

A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF VISHALADI CHURNA & CHITRAKADI CHURNA IN KAPHAJA KASA IN CHILDREN

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ABSTRACT

Kasa is one of the most common complaint prompting patients to visit health care professionals, especially Pediatricians. Though it is not life threatening, it interferes with daily routine activities. Recurrent attacks make a child especially, the school going child suffer and may have its adverse effects on their studies. If neglected, it will cause some serious ill effects. Hence treatment should be given at proper time. As the childhood is *Kapha Dosha Pradhana Kaala*, children are more prone to get afflicted with *Kaphaja Kasa*. Hence, *Vishaladi Churna* and *Chitrakadi Churna* mentioned in *Charaka Samhita*, *Chikitsa Sthana*, *Kasa Chikitsa Adhyaya* has been selected for the clinical study.

Objectives: To evaluate the efficacy of the *Vishaladi Churna* and the comparative effect of the *Vishaladi Churna* and *Chitrakadi Churna* in the management of *Kaphaja Kasa*. **Methods:** A randomized single blind comparative clinical study was conducted in 40 diagnosed cases of *Kaphaja Kasa* aged 6-12 years. They were randomly allocated into two groups, 20 subjects each. In Group A, *Vishaladi Churna* (trial drug) and in Group B *Chitrakadi Churna* (standard drug) was given orally with *Madhu* 8g/day in four equally divided doses after food for 7days. The assessment was done on before treatment, 3rd day, 7th day of treatment and follow up on 10th day. Observations were analysed and findings were evaluated by using statistical methods. **Results & Conclusion:** Hence, by this study it

can be concluded that both *Vishaladi Churna* and *Chitrakadi Churna* had significant effect but on comparing there was no significant difference between these two groups in the management of *Kaphaja Kasa* in children.

KEYWORDS: *Kaphaja Kasa*, *Vishaladi Churna* and *Chitrakadi Churna*.

INTRODUCTION

Kasa is one of the most prevalent respiratory illness symptoms seen in paediatric practice. *Kaphaja Kasa* is one of the five kinds of *Kasa*.^[1] Each stage of life is symbolised by the predominance of different Dosha, among that *Kapha* is being the most predominant *Dosha* during childhood period.^[2] The incidence of *Kaphaja Kasa* is higher in this age group because in this disorder *Kapha* is the primary cause of *Kasa* formation and *Kapha Dosha* dominates in *Balyavastha*. In its pathogenesis, there is an obstruction of *Prana* and *Udana Vata* due to *Kapha* which leads to *Kaphaja Kasa*.^[3]

Kasa is the debilitating disease of *Pranavaha Srotas*, when untreated; it may lead to dreadful diseases like *Kshaya*.^[4] Also, any *Balaroga* should be treated as soon as possible because it can obstruct a child's proper growth and development, as *Charaka* describes *Avighata* (non obstruction) as *Shareera Vriddhikara Bhava* i.e. (*Vighata* hinders *Shareera Vriddhi*).^[5]

Oral administration of medicines is one among the important *Shamana* line of treatment which is very easily administered and well accepted compared to *Shodhana* in children. Hence, in this present study *Vishaladi Churna*^[6] as a trial drug and *Chitrakadi Churna*^[7] as a standard drug mentioned in *Charaka Chikitsa Sthana*, *Kasa Chikitsa Adhyaya* were selected.

Objectives of the study

1. To evaluate the efficacy of the *Vishaladi Churna* in the management of *Kaphaja Kasa*.
2. To evaluate the comparative effect of the *Vishaladi Churna* and *Chitrakadi Churna* in the management of *Kaphaja Kasa*.

MATERIALS AND METHODS

Source of data

Literary source: All the classical, modern literatures and contemporary texts including the articles from periodical journals, websites about the disease and drug were reviewed and documented for the intended study.

Drug source: Raw drugs collected from the source of procurement. Raw drugs were identified by ATMA Research Centre and provided Drug Authentication Certificate. The *Churna* will be prepared according to the textual reference, in the Alva's Pharmacy, Mijar.

Sample source: Patients were selected from OPD and IPD of Kaumarabritya of AAMCH, Moodbidri who were diagnosed with having *Kaphaja Kasa*. Special Medical Camps in Alva's Ayurveda Medical College and other referrals.

Method of preparation of medicine: It was prepared according to the classical method of *Churna* preparation.^[8]

Method of collection of data

Selection of patients: Irrespective of gender, caste, religion that had fulfilled the diagnostic and inclusion criteria.

Design of study: Randomized Single Blind Comparative Clinical Study.

Sample size: Minimum of 20 subjects in each group.

Method of sampling: Lottery Method.

Grouping: 2 groups- Group A and Group B.

Table no. 1: Intervention.

Group	Yoga	Dose	Anupana	Time	Duration
A	<i>Vishaladi Churna</i>	8g in 4 divided doses per day.	<i>Madhu</i>	After Food	7 Days
B	<i>Chitrakadi Churna</i>	8g in 4 divided doses per day.	<i>Madhu</i>	After Food	7 Days

Diagnostic criteria

Children were diagnosed based on following symptoms of *Kaphaja Kasa* mentioned in classical texts, in addition to the signs and symptoms mentioned in contemporary texts.

