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Elakanadi Kashaya In Pediatrics: An Ayurvedic Approach To Respiratory Health

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Abstract: Sahasrayoga is a textbook where the diseases and its treatments have been explained in a very systematic manner. Recurrent respiratory infections in childrens are very common. Elakanadi kashayam is a formulation mentioned in sahasrayoga for mainly in respiratory conditions like chronic cough, asthma It contains ingredients like ela,pippali, vasa which is very effective in Pediatric respiratory diseases

Key words: Cough,Congestion,Expectorant,Indigestion,Inflammation,Diarrhoea

I. INTRODUCTION

Sahasrayoga is a book that is a compilation of different formulations that are mentioned in various diseases. It containing of 1000 yogas in which most of the yogas are commonly used in south India. It contains numerous easy and commonly practised yogas, especially by the physicians of Kerala. Sahasrayoga is a textbook where in the diseases and its treatments have been explained in a very systematic manner. Elakanadi kashayam is a formulation mentioned in sahasrayoga for mainly in respiratory conditions like chronic cough, asthma It contains ingredients like ela,pippali, vasa which is very effective in respiratory diseases. Elakanadi kashayam clears kapha from the region of the chest and strengthens respiratory function, Elakanadi kashayam stimulates appetite and digestion, Improves metabolism.

ELA

Main chemical constituents present in it - Heptane, myrcene, linalool, bornneol, p- cymene, a & b pinenes, methylheptenone, geraneol, saibenene, nerol, camphene, sitosterol, thijene, terpeneols, n- alkanes, ascaridole, camphor, mentioned, etc.¹

Medicinal properties of cardamom

- Rasa (taste)- Madhura (sweet) and katu (pungent)
- Guna (qualities)- Rooksha (dry) and Laghu (light)
- Veerya (potency)- Sheeta (cold)
- Vipaka (undergoes taste conversion after digestion)- Katu (pungent)
- Karma (Effect on tridosha)- Balances vata and Kapha dosha

Medicinal uses

1. Kasahara- It is used in cold and cough
2. Vatahara- used in treating various diseases of vata dosha imbalance like constipation, abdominal bloating, neuralgia, etc
3. Deepana- it improves digestive strength
4. Pittahara- treats burning sensation and relieves pain
5. Rochana- relieves anorexia and improves taste
6. Shwashara- used in treating various chronic respiratory diseases like asthma
7. Arshahara- used in hemorrhoids and piles
8. Mutrakrichahara- treats urinary retention and relieves painful micturition and also works as a diuretic
9. It is also used in various diseases like irritable bowel syndrome and its related symptoms like acidity, vomiting, etcⁱⁱ.

Bronchitis- It helps to manage symptoms related to bronchitis as it has antibacterial, expectorant, and anti-inflammatory action. Being an expectorant, IT solutions and expels out the mucus from the lungs and relieves bronchitis. As per Ayurveda, bronchitis is caused due to poor digestion and incomplete elimination of waste ie ama from the body. Because of digestive properties, it improves digestion and reduces ama accumulation.

PIPPALI (Piper longum)

Rasapanchak (properties) of Piper longum. Sanskrit/English

Rasapanchak (properties) of Piper longum. Sanskrit/English	Sanskrit/English
Guna (Physical property)	Laghu (light), Tikshna (Sharp), Snigdha(Oily)
Rasa (Taste)	Katu (Pungent)
Vipak (Metabolic property)	Madhur (Sweet)
Veerya (Potency)	Anushnasheet (Slight cold) ⁱⁱⁱ

Actions and Properties

Doshkaram: It alleviates the vitiated Kapha, Pitta and Vata dosha and is used to treat the disorders that arise due to misbalance in Kapha, Vata and Pitta.

Sansthanik Karam: The topical application of the plant helps in head evacuation. It is also used as a blood purifier and possesses anthelmintic properties.

Abhyantranadisansthan: It is used as a brain tonic and balances Vata dosha.

Paachansansthan: It is used to cure stomachache, constipation, dysentery, diarrhea, pacify thirst, stimulate the spleen and also act as a mild laxative.

Raktabahsansthan: It is used as a blood purifier.

Shawasansansthan: It is used to stop hiccups and is associated with antitussive and anti-asthmatic properties.

Mutravahsansthan: It acts as a diuretic agent.

Prajanansansthana: It stimulates the uterine muscles and acts as an aphrodisiac agent.

Twacha: It is effective against skin disorders.

