

## EFFECTIVENESS OF KANTAKARYAVALEHYA IN TAMAKA SHWASA IN CHILDREN – A REVIEW

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### ABSTRACT

Respiratory infections accounts to most number of visits to a doctor during the childhood and one such common disorder which requires frequent visits is Tamaka shwasa. Tamaka shwasa is a pranavaha sroto vikruti of Yapya nature with varied aetiology, frequent remissions, bahu doshaja, many srotas involvement and thus requires a multidrug therapy. Kantakaryavalehya is one such multi drug combination which encompasses and subdues all different Samprapti ghatakas and thus gives relief to the patients of Tamaka shwasa according to a well-known statement Samprapti Vighatanameva Chikitsa.

**KEYWORDS:** Tamaka shwasa, Pranavaha srotas, Kantakaryavalehya.

### INTRODUCTION






Tamaka shwasa is a pranavaha sroto vikruti of kapha and vata dushti<sup>1</sup> along with involvement of other srotas and dosha also. Tamaka shwasa is a disease characterised by shwasakrucchrata, ghurghurukata, kasa, shula, asino labhate sukham and it is recurrent in nature. Being a disease of Yapya in nature, it requires treatment which can act on various components of its Samprapti and thus cut the progress of Samprapti. One such drug which can be considered is Kantakaryavalehya which has the phalashruti of only three diseases of Pranavaha srotas viz., Kasa, Shwasa, Hikka. Administering a drug in the paediatric age group requires good palatability and minimum dose maximum effect. This

combination being able to make in Syrup form and the same being available in market, may be considered as drug of choice for the same.

**REVIEW ON KANTAKARYAVALEHA**  
Kantakaryavalehya is a multi-drug combination formula mentioned in Kasa roga adhikara of Bhaishajya ratnavali<sup>2</sup> with ingredients like Kantakari, Chavya, Pippali, Maricha, Musta, Chitraka, bharangi, Shunthi, Guduchi, Rasna, Shati, Karkatashruni, Dhanvayasa and Vamshalochana with phalashruti of only three diseases of Pranavaha srotas viz., Kasa, Shwasa, Hikka. It has the following ingredients and their detailed descriptions are as follows.

### DRUGS AND THEIR CONSTITUENTS AND ACTIONS

SI No.	NAME OF THE DRUG	RASA	GUNA	VIRYA	VIPAKA	KARMA
1.	KANTAKARI <sup>3</sup> <i>Solanum xanthocarpum</i> 	Katu Tikta	Laghu Ruksha Ushna	Ushna	Katu	Kapha vata hara, Deepana, Pachana, Kasa-shwasaghna, Hikkanigrahana, Kanthya, Angamarda prashamana.
2.	CHAVYA <sup>4</sup> <i>Piper chaba</i> 	Katu	Laghu Ruksha	Ushna	Katu	Kapha vata hara, Deepana, Pachana, Shulaprashamana
3	PIPPALI <sup>5</sup> <i>Piper longum</i> 	Katu	Laghu Snigdha Tikshna	Ushna	Madhura	Vata kapha hara, Deepana, Pachana, Rasayana, Kasahara, Hikkanigrahana, Kanthya, Sheetaprashamana, Shulaprashamana,
4	MARICHA <sup>6</sup> <i>Piper nigrum</i> 	Katu	Laghu Tikshna	Ushna	Katu	Kapha vata hara, Deepana, Pramathi, Krumighna.
5	MUSTA <sup>7</sup> <i>Cyperus rotundus</i>	Tikta, Katu Kashaya	Laghu Ruksha	Sheeta	Katu	Kapha pitta hara, Deepana, Pachana, Lekhana,

						Kandughna.
6	CHITRAKA <sup>8</sup> <i>Plumbago zeylanica</i> 	Katu	Laghu, Ruksha, Tikshna	Ushna	Katu	Kapha vata hara, Deepana, Pachana, Lekhana.
7	BHARANGI <sup>9</sup> <i>Clerodendrum serratum</i> 	Tikta, Katu	Laghu, ruksha	Ushna	Katu	Kapha vata hara, Kasahara.
8	SHUNTHI <sup>10</sup> <i>Zingiber officinale</i> 	Katu	Guru, Ruksha, Tikshna	Ushna	Madhura	Vata kapha hara, Truptighna, Shulaprashamana.
9	GUDUCHI <sup>11</sup> <i>Tinospora cordifolia</i> 	Tikta, Kashaya	Guru, Snigdha	Ushna	Madhura	Tridosahara, Medhya, Rasayana, Deepana, Jwarahara, Truptighna.
10	RASNA <sup>12</sup> <i>Alpinia galanga</i>	Tikta	Guru	Ushna	Katu	Kapha vata hara, Shwasahara, Shulahara,

