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Effect of Shringyadi Leha In The Treatment Of Kapahaja Kasa In Children – A Randomized Controlled Clinical Study

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ABSTRACT

Respiratory system has direct and continuous contact to atmosphere containing dust , pollens , smoke and various other micro organisms . Kasa is related to pranavaha srotas i.e respiratory system. Kasa (cough) is much common complaint among the population espacially in pediatric population. Kaphaja kasa is one among the 5 varieties of kasa .It is characterized by inflammation of upper respiratory tract and bronchi. Children become more susceptible to respiratory diseases because of some specific anatomical and physiological peculiarities and immature immune responses who are more prone for infections.The present study is conducted to evaluate the effect of shringyadi

leha in kaphaja kasa in children and to observe its effect on prakruti subsequently comparing the effect of Shringyadi leha with Talisadi churna in kaphaja kasa in children. children of age group 4 to 10 years presenting with cough duration of less than 14-days were randomly selected and divided into two groups. Group A received Shringyadi leha, Group B received Talisadi choorna for 7 days along with honey as anupana. Assessment was done on subjective and objective parameters. Statistically result was significant within the groups and comaprable between the groups.

Key Words: Kaphaja kasa, Shringyadi leha, Talisadi choorna, cough, children

INTRODUCTION

In medical science , many diseases are not known to be life threatening but these diseases increasingly irritates the individual's routine life. When these type of diseases are neglected , which may leads to various types of complications which may be serious and life threatening. There are various number of common clinical complaints in which Kasa (cough) is known as commonest complaint in day to day practice. Kasa is most common acute disease of lungs and a separate disease as well as a symptom of many diseases related to respiratory symptoms. It involves various parts of respiratory tract like inflammation of upper respiratory tract and bronchial tubes inflammation.[1] If Kasa is neglected or kept untreated for longer duration, then it may leads to serious complications in future. Kasa occurs when sensitive receptors located in larynx and upper airway activated by secretions , irritants , microbes and other foreign bodies. Cough is one of the most

commonest complaint among various respiratory symptoms for which number of patients desire more consultation.[2] Cough is 5th most common disease in pediatrics practice all over the world. In children the incidence rate and recurrence rate is much higher than other age groups . School going children are more catarrhal, which itself shows the prevalence of the same in this age group.[3] It is a complex and precisely timed neuromuscular phenomena.Treatment of cough depends upon its presented function. In today's era number of drugs like antibiotics[4,5]antihistamines[6] , mucolytics etc. are available for treatment of diseases successfully , but it also has disadvantages like chances of recurrence of condition , development of bacterial resistance against drug are noticed day by day. Beside this problem , there are more side effects and adverse drug reactions which have been reported time to time. So in current sceinario by looking at these type of problems arising due to drugs , it's better to look for a safe and effective alternative treatment. Kapahaj kasa is distinguished by productive cough , heaviness of head and body , dense sputum , chest pain and reduced or loss of appetite .[7,8] For its successful treatment, since ancient times various therapies like shodhana , shamana , and rasayana therapy are in practice . In ayurvedic classical texts many drugs and formulations have been written for the tratment of Kasa . Various researches have been done on these drugs which indicates their expectorent , mucolytic , demulcent etc actions. By looking at above said points and various problems arised due to modern drugs, this present work was taken by choosing the formulation Shringyadi Leha

[9,10] having drugs like *Karkatshringi , Ativisha* and *Nagarmotha* , which are having properties to treat the cough by tackling the all possible pathologies of cough

AIMS AND OBJECTIVES :

1. To evaluate the effect of shringyadi leha in kaphaja kasa.
2. To observe the prakrutiwise effect of shringyadi leha in kaphaja kasa in children.
3. To compare the effect of Shringyadi leha with Talisadi churna in kaphaja kasa in children.

