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A critical review on ayurveda drugs useful in Tamaka Shwasa (Childhood Asthma)

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Abstract

Ayurveda (the science of life) is the ultimate theory with infallible factors based on *Tridosha* and *Panchabhautic* principles. At present time, many chronic recurrent airway disorders are gradually seen in worldwide population. Ayurveda has defined a disease *Tamaka Shwasa* (disorder associated with respiratory tract) which is equivalent to 'Bronchial asthma' in allopathic medicine. Children asthma is not a different disease from bronchial asthma in adults, but children do face unique challenges. Among 200 million asthmatics worldwide, approximately 15 million are found in India. The Prevalence has increased by two fold in last two decades. While describing the management, *Nidana parivarjana* along with *Shodhana* and *Shamana Chikitsa* as mentioned in ayurveda. Those *Aushadh*, *Ahara*, and *Vihara* are *Kaph-vata Shamaka*, *ushna* and *vatanulomak* should be used in *Shwasa chikitsa*. In the present perspective, the re-validation of ancient ayurveda drugs (herbs and herbo-minerals drugs) which can improve the functions of respiratory tract by *Samprapti Vighatana* of disease and according to pharmacotherapy due to presence of specific chemical used in bronchial asthma. *Shamana chikitsa* is more beneficial in childhood asthma in comparison to *Shodhana chikitsa* because children cannot bear the stress of *Shodhanachikitsa* due to *Alpabala*. Ayurveda drugs (herbs and herbo-minerals drugs) with allopathic medicine have excellent response in management of childhood asthma.

Keywords: Ayurveda, *Tridosha*, *Tamakashwasa*, Bronchial asthma, Herbs and herbo-minerals drugs

1. Introduction

The basic concepts of ayurveda (the science of life) are mainly depend upon *tridosha* and *panchabhautic* principles. Among the *Astangas* of Ayurveda, Kaumarbhritya particularly deals with the problems related with infants and children. *Dosas*, *dusyas*, *malas* and also the disorders which are in adults are completely the same in children with the only difference that their quantity is less ^[1]. The administration of drugs in children are smaller dose according to disease ^[2]. In the present scenario, recommendation of drug doses are decided according to age and weight of child.

Ayurveda has defined a disease *Tamaka Shwasa* (disorder associated with respiratory tract) which is one of the five types of disease *Shwasa*. The signs, symptoms and etiopathogenesis of 'Bronchial asthma' explained in allopathic medicine have many similarities with the disease entity *TamakaShwasa*. Bronchial asthma is a common chronic inflammatory disease of airways characterized by variable and recurring symptoms, reversible airflow- obstruction and bronchospasm. Children asthma is not a different disease from asthma in adults, but children do face unique challenges. Asthma in children is a leading cause of emergency, with departmental visits, occasional hospitalizations and missed school days. If not treated properly some of persistent asthmatics end up in irreversible state due to airway remodeling. The prevalence of asthma is increasing in most countries. The peak incidence is seen in the age group of 5-10 years. When compared with girls, boys suffer twice as much as them. Even the severity of illness is also further severe in them ^[3]. It is about 2% in school-going age group ^[4]. The prevalence is 25.6% in 2009 which is under 18 years and near about 75% of asthma occurs in children under 5 years of age. Recent estimates recommend that asthma affects 300 million people world-wide and there will be an additional 100 million people will be diagnosed by 2025 ^[5]. It is a major health concern globally and causes a countless burden on the family and society and accounts for a large number of lost school days and affect with academic achievement and social communication, in addition places a strain on health visits to physician and hospital ^[6].