						
11	SHATI <sup>13</sup> <i>Hedychium spicatum</i> 	Katu, Tikta, Kashaya	Laghu, Tikshna	Ushna	Katu	Kapha vata hara, Shwasahara, Hikkanigrahana.
12	KARKATASHRUNGI <sup>14</sup> <i>Pistacia integerrima</i> 	Kashaya, Tikta	Laghu, Ruksha	Ushna	Katu	Kapha vata hara, Deepana, Kasahara, Hikkanigrahana.
13	DHANVAYAASAKA <sup>15</sup> <i>Fagonia cretica</i> 	Kashaya, Tikta, Madhura, Katu	Laghu, Snigdha	Ushna	Madhura	Kapha pitta hara, Kaphanissaraka, Trushna nigrahana
14	VAMSHALLOCHANA 	Kashaya, Madhura	Laghu, Ruksha, Tikshna	Sheeta	Madhura	Vata pitta hara, Hrudya, Deepana, Pachana, Shwasahara, Kapha nissaraka, Jwaraghna, Balya.

**KANTAKARI** – It is a drug included in *Kasahara, Kanthya, Hikkanigrahana, Shothahara, Sheetaprashamana varga*. Both glycol alkaloid and fatty acid fractions of the

plant's extracts cause liberation of histamine from chopped lung tissue. The beneficial effect of the drug on bronchial asthma may be attributed to the depletion of histamine

from bronchial and lung tissue. Numerous research works have proven its anti-tussive, anti-asthmatic, expectorant and histamine depleting effects<sup>16</sup>.

**CHAVYA** - It contains alkaloids Piperine and Piplartine. Active principles show muscle relaxant properties<sup>17</sup>.

**PIPPALI** – Piperine is the major alkaloid. It is antipyretic, hypotensive, analeptic, CNS stimulant. It has been reported to exert significant protection against CCl<sub>4</sub> induced hepatotoxicity in mice. It improves drug availability in experimental animals, and is used for enhancing the efficacy of administered medicaments. Milk extract of fruit effectively reduced passive cutaneous anaphylaxis in rats. It protected guinea-pigs against antigen-induced bronchospasm. Research activities have revealed its Respiratory stimulant, anti-inflammatory properties. Significant effect in controlling the frequency and severity of asthmatic attack was also observed<sup>18</sup>.

**MARICHA** – Stimulant, carminative, diuretic, anticholerin, sialogogue, bechic, antiasthmatic. Fruit extracts and essential oils are inhibitory to various bacteria; it is anti-fungal and also increases permeability in intestines<sup>19</sup>.

**MUSTA** – Its active ingredients Cyperol and Cyperene have shown significant anti-bacterial activity against a number of organisms and especially Staphylococcus aureus. Alcoholic extracts are antagonistic to stimulant effect of histamine, bradykinin and serotonin on smooth muscles<sup>20</sup>.

**CHITRAKA** – Root yielded Naphthoquinone derivatives and plumbagin – the most important active principle and exhibited specific antimicrobial activity.

Plumbagin prevented accumulation of triglycerides in liver and aorta<sup>21</sup>.

**BHARANGI** – Antiasthmatic, antihistaminic, antispasmodic, antitussive, carminative, febrifuge. Found to be effective in pleuritis<sup>22</sup>.

**SHUNTI** – Anti-inflammatory, expectorant, circulatory stimulant, increases bioavailability of other drugs. Its anti-inflammatory activity is comparable to that of Prednisolone. Alcoholic extract showed some significant activity against E. coli, Preotus vulgaris, Staphylococcus aureus, Streptococcus viridans. Gingerol and Shogaol found in both fresh and dried rhizomes suppress gastric secretion and reduce vomiting. They have also shown cardio-tonic activities<sup>23</sup>.