- Kasa severity
- *Nishteavana*
- Swarabheda
- Aruchi
- *Peenasa*
- Gaurava

Inclusion criteria

1. Patients of either gender aged between 06 to 12 years.
2. Patient with any of two or more symptoms described in the context of *Kaphaja Kasa* had been selected.
3. *Kaphaja Kasa* of less than 15 days duration had been selected.

Exclusion criteria

1. *Kasa* other than *Kaphaja* type are excluded.
2. *Kaphaja Kasa* as *Anubandha lakshana* & *Upadrava* (complication) in other systemic diseases.
3. Patients below the age group of 06 years and above 12 years.

Study duration

- Treatment duration : 7 days
- The drug will be administered for a period of 7 days and the patients was assessed on before treatment, 3rd day and 7th day.
- Follow up period: 3 days.
- Total study duration including follow up: 10 days.

Assessment criteria

Depending upon Subjective and Objective criteria, assessment will be made based on gradation.

Subjective parameters

- Number of bouts of cough per hour.
- Average duration of each bout of Cough
- Disturbance in sleep
- *Aruchi*
- *Gaurava*

Objective parameters

- Throat congestion / Sore throat
- Nishteevana
- Peenasa

Table no. 2: Grading for assessment parameters.

Kasa severity:	
Grade 0	No cough.
Grade 1	Brief exacerbation for few hours. Intermittent cough in morning and/or after exercise. Does not inhibit routine activities.
Grade 2	Exacerbation for few hours in a day. Continuous cough during day as well as in morning. Inhibits the routine activities.
Grade 3	Exacerbations throughout day and night. Continuous cough during day and night. Disturbs sleep & prohibits the routine activities.
Nishteavana:	
Grade 0	No expectoration.
Grade 1	Thick mucoid expectoration (intermittent during cough).
Grade 2	Mucoid & sticky expectoration (accompanied during cough).
Grade 3	Mucopurulent expectoration (accompanied with each bout of cough).
Throat congestion:	
Grade 0	Absent.
Grade 1	Present.
Aruchi:	
Grade 0	Willing towards normal food.
Grade 1	Willing towards only most likely food and not to others.
Grade 2	Unwilling for food but could take meals only.
Grade 3	Totally unwilling for meals, does not take meal.
Peenasa:	
Grade 0	No nasal discharge.
Grade 1	Intermittent nasal discharge (Watery).
Grade 2	Persistent nasal discharge (Watery / Mucoid).
Grade 3	Persistent nasal discharge (Thick / Odoursome).
Gaurava:	
Grade 0	No feeling of heaviness and discomfort in the children.
Grade 1	Heaviness and pain / discomfort in chest during cough only, Relieved after expectoration.
Grade 2	Heaviness and discomfort in chest by which the patient bound to change his posture after a few minutes Relieved slightly after expectoration.
Grade 3	Restlessness due to heaviness and discomfort in chest. Not relieved after expectoration.
Sleep disturbance:	
Grade 0	Absent.
Grade 1	Present.

Investigation

Investigation was done if necessary so as to rule out any other systemic disease/disorder accordingly.

Statistical analysis

- Pre-test and Post-test was compared using Wilcoxon Signed-Rank Test.
- Comparison of two groups i.e. Group A and Group B were done using Mann-Whitney Rank Sum Test.

OBSERVATION

Table no. 3: Observations with their inference.

Observation	Predominance	Inference
Age	12 years (45%)	This could be because the majority of the individuals are from a hostel, & are more susceptible to droplet infection due to the mixing nature of children in this age group.
Gender	Male (57.5%)	This could be due to the short sample size & random subject selection.
Religion	Hindu (97.5%)	This could be due to high Hindu residents in this locality.
Socio-economic status	Middle (70%)	This just reflects the socioeconomic class of the individuals living in and around the trial site.
Diet	Mixed (55%)	Aids in the easy accumulation & aggravation of <i>Kapha</i> .
Agni	Manda (47.5%)	This could be due to the children's improper eating habits.
Koshta	Madhyama (57.5%)	This could be due to dietary habits as well as geographical location.
Prakriti	Kapha-Vata (47.5%)	Because <i>Kaphaja Kasa</i> is a <i>Pranavaha Sroto Vikara</i> and it involve both <i>Kapha</i> and <i>Vata Dosha</i> .
Mode of Onset	Sudden (62.5%)	This may be due to sudden change in climate factors.
Course of illness	Episodic (42.5%)	This could be due to their food habits, immune system issues, or exposure to exacerbating factors.
Periodicity	Throughout (50%)	It is caused by a combination of <i>Kapha</i> and <i>Vata Dosha</i> .
Aggravating factors	Weather & Food (100%)	These are the primary causes of <i>Kapha</i> aggravation. As a result, the same is refracted in the research.

RESULTS

Table no. 4: Effect of treatment in Signs and Symptoms on 7th day in Group A.