Tamaka shwasa is *Kapha-vataja vikar* and site of its origin is *pitta sthana* ^[7]. It is affected the *Pranavaha Srotas* and massively injurious to life because of prolonged expiration, wheeze, dyspnoea of very deep velocity ^[8-9]. *Vata* when get obstructed by *Ama (srotavarodha)* not able to move in downward direction and thus its normal physiological function (i.e. expulsion of

malamutra) is obstructed and patients suffers from the complaint of constipation, a cardinal sign of *SamaVata*. Although *Acharya* not clearly mentioned that it is *Apana Vayu* which get vitiated to produce *Shwasa roga* but by using this term, (*Pratiloma*) i.e. *Apana Vayu* which in normal physiological condition goes downward and helps in expelling out *Malamutra* get vitiated and starts moving in upward. The obstructed *Vata* moves upwards (*Pratiloma Gati*) and causes vitiation of *Pranavaha Srotas Sthita Vata* i.e. *Pranavayu* and *Udanavayu* to cause *Shwasa Roga* [10]. *Tamaka Shwasa* classified on the basis of *doshas* as *Vata Pradhana* and *Kapha Pradhana* and have two allied stage of *tamakashwasa* known as *Pratamaka* and *santamaka*. Patients suffering from *tamakashwasa* when gets afflicted with fever and fainting, the condition is called as *Pratamaka Shwasa*. It is suggestive of involvement of *pittadosha* in *Pratamaka Shwasa*. When the Patients feels submerged in darkness, the condition is called as *Santamaka Shwasa* [11]. Etiological factors of *Tamaka shwasa* are included the use of cold waters, belong to a cold place, exposure to dust, smoke and air, intake of *Vidahi* (Irritant food), *Guru* (heavy) and *Vishtambhi* (Slow digestible diet), *Rukshanna* (dry diet), *Abhisyandi* (the substances that causes obstruction to channels), exercise, long walk beyond the capacity, vitiation of *Ama* (intermediate products formed during digestion and metabolism), *Vishamasana* (ingestion of food in inadequate quantity), *Aptarpana*, *Kshaya* (emaciation) and nutritional deficiency, injury to vital organs (*Marma*), as a consequence of *jwara* (fever), *atisara* (diarrhea), vomiting, anemia & poison, coryza, rakta-pitta (bleeding from different parts of body), *anaha* (constipation associated with flatulence), intake *kapha* annoying ingredients, injury to throat and chest, different types of obstruction to the channels of circulation. *Sushruta* and *Vagbhata* have only revealed the name as *Pratamaka*, which includes clinical manifestation of *Santamaka* [12-13].

2. Aims

To emphasize the basic idea that is shared to many of the existing recommendations. Critically reviewing ayurveda drugs (herbs and herbo-minerals drugs) useful in management of *tamakashwasa* (childhood asthma).

3. Material and Methods

Various Ayurveda literature, Ayurveda pediatric books, Pharmacology (*Dravyaguna*) and *Rasashastra* books, magazines and research journals as well as PUBMED, MEDLINE database related to effect of ayurveda drugs (herbs and herbo-minerals drugs) useful in management of *tamakashwasa* (childhood asthma) are critically reviewed and analyzed.

4. Samanya chikitsa siddhanta

While describing the management, *Acharya Charaka* has clearly mentioned the importance of *Nidana parivarjana* along with *Shamana* and *Shodhanachikitsa* as mentioned below.

4.1 Nidana Parivarajan

Nidana parivarjan or prevention of all types of precipitating or predisposing factors is to be strictly followed in children. If the precipitating or predisposing factors are not avoided, the *Dosas* involved in the pathogenesis will further be aggravated, more prone to disease and the prognosis will be worse. *Ayurveda* fundamentally being emphatic about “*Swasthya Rakchhanam*” give priority to prophylactic management by which children are protected from the disease *tamaka Shwasa*. The “*Aagantuka hetu*” have to be avoided in the first place. Being a “*Yapy Roga*”, avoidance of triggering factors and providing quality of life with minimum medication is the aim of childhood asthma management.

4.2 Shamana therapy

Those *aushadh*, *ahara*, and *vihara* are *kaph-vata shamaka*, *ushna* and *vatanulomak* should be used in *shwasa chikitsa* [14]. According to the *samprapti* of *tamakashwasa*, drugs should be *kaphavatashamaka*, *ushna*, and *Vatanulomaka* properties. For *Shamana* treatment of *tamakashwasa*, drugs have following properties [15].