**GUДУCHI** – Anti-pyretic, anti-inflammatory, smooth muscle relaxant, histamine antagonist, anti-allergic property on histamine induced bronchospasm. Alcoholic extract shows activity against E.coli<sup>24</sup>.

**RASNA** – Flavonoids in rhizomes have potent anti-fungal and antibacterial activity against both Gram positive and Gram negative bacteria. They are also active against Leukotrienes<sup>25</sup>.

**SHATI** –In clinical studies, EtOH extracts showed encouraging results in TPE and anti-inflammatory properties. The oil of rhizome inhibits the growth of several fungi and antimalarial activity in in-vitro studies<sup>26</sup>.

**KARKATASHRUNGI** – Expectorant, anti-asthmatic. The oil extracted from galls are found to be anti-spasmodic, anti-bacterial and anti-helminthic<sup>27</sup>.



**VAMSHALLOCHANA** – Is extracted from nodal joints of stems of species of *Bambusa arundinacea*.

In a nut shell, all drugs mentioned under the drug *Kantakaryavalehya* are *Kapha-vata hara* prominently, *Kasahara*, *Shwasahara*, *Shothahara*, *Deepana*, *Pachana*, thus exerting overall effect on all the involved *srotas* thus correcting the *Udbhava sthana*, *sanchara sthana* and *Vyakta sthana*.

The extracts are found to be carminative, expectorant, anti-inflammatory, anti-pyretic, anti-tussive, anti-bacterial, anti-microbial.

## DISCUSSION

The following points are taken to be consideration before selecting a formulation or drug for the treatment of *Tamaka Shwasa* as it is a

>*Vata kapha pradhana vyadhi*

>*Pratiloma gati* of *Vayu*

>*Sroto sangha*

>*Agni dushti* and *Aama*

Though *shodhana* is the prime mode of treatment in *Tamaka shwasa*, considering the age and probable complications, *shamana* mode of therapy may be considered using *Kantakaryavalehya*.

The *phalashruti* of *Kantakaryavalehya* is restricted only to 3 diseases – *Hikka*, *Kasa* and *Shwasa*, all three *prana vaha sroto vyadhis*, and also it is described as ‘*hanti asheshataha*’ which means *Kantakaryavalehya* cures these three conditions without any remnants or the patients become completely free from all the symptoms. It can be observed that most of the drugs mentioned in *Kantakaryavalehya* are in *Kasahara*, *Shwasahara*, *Hikkanigrahana* and *Kanthya ganas* of *Charaka* and are *Vata Kapha hara*,

*Ushna*, *Deepana*, *Pachana*, *Kasa shwasa hara*, *Shulahara*. The combination of *Kantakaryavalehya* is so unique, that the drugs are formulated with the whole *samprapti* of *shwasa* in mind where in all *samprapti ghatakas* are taken care of. *Doshas* involved in the *Samprapti* of *Tamaka shwasa* and the *ahara viharas* are provocative of *Kapha* and *Vata doshas*<sup>1</sup>. It can be observed from the *phalashruti* of the drugs that all of them are *kapha* and *vata hara* which aids in the basic concept of *Samprapti vighatana* and thus does not leave the *kriyakala* of the disease to progress.

Numerous research works done on these drugs have proven their anti-tussive, bronchodilator, smooth muscle relaxant, anti-histaminic, antibacterial, antifungal, anthelmintic, bio-availability enhancer effects which are all required in *Tamaka shwasa*. *Kantakaryavalehya* along with *pathya ahara vihara* plays a significant role in *Samprapti vighatana* of *Tamaka shwasa* in children<sup>28</sup>.

*Kantakaryavalehya* may also be made into syrup form as it is easy to administer in the paediatric age group than any other forms of medicines like tablet, *churna*, *lehya* considering the age and palatability.

## CONCLUSION

*Tamaka shwasa* is a *yapya vyadhi* and needs medication for a long time. In such *yapya vyadhis nidana parivarjana* holds the prime position in treatment as the disease can only be managed. But by using proper treatment modalities and formulations, the patient may be made symptom free for longer durations and *Samprapti vighatana* should be done at possible places.

Considering the *doshahara*, *rogaghnata* properties of the multi-drug combination *Kantakaryavalehya*, it suits to all needs of treatment in the disease *Tamaka shwasa* and so may be utilized as the first choice in its treatment.

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