preventive measures. Clinical features usually include recurrent cough (more at night, or early morning time; induced by physical or emotional stress), recurrent wheeze, other comorbidities like allergic rhinitis, sinusitis, serous otitis media etc. The management of asthma in children includes educating parents regarding the need of preventing any known allergens, pharmaceutical preparations and regular follow ups. The choice of medicine usually depends on the age and he severity of the disease and usually includes short acting beta-2-agonists, long acting beta-2-agonists, leukotriene receptor antagonist, inhaled corticosteroids, etc

Tamaka swasa, one among the five types of *swasa roga*, explained in Ayurveda classics shows close resemblance to

asthma with respect to its causative factors and clinical features. In *tamaka swasa* the *prana vayu* vitiated and obstructed by *kapha*, moves upward, fails to reach the lungs causing difficulty in breathing, wheezing sound, cough, muscle tightness etc. Though the clinical entity, *tamaka swasa*, is considered '*yapya*' (incurable but can be managed) by *Acharyas*, *tamaka swasa* of recent origin is considered to be curable. Management protocol includes *shodana* therapy (during *vegavastha*) and *shamana* therapy (during *avegavastha*). *Shamana* therapy uses drugs having *kapha-vatahara*, *ushna guna* and *vata anulomana* properties.¹

CASE REPORT:

A 3 year old female child was presented with severe productive cough since 10 days with mild raise in temperature especially in the evenings. As the child had history of recurrent respiratory infections, initially her parents tried to manage the symptoms with the medicines prescribed earlier. But as the symptoms showed no alleviation they consulted her pediatrician three days later and the child was advised with Ascoril LS expectorant (4ml tds for 7 dyas), Levolin (0.63mg tds for 5 days), Tab. Montaire 4mg (HS for 2 months), Omnacortil suspension (5ml for 5 days) and Sinarest AF syrup (3.5ml HS for 5 days). The child showed no improvement even after taking the medicines for a week and parents decided to consider ayurvedic management.

History of past illness:

- Admitted 12 days in hospital at the age of 7 months following Right upper lobe pneumonia.
- Admitted in hospital for 3 days at the age of 1 year 8 months following acute respiratory infection with wheeze. After this episode child was advised to start 'Seroflo 125' inhaler regularly twice a day and nebulization on developing symptoms like cough.
- Admitted in hospital for 6 days at the age of 2 years 5 months following viral pneumonia

Family history:

History of wheeze in sibling

Personal history:

Second child of Non-consanguineous parents, Full term normal delivery, birth weight 3.3kg, no neonatal complications

- a) Age :3 years
- b) Diet :Mixed
- c) Sleep :Disturbed (due to breathing difficulty).
- d) Bowel :Irregular.
- e) Micturition :Normal.
- f) Appetite :Reduced
- g) Weight :11.2kg

- h) General appearance :Weak and less playful
- I) Abdomen :Distended
- j) Chest :Clear on auscultation

On detailed evaluation of all the signs and symptoms of the patient the condition was diagnosed as *Tamaka swasa* and the treatment was decided as follows:

Treatment Phase 1: Advised to follow for 5 days

<i>Dasamoolakadutravam kashayam (DMK) sookshma choornam</i>	10g powder boiled with 200 ml water and 50 ml of warm kashayam to be given four times a day.
<i>Swasanandam gulika</i>	1 tab twice daily with asavam (3 days)
<i>Kanakasavam</i>	5 ml twice daily after food
<i>Vyoshadi vatakam</i>	1/4 tsp once in 3 hours

(Table 1)

Parents were asked to follow these advises in case of child's diet and activity:

- Avoid milk and milk products, Maida, biscuits, sweets, cold food/water, curd etc
- Food and water always to be given warm.
- Light and easily digestible food was advised.
- To avoid contact with any allergens like dust, smoke etc.

On review after 5 days, the child showed significant improvement in her condition. Evening rise of temperature was gone. Coughing was significantly reduced and the productive nature was substantially reduced and there was improvement in her appetite. The child looked better than before. She was still taking her daily dose of Seroflo inhaler and tab. Montaire.