Table 1: Showing properties of drugs for shaman treatment of *tamakashwasa* (Childhood asthma)

Rasa	Katu, Tikta
Guna	Tiksha, Laghu, Ruksha
Veerya	Usna
Vipaka	Katu
Karma	Deepana, Pachana, Vatanulomaka, Kaphavatashamaka

4.3 Pharmacotherapy for bronchial asthma [16]

Pharmacotherapy for bronchial asthma involves use of medications that relax smooth muscle and dilate the airways and that decrease inflammation and thereby prevent exacerbations. The medications used for long term treatment of asthma include bronchodilators (adrenaline, terbutaline and salbutamol), steroids (beclomethasone, budesonide and fluticasone), mast cell stabilizers (Cromolyn sodium, Nedocromil, Ketotifen), leukotriene modifiers (Montelukast, Zafirlukast) theophylline and immunotherapy.

There are described many herbal and herbo-mineral drugs which are beneficial in *tamakashwasa* (childhood asthma) by its ayurvedic properties like *rasa*, *guna*, *veerya*, *vipaka*, and its modern mode of action due to presence of some certain chemicals. These chemicals of herbal and herbo-mineral drugs act as a bronchodilator, mast cell stabilizer, expectorant, anti-inflammatory, anti-spasmodic, antiasthmatic, antihistaminic, immuno-modulatory and helpful in reducing the patients of *tamakashwasa* (bronchial asthma). Ayurveda medicines are the preventive and protective therapy which has minimal side effects, used in long term therapy. But emergency treatment needs allopathic medicine, which gives quick relief. So existence of asthmatic children can be managed by using the herbal and herbo-mineral drugs with allopathic medicine. The requirement of the time is to develop an allopathic system using the herbal and herbo-mineral drugs approaches to reduce the side effects for treating childhood asthma.

Table 2: Showing ayurveda drugs (herbal drugs) useful in *tamaka Shwasa* (Childhood Asthma)

S.N.	Name of Drugs	Latin Name	Property of drugs	Modern mode of action
1.	<i>Pushkara moola</i>	<i>Inula racemosa</i>	Rasa : Katu, Tikta Guna : Tiksha, Laghu Veerya : Usna Vipaka : Katu	Mast cell Stabilization property in the animal allergic models [17], Anti-histamine activity, Anti-eosinophilic [18], Adrenergic Beta-Blocking activity [19], Effect on smooth muscle [20]
2.	<i>Amlavetasa</i>	<i>Garcinia pedunculata</i>	Rasa : Amla-atymla Guna : Tiksha, Laghu,	Anti-inflammatory [21]