Taapkram: It is used as an antipyretic agent

Pippali in ayurveda samhita: Because of the multidimensional activity of *Pippali*, it is very notable drug since the samhita season of Ayurveda.^{iv}

VAASA (ADATODA VASICA)

Rasapanchak (properties) of *Adatoda vasica* in Ayurveda

Virya/Potency- Sheeta/ cold

Vipaka (Metabolic property) Katu/astringent, laghu/light

Guna (Physical property) Laghu/light

Rasa (taste) Tikta/bitter, Kashaya/ astringent

Karma (Action) Hridya:

It act against heart diseases Kaphapittahara; It act against digestion problem, heartburn, arthritis ,

Raktasangrahika: It helps in blood circulation.

Kasaghna: It is used against cough and cold.

Properties of *Vasaka* plant –

Raktapitta: It is used to cure hemorrhagic disorder/purpura. Kasa: It is used against cough and cold.

Jwara: It is used to cure fever. Kshaya: It is used in the treatment of Phthisis. Rajayakshma: It is used to cure

tuberculosis Parshvashula: It is used to cure pain in flanks. Hritshula: It is used to treat cardiovascular diseases like angina pectoris.

Shotha: It is used to cure oedema.

Expectorant Activity :

From the reported studies it was found that the petroleum ether extract of the leaves possesses expectorant activity when given at a dose of 50 mg/kg. Anti-tubercular Activity From the reported study it was found that the *Adhatoda vasica* plant possesses anti-tubercular activity. The in-vitro study was carried out against *Mycobacterium tuberculosis* revealed that the Bromohexine and ambroxol the two derivatives of Vasicine showed a growth inhibitory effect on *M. tuberculosis*.

Anti-inflammatory Activity - The main alkaloid component Vasicine of *J. Adatoda* plant possesses anti-inflammatory properties. The modified hen's egg chorioallantoic membrane test was conducted to evaluate the antiinflammatory activity of Methanolic extract (non-alkaloid fraction saponins and alkaloid) constituent of *J. adhatoda* plant. Results showed the alkaloid content showed potent activity at 50 mg/kg dosage equivalent to hydrocortisone while Methanolic extracts possess less activity

Asthma and bronchitis :- The comparative study was conducted to assess the efficacy of *Vasa-arishta* and *Vasaka asava* on 24 patients of *Shwasa*. The effective results were found more in *Vasa arishta* group whole improvement was observed in *Vasaka asava* treated group^v

ARDRAKA

Rasa-Katu

Guna-Guru,rooksha,teekshna

Veerya- ushna

Vipaka - Madhura

.Effects on Doshas-

It balances kapha dosha.

In Charaka Samhita it is

- **Truptighna** – Herbs which Relieve pseudo-satiation.
 - **Arshoghna** – Herbs which are good for piles.
 - **Deepana** – Herbs which are good for digestive health.
 - **Shoolprashmana** – Herbs useful in relieving abdominal pain.
- Trishna nigrhana** – Group of herbs useful in thirst.

AGNIMANTHA(*Premna integriflora*)

Ayurvedic Properties

Rasa – Tikta, Katu, Kashyaya, Madhura

Guna –Rukhsa, Laghu

Virya – Ushna

Vipaka – Katu

Dosha karma – Pacifies Kapha and Vata dosha Main Indication – Vata Disorders (disease related to nervous and musculoskeletal system)

Agnimantha is useful in neurological diseases, musculoskeletal disorders and disease related to the lungs, heart, blood, skin and kidneys. It acts as a protective agent for blood vessels, heart, liver, skin, muscles, joints and other connective tissues^{vi}. Agnimantha is also very effective for alleviating the pain, inflammation and swelling of the lymph nodes occurring in lymphadenitis. It has anti-inflammatory. Antibacterial and antiviral actions that help to inhibit the growth of microbes, fights against infections and reduce inflammation. However, if tuberculosis is the underlying cause of lymphadenitis, then Agnimantha may not alone help.

Shalaparni

Ayurvedic Properties

Rasa- Madhura, Tikta

Guna- Guru snigdha

Virya- Ushna

Vipaka- Madhura

Effects on Doshas

It balance the vata and kapha doshas.

There are various synonyms of shalaparni or srivan in Sanskrit– shalaparni, sthira, saumya, triparni, pivari, guha, vidarigandha, deergaangi, deergharpatra or anshumati.

- It states that the shalaparni is heavy in nature. It is helpful in jwara, shwasa, atisara, or Doshatrayahara and rasayan. It is tikta in taste and madhur in taste after digestion. It also has effective kriminashak, vishnashak, kshaya or kas nashak properties^{vii}. **Respiratory complications** – Extracts of this herb helps to restrict the release of allergic and inflammatory chemicals from the lung.