Signs& Symptoms	Mean		%	SD	SE	P Value
	BT	AT				
Kasa severity	2.150	0.800	62.7%	0.489	0.109	<0.001
Sleep disturbance	0.650	0.000	100%	0.489	0.109	<0.001
Aruchi	1.700	0.300	82.3%	0.681	0.152	<0.001
Gaurava	1.000	0.000	100%	0.858	0.192	<0.001
Throat congestion	0.500	0.0500	90%	0.510	0.114	0.004
Nishteavana	1.600	0.350	78.1%	0.550	0.123	<0.001
Peenasa	1.250	0.150	88%	0.788	0.176	<0.001

There was statistically significant in all signs and symptoms on 7th day of treatment ($P < 0.05$).

Table no. 5: Effect of treatment in Signs and Symptoms on 7th day in Group B.

Signs & Symptoms	Mean		%	SD	SE	P Value
	BT	AT				
Kasa severity	2.300	0.700	69.5%	0.503	0.112	<0.001
Sleep disturbance	0.500	0.000	100%	0.513	0.115	0.002
Aruchi	1.550	0.1000	93.5%	0.510	0.114	<0.001
Gaurava	1.050	0.0500	95.2%	0.562	0.126	<0.001
Throat congestion	0.750	0.0500	93.3%	0.470	0.105	<0.001
Nishteavana	1.850	0.400	78.3%	0.510	0.114	<0.001
Peenasa	1.050	0.0500	95.2%	0.858	0.192	<0.001

There was statistically significant in all signs and symptoms on 7th day of treatment ($P < 0.05$).

Table no. 6: Comparative effect of both the group treatment in Sign and Symptoms on 7th day.

Signs & Symptoms	Median		Percentage Relief %		P Value	Remarks
	Group A	Group B	Group A	Group B		
Kasa severity	1.000	2.000	62.7%	69.5%	0.179	NS
Sleep disturbance	1.000	0.500	100%	100%	0.423	NS
Aruchi	1.500	1.000	82.3%	93.5%	0.989	NS
Gaurava	1.000	1.000	100%	95.2%	0.989	NS
Throat congestion	0.000	1.000	90%	93.3%	0.179	NS
Nishteavana	1.000	1.000	78.1%	78.3%	0.342	NS
Peenasa	1.000	1.000	88%	95.2%	0.735	NS

There was no statistically significance in between the groups to treat the *Kaphaja Kasa* on the 7th day ($P > 0.05$).

DISCUSSION

Probable mode of action of Vishaladi Churna

This formulation is composed of *Vishala*, *Pippali*, *Musta* and *Trivrut*. It has *Katu Tikta Rasa*, *Laghu Ruksha Guna*, *Ushna Virya* and *Katu Vipaka* predominantly. The *Kapha-Vatahara* property of *Ushna Virya* aids expectoration by resolving the *Sanga* of *Vata* produced by *Kapha*. *Katu Rasa* gives good taste and *Tikta Rasa* stimulates the taste buds which help in eradication of *Aruchi* as well as *Laghu Ruksha Guna* helps in easy digestion of *Ahara*. Furthermore, because of its *Deepana Pachana* property, it enhances *Jataragni* and relieves *Agnimandya*. It also contains *Musta*, which has antibacterial, antimicrobial, and tranquillizing properties and aids in *Peenasa* elimination.

Probable mode of action of Chitrakadi Churna

This formulation composed of *Pippali*, *Pippalimula*, *Chitraka* and *Hastipippali*. It has *Katu Rasa*, *Laghu Ruksha Guna*, *Ushna Virya* and *Katu Vipaka* predominantly. Due to its *Kapha-Vatahara* property and *Ushna Virya* it counteracts *Kapha Nishteevana* which is the main symptom of disease. *Aruchi* is countered by its *Ruchya* characteristic. The *Laghu Ruksha Guna* facilitates *Ahara* digestion. *Hastipippali's* *Kanthya* property also aids in the treatment of throat congestion/sore throat, *Swarabheda*, and *Kante Kandu*. And the *Grahi* feature of *Chitraka* prevents excessive mucus production in *Pranavaha Srotas* as well as aids in the treatment of *Peenasa*.

CONCLUSION

Kaphaja Kasa is an independent disease of *Pranavaha Srotas* mentioned in classics, commonly observed in general practice. *Kapha-Vata Prakopakara Ahara* like intake of cold and oily foods, particularly bakery foods acts as *Vyanjaka Nidana* and *Vihara* like dust, weather act as *Utpadaka Nidana* for the manifestation of *Kaphaja Kasa*. The pathophysiology of *Kasa* involves the vitiation of *Rasa Dhatu* by vitiated *Doshas*. In present clinical study both *Vishaladi Churna* and *Chitrakadi Churna* showed statistically significant on all the assessment criteria but on comparison between two groups there is no statistically significant difference in all assessment criteria. Thus we can conclude that there is a significant effect of *Vishaladi Churna* in *Kaphaja Kasa* in children (6-12 years).

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