			<i>Ruksha</i> <i>Veerya : Usna</i> <i>Vipaka : Amla</i>	
3.	<i>Suksmaila</i>	<i>Elettaria cardamomum</i>	<i>Rasa : Katu, Madhura</i> <i>Guna : Laghu, Ruksha</i> <i>Veerya : Sheeta</i> <i>Vipaka : Madhura</i>	Anti-inflammatory, analgesic, antispasmodic, antimicrobial [22]
4.	<i>Vasa</i>	<i>Adhatoda vassica</i> Nees.	<i>Rasa : Tikta, Kashaya</i> <i>Guna : Ruksha, Laghu</i> <i>Veerya : Sheeta</i> <i>Vipaka : Madhura</i>	Antispasmodic, Expectorant, anti-tissue, bronchodilator [23-24]
5.	<i>Madhuyasthi</i>	<i>Glycyrrhiza glabra</i> Linn.	<i>Rasa : Madhura</i> <i>Guna : Guru, Snigdha</i> <i>Veerya : Sheeta</i> <i>Vipaka : Madhura</i>	Anti-asthmatic [25], anti-inflammatory, anti-microbial, expectorant [26]
6.	<i>Shirish</i>	<i>Albizia lebbek</i> Benth.	<i>Rasa : Madhura, Tikta, Kashaya</i> <i>Guna : Tiksha, Laghu, Ruksha</i> <i>Veerya : Usna</i> <i>Vipaka : Katu</i>	anti-inflammatory [27]
7.	<i>Shunthi</i>	<i>Zinziber officinale</i> Roxb.	<i>Rasa : Katu</i> <i>Guna : Guru, Snigdha</i> <i>Veerya : Usna</i> <i>Vipaka : Madhura</i>	Anti-inflammatory [28]
8.	<i>Pippali</i>	<i>Piper longum</i> Linn.	<i>Rasa : Katu</i> <i>Guna : Tiksha, Laghu, Snigdha</i> <i>Veerya : Anushna Sheeta</i> <i>Vipaka : Madhura</i>	Mast cell Stabilization property [29], Immuno-modulatory, Anti-asthmatic [30]
9.	<i>Bharangi</i>	<i>Clerodendrum serratum</i>	<i>Rasa : Katu, Tikta</i> <i>Guna : Ruksha, Laghu</i> <i>Veerya : Ushna</i> <i>Vipaka : Katu</i>	Anti-Inflammatory effect [31]
10.	<i>Guduchi</i>	<i>Tinospora cordifolia</i>	<i>Rasa : Tikta, Kashaya</i> <i>Guna : Guru, Snigdha</i> <i>Veerya : Ushna</i> <i>Vipaka : Madhura</i>	Immuno-modulatory activity [32] Anti-allergic [33]
11.	<i>Soma</i>	<i>Ephedra vulgaris</i>	<i>Rasa : Kashaya</i> <i>Guna : Laghu, Ruksha</i> <i>Veerya : Ushna</i> <i>Vipaka : Katu</i>	Anti-asthmatic [34]
12.	<i>Rasna</i>	<i>Pluchea lanceolata</i>	<i>Rasa : Tikta</i> <i>Guna : Guru</i> <i>Veerya : Ushna</i> <i>Vipaka : Katu</i>	Anti-inflammatory (The wealth of India raw material), Immunomodulatory activity [35]
13.	<i>Tulsi</i>	<i>Ocimum sanctum</i>	<i>Rasa : Katu, Tikta</i> <i>Guna : Tiksha, Laghu</i> <i>Veerya : Usna</i> <i>Vipaka : Katu</i>	anti-inflammatory, anti-asthmatic, immunomodulatory [36]
14.	<i>Maricha</i>	<i>Piper nigrum</i>	<i>Rasa : Katu, Tikta</i> <i>Guna : Tiksha, Laghu</i> <i>Veerya : Usna</i> <i>Vipaka : Katu</i>	Anti-inflammatory, Antihistaminic, Suppression of production of IgE, Interleukin-5, Interleukin-4 [37]
15.	<i>Kantakari</i>	<i>Solanum surattense</i> Burm. F	<i>Rasa : Katu, Tikta</i> <i>Guna : Ruksha, Tikshna, Vishada</i> <i>Veerya : Ushna</i> <i>Vipaka : Katu</i>	Antihistaminic, anti-inflammatory and mast cell stabilizing activity [38]
16.	<i>Haridra</i>	<i>Curcuma longa</i>	<i>Rasa : Katu, Tikta</i> <i>Guna : Ruksha</i> <i>Virya : Ushna</i> <i>Vipaka : Katu</i>	anti-inflammatory, analgesic, antibacterial [39]
17.	<i>Karkatshringi</i>	<i>Pistacia integerrima</i>	<i>Rasa : Tikta, Kashaya</i> <i>Guna : Laghu</i> <i>Veerya : Ushna</i> <i>Vipaka : Katu</i>	Anti-asthmatic [40] Anti-inflammatory [41]
18.	<i>Shati</i>	<i>Hedychium Spicatum</i>	<i>Rasa : Katu, Tikta, Kashaya</i> <i>Guna : Laghu, Tikshna</i> <i>Virya : Ushna</i>	Analgesic and Anti-inflammatory [42]

			<i>Vipaka : Katu</i>	
19.	<i>Amalaki</i>	<i>Emblica officinalis Gaertn</i>	<i>Rasa : Madhura, Amla, Katu, Tikta, Kashaya</i> <i>Guna : Laghu, Ruksha</i> <i>Virya : Sheeta</i> <i>Vipaka : Madhura</i>	Immunostimulatory [43]
20.	<i>Kutaki</i>	<i>Picrorrhiza kurroa Royle ex Benth.</i>	<i>Rasa : Katu, Tikta</i> <i>Guna : Laghu</i> <i>Virya : Ushna</i> <i>Vipaka : Katu</i>	Anti-asthmatic [44], and immunomodulatory [45]
21.	<i>Talisha Patra</i>	<i>Abies webbiana</i>	<i>Rasa : Madhura, Katu, Tikta</i> <i>Guna : Laghu, Tikshna</i> <i>Virya : Ushna</i> <i>Vipaka : Katu</i>	Anti-inflammatory [46], Stabilizing effect like sod. Chromoglycate [47]