PRISHNAPARNI(*Uraria picta*)

U. picta is prescribed for boiling cough, chills, and fever. The antiseptic leaves are well thought out and used to get gonorrhea. The roots and pods are used to treat infantile rectal prolapse. The capsules are used to treat oral pain in children. It is used to treat urinary tract diseases, tumors, and inflammation, smoking and breathing problems. Its paste mixed with water is used as a remedy for snake bites. It is the Ayurvedic

medicine of the Indian system of medicine for the treatment of general fatigue. It is an antioxidant, analgesic, and anti-inflammatory drug in medicine.^{viii} The herb is traditionally used as an antipyretic, diuretic, astringent (used for irritable bowel syndrome, diarrhea, and dysentery) against colds, diuretics, anthelmintics, laxatives, and tonic nerves. As in China, where *U. picta* is used as a popular remedy, it is mainly used to treat fever, neutralize toxins, relieve pain, stimulate blood circulation, relieve cough, and improve breathing^{ix}.

Charaka and Sushruta prescribed the entire plant, internally in prescriptions, in misperistalsis, diarrhea, dysentery, cough, consumption, respiratory diseases, abdominal glands, and fever from the inside of the whole herb; relieve asthma attacks as an ingredient in a drink to increase breast milk. Charaka gave him liquid porridge cooked with Prishnparni for the bloody bottom; it is cooked with Prishnparni, processed with dry rice and bullet (*Sida cordifolia*) for bleeding piles and haemorrhage

BRIHATI(*Solanum indicum*)

It is a drug that present in dasamoola. It is useful respiratory conditions, heart conditions, persistent fever, scorpion stings, and difficulties urinating. Asthma, cough, and other respiratory conditions are treated with a root decoction. Brihati is a herb that helps with digestive issues and works well for intestinal worms, gas, indigestion, dysentery, and hunger. This plant helps with cardiac conditions, strengthens and stimulates the heart, and reduces edema.

VILWA

Respiratory Infection:

In south India the juice of leaves are mixed with pepper to bring relief from wheezing cough and respiratory spasm. Its regular use builds up resistance against cold and cough^x

SHYONAKA(*Oroxylum indicum*)

It is referred to as Indian caper. One among Dashamoolas. It has analgesic and anti-inflammatory properties. Wounds and boils are treated with a seed paste. The bark infusion helps with dysentery and diarrhea and has diuretic properties. In addition to revealing constipation, it will boost appetite. Its possible cytotoxic and anti-metastasis qualities make it a promising herb against cancer.

GOKSHURA(*Tribulus terrestris*)

It is a natural aphrodisiac (arouses sexual desire) and has diuretic property thus it's used in urinary disorders. Used to tone muscles before childbirth, to cause an abortion, and to stimulate milk flow. Effective in treating chest pain, eczema, enlarged prostate, sexual disorders, and infertility. The dry herb is boiled in water and given in urinary problems.

PATALA(*Stereospermum suaveolens*)

One among the dashamoola. It counteracts on pitta and Kapha. It cures swelling over the body. Effective in bleeding disorders and vomiting. It is used in snake bite, scorpion bite, vomiting, etc. It is neuroprotective and protects the liver. The herb is used for blood disorders such as anemia. It promotes the production of red blood cells. It also provides relief from symptoms associated with anemia such as lethargy, fatigue, and weakness. Roots are used for treating diseases such as bronchial asthma, blood disorders, jaundice, vomiting, paralysis, rheumatism.

GAMBARI(*Gmelina arborea*)

Commonly known as beech wood. It acts as a rasayanas. It has an action on bleeding disorders. Balances Vata dosha. It nourishes the body. With its anti-inflammatory property, It is used to relieve pain and swelling.

BADRA(*Aerva lanata*)

Commonly called the mountain knotgrass. It is a diuretic with anti-inflammatory, antihelmintic, anti-bacterial, and mild analgesic effects. It is used in the treatment of lithiasis, cough, asthma, and headache and as an antidote for rat poisoning. The decoction of the root of *Aerva lanata* is given in a dose of 50-60 ml to treat renal calculi and retention of urine. Cold infusion of the whole plant is given in a dose of 30-40 ml to treat cough and sore throat.

AMRUTHA(*Tinospora cordifolia*)

The extract is used in fever and in rhinitis conditions. It's having tonic, anti-spasmodic, anti-inflammatory, antipyretic, anti-arthritis, anti-leprosy, anti-allergic, and anti-diabetic properties. The powder of *Tinospora* is given to children by mixing with lukewarm water for nourishment and pregnant women also. The extract is given in fever conditions.

MUSTA(*Cyperus rotundus*)

Commonly known as common nutsedge. Effective in gastritis, irritable bowel syndrome. Due to its breast purification property, it is used during postpartum care to avoid indigestion to the child. The paste is applied over the breast and washed after some time. Musta oil is an effective home remedy for managing stomach disorders due to its antispasmodic and carminative properties.