Treatment Phase 2: Advised to follow for 3 weeks

<i>Agasthya rasayanam (200g) mixed with vyoshadi vatakam (50g)</i>	½ tsp twice daily
<i>Kanakasavam</i>	5 ml twice daily after food (7 days)
<i>Swasanandam gulika</i>	Only if respiratory distress occurred

(Table 2)

Advice regarding diet and activity was same as mentioned above.

Reviewing after 3 weeks, child looked more healthy and playful. Her appetite was back to normal and bowel pattern regular. Symptoms like cough, temperature etc was no more present. Abdominal distension reduced. All medicines except daily inhaler was stopped including Tab Montaire which was initially advised to be continued for 2 months to prevent occurrence of asthma symptoms.

As part of next phase of treatment, *Astachurnam* was advised for a week in the dose of ½ teaspoon twice daily with ghee just before breakfast and dinner to ensure proper *Agni* before starting *lehyam* preparation. After one week of *Astachurnam*, a mixture of *Agasthyarasayam* (200g), *Dasamoola rasayanam* (50g) and *Haridrakhandam* (50g) was made and ½ teaspoon of this mixture was advised twice daily for a period of two months. Diet and activities to be followed as before. On review after a month the child looked much healthier with good appetite and bowel pattern. Sleep was adequate and body weight increased from 11.2 kg to 12kg. The inhaler usage was reduced to once initially and stopped completely in another month time. By the end of second month the weight of child further increased to 12.4kg. The child was advised *Indukantham ghrutham* (1/2 tsp twice daily) after *lehyam* and since 3 months child is symptom free with no asthma episodes in between. Mild symptoms like cold, fever, indigestion etc

which appeared during the course of treatment was managed symptomatically with medicines like *Mustarishitam*, *vilwadi gulika*, *Astachurnam* etc.

DISCUSSION:

Phase 1 of the treatment was aimed at reducing the acute symptoms of productive cough and the breathing difficulty associated with it. Considering the *kapha* dominance of the condition *Dasamoolakadutravam kashayam* (DMK) explained in *Sahasrayogam* was selected owing to its *ushna*, *vata-kapha hara* and *vata anulomana* property and also for its direct indication in *swasa-kasa roga*. *Kanakasavam* and *swasanandam* was selected to bring about an ease in the respiratory process, to reduce the symptoms like wheeze, cough etc and to prevent the occurrence of another episode of asthma. *Kanakasavam* is indicated in *swasa-kasa roga* and it is supposed to reduce the spasm of the airway system. *Swasanandam gulika* has *vata-kapha shamana*, *Agni deepana*, *srothoshodhana* and *vata anulomana* properties. *Vyoshadi vatakam*, again has been indicated for *peenasa*, *swasa kasa roga* etc. The usage of all these *vata-kaphahara*, *ushna* medicines along with proper *pathya* reduced the symptoms and also improved the *Agni*.

As the acute symptoms got alleviated and *Agni* improved, next phase of the treatment was initiated towards strengthening the respiratory system to prevent further episodic attacks of asthma. *Agasthya Rasayana* was selected for its *vata-kapha shamana*, *vata anulomana*, *deepana*, *pachana*, *rasayana* and *balya* properties. *Vyoshadi vatakam* was mixed in small quantities along with *Agasthya Rasayana* to enhance the *kapha shamana* property of the preparation. Following this phase of treatment more attention was given to improve the general health and immune status of the child. A combination of *Agasthya rasyanam*, *Dasamoola rasayanam* and *Haridrakhandam* was selected for this purpose. *Dasamoola rasayanam* has *vata-kapha shaman*, *deepana pachana*. *Srothoshodana* and *balya* properties. *Haridrakhandam* is found to be very effective clinically in all allergic manifestations and hence selected here. *Indukantham ghrutham* was selected in the last phase of the treatment with a notion to maintain the general health of the child so as to prevent further attacks. *Vata-kapha shaman*, *vata anulomana*, *deepana*, *srotho shodhana* and *balya* properties of the preparation makes it an ideal candidate for the aforesaid purpose.

CONCLUSION:

The clinical entity of asthma can be effectively managed by adopting the principles of *Tamaka swasa* explained in Ayurveda classics. It can be considered that the treatments in the initial phases helped to correct the deranged *dosha*, *dhatu* and *srotas* and the *Rasayana* therapy in the later stage helped to restore the health of the system thereby preventing further occurrence of the disease.

REFERENCES:

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