Table 3: Herbo-Mineral drugs with its properties useful in *tamakaShwasa* (Childhood Asthma)

SI. No.	Drugs	Properties
1.	<i>Shwasa-kasa-chintamani Rasa</i>	More effective in those patients who are not taking corticosteroid with bronchodilator while children taking corticosteroids with/without bronchodilator. It is beneficial in childhood bronchial asthma (in those children who have history of taking steroid and bronchodilators) [48]
2.	<i>Mahalaxmivilasa Rasa</i>	To control of asthmatic attacks [49]
3.	<i>Shwasa-kuthara Rasa</i>	Anti-Allergic functions [50]
4.	<i>Samirapannaga Rasa</i>	To preclude recurrence of asthma, enhancement in peak expiratory flow rate [51]
5.	<i>Padmapatradi yoga</i>	Act as bronchodilator drug, anti-histaminic and anti-inflammatory activity [52]
6.	<i>Krishnadi curna</i>	Use as bronchodilator [53]
7.	<i>Shringyadi churna</i>	Use as anti-inflammatory, anti-microbial, anti-oxidant, bronchodilator [54]
8.	<i>Puskaramuladi Churna</i>	Use in <i>Tamaka Shwasa</i> (Bronchial Asthma) With Pulmonary Function Tests [55]
9.	<i>Sitopaladi curna</i>	Manage cold & chest congestion, use as expectorant, anti-oxidant and anti-inflammatory properties [56]
10.	<i>Shunthyadi Churna</i>	Anti-inflammatory, anti-microbial, immunomodulatory, anti-asthmatic due to individual drugs favour its effect [57]
11.	<i>Abhraka Bhasma</i>	Use in Asthma and low immunity [58]
12.	<i>Godanti Bhasma</i>	Cure cough and dyspnea [59]
13.	<i>Lavangadi Vati</i>	Bronchodilator [60]
14.	<i>Kanakasava</i>	To show immuno-stimulating activity on the splenic cells of BALB/c mice <i>in vitro</i> [61]
15.	<i>Vasa Avaleha</i>	Use in <i>tamakashwasa</i> (Bronchial asthma) [62]
16.	<i>Bhargyadi Avaleha</i>	Use in childhood bronchial Asthma [63]
17.	<i>Vasa Haritaki Avaleha</i>	Use in <i>tamakashwasa</i> (Bronchial asthma) [64]
18.	<i>Vyaghri haritaki</i>	Use in bronchial asthma [65]
19.	<i>Vrisha ghrita</i>	To prevent recurrent respiratory tract infections by augmenting child's immunity [66]

4.4 Shodhana Therapy

Panchakarma procedures are used in *shodhana* therapy. The child who suffer from *Shwasa Roga* should be first applied *Saindhava Lavana* with *Tila Taila* over the chest region then subjected to sudation either by methods of steam (*Nadi Sweda*), hot bed sudation (*Prastara*) or mixed sudation [67]. *Acharya Sushruta* [68] has recommended to do both *Vamana*, *Virechana* in *Shwasa* management while *Acharya Charaka* has described first *Vamana* in *Shwasa* may be as an emergency and after that *Virechana* with *Vata-shleshmahara dravya* particularly for *Tamaka Shwasa* in between the two attacks or *Avegavastha*. *Virechana* is best for *Srotoshodhan*. Generally children cannot bear the stress of *panchakarma* procedure used in *shodhana* therapy, so *shaman chikitsa* is much better than *shodhanachikitsa* in childhood asthma.