Discussion**Elakanadi Kashaya: A Traditional Ayurvedic Remedy for Childhood Respiratory Woes**

In the realm of traditional Ayurvedic medicine, nature offers a treasure trove of remedies to address various health concerns. Among these, Elakanadi Kashaya stands out as a time-tested formulation specifically beneficial for managing respiratory disorders in children. This herbal decoction, prepared with a carefully selected blend of potent ingredients, has been traditionally used to alleviate coughs, colds, bronchitis, and other related ailments in young ones.

Understanding Elakanadi Kashaya:

Elakanadi Kashaya is a liquid Ayurvedic preparation, essentially a herbal decoction (Kashaya) where the active medicinal components of the herbs are extracted by boiling them in water. The name itself provides a clue to its key ingredient: "Ela" refers to cardamom, a prominent component in this formulation.

The effectiveness of Elakanadi Kashaya lies in the synergistic action of its various herbal ingredients. While the exact formulation might slightly vary depending on the Ayurvedic tradition and practitioner, some common and key components include:

* Ela (Cardamom - *Elettaria cardamomum*): Known for its aromatic and expectorant properties, cardamom helps in loosening mucus and facilitating its expulsion from the respiratory tract. It also possesses anti-inflammatory and antispasmodic actions, which can soothe irritated airways.

* Pippali (Long Pepper - *Piper longum*): Pippali is a powerful digestive and respiratory stimulant. It helps in improving metabolism, reducing Ama (undigested toxins), and clearing congestion in the chest. It also possesses anti-inflammatory and expectorant properties.

* Shunti (Ginger - *Zingiber officinale*): Ginger is well-known for its anti-inflammatory, antioxidant, and expectorant properties. It helps in relieving cough, cold, and sore throat. Its warming nature also provides comfort and helps in dispelling Kapha dosha (one of the three Ayurvedic humors associated with mucus).

* Vasa (Malabar Nut - *Adhatoda vasica*): Vasa is a renowned herb for respiratory disorders. It acts as an excellent expectorant, helping to liquefy and expel phlegm. It also has bronchodilatory and anti-inflammatory properties, providing relief from cough and breathing difficulties.

* Kantakari (Yellow-berried Nightshade - *Solanum surattense*): This herb is traditionally used for its antitussive, expectorant, and bronchodilatory actions. It helps in relieving cough, asthma, and other respiratory problems.

* Bharangi (Blue Glorybower - *Clerodendrum serratum*): Bharangi is known for its anti-inflammatory, antispasmodic, and expectorant properties. It is beneficial in managing cough, bronchitis, and other respiratory conditions.

How Elakanadi Kashaya Effectively Addresses Childhood Respiratory Disorders:

The combination of these herbs in Elakanadi Kashaya works in a multi-faceted way to alleviate respiratory problems in children:

* Expectorant Action: Herbs like Vasa, Ela, and Pippali help in liquefying thick mucus, making it easier to cough up and clear the airways. This reduces congestion and improves breathing.

* Antitussive Action: Ingredients like Karkatashringi and Kantakari help in suppressing the cough reflex, providing relief from persistent coughing, which can be exhausting for children.

* Bronchodilatory Action: Certain herbs like Karkatashringi and Vasa help in widening the constricted airways, making breathing easier, especially in conditions like bronchitis or mild asthma.

* Anti-inflammatory Action: Herbs like Ginger, Cardamom, and Bharangi help in reducing inflammation in the respiratory tract, which is often a key factor in conditions like bronchitis and upper respiratory infections.

* Immunity Boosting: Some ingredients like Pippali and Ginger can also help in boosting the child's immunity, making them less susceptible to recurrent infections.

* Digestive Support: Pippali and Ginger aid in digestion, which is crucial as proper digestion prevents the formation of Ama (toxins) that can aggravate respiratory issues.

* Preparation Method: The traditional method of preparing the Kashaya involves boiling the herbs in water until the volume is reduced to a specific proportion. Following the correct preparation method is essential for its efficacy.

* Individual Constitution: Ayurvedic treatments are often tailored to the individual's constitution (Prakriti). An Ayurvedic practitioner can assess the child's constitution and recommend the most suitable dosage and adjunct therapies.

Conclusion:

Elakanadi Kashaya represents a valuable contribution of Ayurveda in managing respiratory ailments in children. Its unique combination of potent herbs works synergistically to alleviate cough, congestion, inflammation, and breathing difficulties. However, it is paramount to use this traditional remedy under the guidance of a qualified Ayurvedic practitioner to ensure its safe and effective application for the well-being of young ones. By harnessing the power of nature, Elakanadi Kashaya offers a gentle yet effective approach to supporting children's respiratory health.

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