4.5 Pathya: (Wholesome diet and lifestyle)

- Ahara:** *Vata shamaka*, *Kapha shamaka* and *vatanulomak* type of food & drinks [69, 70]
 - Shaali Dhanya: Tandula* (broken rice),
 - Shooka Dhanya: Yava* (Barley: *Hordeumvulgare* Linn.), *Godhuma* (wheat: *Triticumsativam*), *Mudge* (green gram),
 - Shaka Varga: Guduchi* (*Tinosporacordifolia*), *Patola* (*Trichosanthesdiocia*), *Vartaka* (Brinjal:

Solanumindicum), *Rasona* (Garlic: *Aliumsativam*), *Bimbi* (Jvy gourd: *Cocciniaindica*),

- Phala Varga: Jambira* (Lemon: Citruslimon), *Draksha* (Grapes: *Vitis vinifera*), *Amalaki* (Indian gooseberry: *Emblica officinalis*)
 - Madhu Varga: Madhu*,
 - Dugdha Varga: Ajakshira*,
 - Ghrita Varga: PuranaSarpi*,
 - Krutanna varga: Yusha, Yavagu, Peya, Sakatu*.
- Vihara:** *Swedana*, Hot water bath, *Atapasevana*, *Lavana*, *TailaAbhyanga*, *Pranayama*, Warm clothes in winter season.

4.6 Apathya: (Unwholesome diet and lifestyle)

a. Ahara [71, 72]:

- Shimbi Dhanya: Nishpava* (*Lablabpurpureus*/Indian bean), *Masha* (*Vignamungo*), *Tila* (*Sesamum indicum*), *Sarshapa* (*Brassica nigra*)
- Shaaka Varga: Kanda* (Tubers)
- Dadhi Varga: Dadhi*
- Kshira Varga: Mahisha Kshira*
- Grita Varga: Mahisha Grita*
- Krutanna Varga: Pinyaka*

b. Vihara: *Vegadharana*, In front of dust/wind/hot sun, hard exercise, Smoke, Pets, Pollen *Sheeta*, *Ruksha* [Air-

Conditioner], cold and damp places. Fasting for a longer period, Seating in frosty, smoky and congested places for a longer period etc. are to be evaded.

5. Discussion

Tamakashwasa is a well-defined disease in Ayurveda which is equivalent with allopathic medicine disease bronchial asthma on the considerations of risk factors, etio-pathology, clinical manifestations and management principles. All the drugs have the quality to standardize or overwhelm the symptoms of the disease. They support in decreasing inflammation of the bronchioles and are also beneficial in recurrent rhinitis, chronic cough and reducing the cough and relieving chest pain. The effects of these herbs and herbo-minerals drugs are to liquefy the thick bronchial secretion and relief in cough expectoration. They are *Vatta*, *Pitta* and *Kapha* pacifying properties and are used in *Kasa* and *Tamaka-Shwasa*. The entirety total properties of herbal and herbo-minerals are *TiktaKatu* Rasa, light and penetrating properties, *Ushnavirya* (hot potency) and decrease *Vata* and *Kapha Dosh*. The Gunas of the drug are *Laghu*, *RukshaTikshna*, which are antagonistic to the Gunas of *KaphaDosh*, thus normalizing *Kapha Dosh*. *Katurasa* have *Deepana*, *Pachana*, *Ruchikara*, *Shodhana*, *Sritansi Vivrunoti* (*Prasaryati Srotansi-Arundatta*), *Kaphaghna* properties [73]. One belongings of *katu rasa* pronounced by *Acharya Charaka* is '*Marganvivrunoti*' [74] which means it clears the *srotas* and stops pathogenesis by precluding *Dosh-dushya samurchana*. *Tiktarasa* have *Deepana*, *Aruchihara*, *Krimihara*, *Trishnahara*, *Vishaghna*, *Kaphapittaghna*, *Shoshana*, *Kantha Vishodhana*, *Laghu* properties. The *Lekhana* property and *Ruksha Guna* of *Tikta Rasa* lead to reduction of *Kapha*, and *Kleda* [75], thus relieving the *Atipravritti* and mucous hyper secretion. The *Sthirakarana* [76] property leads to having a proper *Samhanana* (Compactness) in lung alveoli. The *Virya* (potency) of this drug is *Ushna* (hot), while that of *Vata* is *Sheeta Guna* (cold in Character). *Ushna veerya* is *Ashupaki*, pacifies *Kapha* and *vata Dosh* and promotes *Sweda&Daha* [77] thus helps in digestion of *Ama*, acts as exothermic, & increases basal metabolic rate. Elevated metabolic rate helps in fast destruction of cell debris and clearing the micro channels. As the micro channels are cleared, the *vata* becomes *Anuloma*. The drugs have potential properties of alleviating *kapha* by *katu rasa* and *ushna veerya* and *laghu tikshna* and *Ruksha* quality, and *vata dosha* by virtue of *ushna veerya*, *Snigdha Guna* of *Sita*. Thus *Kapha Shamaka* properties of drug help in breaking the *Srotorodha* and digestion of *Ama*, which leads to proper functioning of the body. *Laghu guna* is known for its action of *Laghavakara* (lightness), *Kaphaghna* (alleviating *Kapha Dosh*), and *Shighrapakiva* (quickly digestible). It also causes *Lekhana* (removes corpulence) and *Ropana* (it heal the scars) [78]. *Ruksha guna* causes *Stambhana* (obstruction) and *Kharatva* (roughness) [79] thus bringing about a decrease in the extremely produced *Rasa Mala Kapha*. It causes absorption of excess *kapha Dosh*. It is known to have dominant of *vayu* and *agni mahabhuta* [80] which results in alleviation of the vitiated *kapha* which is the main *Dosha* accountable for the pathogenesis. *Ruksha Guna* helps in absorption of excessive secretion and thereby helps in removing obstruction caused by thick mucus plug. *Tikshna guna* due to predominance of *agni mahabhuta* acts on the channels immediately and remove the obstruction by pacifying the *kapha*. It has *Kaphavatahara* and *Lekhana* property. The *Tikshna guna* of drug helps in penetrating

through the *sanga* created by the *kapha*, and carrying out its function. All these drugs clear the vitiated *Pranavahasrotas* and diminish expiratory dyspnea. *Srotodusti* (The mechanism of manifestation of diseases), which is *Sanga* (occlusion) type, is relieved by the *Ushna* (hot) properties of the drug and *Shwasahara* property. They reduce inflammation of the bronchioles. These drugs also worthwhile in recurrent rhinitis, chronic cough then reducing the cough and relieving chest pain. The benefits of these herbs and herbo-minerals drugs are highly acclaimed in Ayurveda classical literature and *Rasashatra* books for management of *tamakashwasa* which make the secretion thin and helps in expectoration, decrease the inflammation of the respiratory system, signs and symptoms of *Tamaka-Shwasa*. All herbs and herbo-minerals drugs have anti allergic, bronchodilator effect, and anti-inflammatory and immune-modulator properties. These properties of drugs reduce inflammation in bronchial lumen, increase strength of respiratory system. These drugs pacifies *Dushita Vata*, *Pitta* and *Kapha Dosh* and control asthmatic problems and improves immunity. So these Ayurveda drugs are used in *tamaka shwasa* and cure the disease. In emergency conditions, herbs and herbo-minerals drugs are used with allopathic medicine which give excellent response in management of childhood asthma because these drugs have no relevant side effect.

6. Conclusions

The present article reviews the re-validation of ancient Ayurveda drugs (herbs and herbo-minerals drugs) which can improve the functions of respiratory tract by *Samprapti Vighatana* of *Tamaka Shwasa* and pharmacotherapy used in childhood asthma. According to the weight, age and severity of the disease, drug doses are decided for children. The properties of herbs and herbo-minerals drugs which is used in *Tamaka Shwasa* according to Ayurveda are *deepana*, *pachana*, *Kapha-vatashamaka*, *Vatanulomaka*, *Srotosodhaka*, *Kantha Vishodhaka*. The ultimate treatment methods are mentioned in Ayurveda classics i.e. *Nidana parivarjana*, *Samsamana* and *Samsodhana*, if administered thoughtfully, the desired results can be achieved. *Shamana chikitsa* is more beneficial in childhood asthma in comparison to *shodhanachikitsa* because children cannot bear the stress of *shodhanachikitsa* due to *alpabala*. Ayurveda drugs (herbs and herbo-minerals drugs) with allopathic medicine have excellent response in the management of childhood asthma.

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