MATERIALS AND METHODS

Subjects

Irrespective of age , sex 40 patients of kaphaja kasa were selected from outpatient department and inpatient department of kaumarabhritya KLE's Ayurveda hospital and from outside the hospital also with prior permission.

Inclusion criteria :	**Exclusion criteria :**
1. Children of either sex between the age group 4 years to 10 years. 2. Patients with any of two or more symptoms described in the context of kaphaja kasa will be selected.	1. Patients with kasa- except kaphaja kasa. 2. Kasa as anubandh lakshana and updrava in other systemic diseases. 3. Patients age below 4 years and above 10 years.

3. Kaphaja Kasa of less than 15 days duration.	4. COPD cases and tuberculosis patients.

Diagnostic criteria : As per clinical signs and symptoms mentioned in ayurvedic classics like Bahula kapha , Nistheevan ghana kapha , Vaksha sampurnata , shreera Guruta , Pinasa , chhardi etc diagnosis was made.

Drug preparation:

Shringyadi Leha was used in study trial and Talisadi churna as controlled drug . Shringyadi Leha was prepared and Talisadi churna was procured from GMP certified KAHER's Ayurveda Pharmacy, Belgavi. For Shringyadi Leha ,All the raw materials were taken,later shodhana of ativisha had done with cow dung juice and dried[11]. Further all raw drugs made into choorna form,the mixed homogeneously in equal quantity to prepare shringyadi leha (churna) and analytical study was done in CRF.

Ingredients of Shringyadi Leha[9,10]

Contents	Latin name	Part used	proportion
Karkatsringi	Pistacia integerrima	Gall	1 part
Ativisa	Aconitum heterophyllum	Tuberous root	1 part
Nagarmotha	Cyperus rotundus	Root	1 part

Ingredients of Talisadi churna[12]

Talish	Abies webbiana	12 gram
Maricha	Piper nigrum	24 gram
Sunthi	Zingiber officinale	36 gram
Pippali	Piper longum	48 gram
Vanslochana (Tavaksheer)	Bambusa bambos	60 gram
Ela	Eleteria cardamommum	6 gram
Tvak	Cinnamomum zeylanicum	6 gram
Sharkara		284 gram

Method of collection of data : From each patient before starting of study Informed written consent was taken . With the help of performed parameters evaluation of lakshnas of kaphaja kasa was done before and after treatment.

Study design : Study design was Randomized controlled comparative clinical trial.

Intervention : With cough as a predominant symptom , the patients attending kaumarabhritya opd were screened. Using simple computer generated randomization method cases were equally distributed in two groups (20 patients in each group) .

Duration of study : The treatment period was for 7 days and10 days was the total period of study. Before and after study both the groups were assessed as per the graded clinical parameters of kasa. The variations in severity of Kaphaja Kasa and its re-occurrence were recorded.

Drug Dose:[13,14] 1 gm/ year of Shringyadi leha (Shringyadi choorna with honey) and Talisadi choorna were given for licking three times a day.

Dose of drug according to Age

AGE	DOSE (GMS – TDS)	AGE	DOSE (GMS – TDS)
4 yrs	4gms/day	**8yrs**	8gms/day
5 yrs	5gms/day	**9yrs**	9gms/day
6 yrs	6gms/day	**10 yrs**	10gms/day
7yrs	7gms/day		

Assessment criteria :

Assessment was done on basis of gradation of both the subjective and objective clinical feature before and after treatment.

Subjective parameter:

1. Number of bouts of cough in 1 hour.(Bahula kapha)[17] 2. Duration of each bout of cough.[17]	3. Peenasa[15] 4. Aruchi [16] 5. Chhardi[16]

Objective parameters:

1. Crepitation	2. Sputum

Statistics :

Wilcoxon test for within the group and Mann Whitney U test for between the groups was applied to know the effect of drugs. All tests were considered statistically significant at $p < 0.05$.

OBSERVATION

Demographic profile	Group A	%	Group B	%	Total	Chi-square	p-value
Gender							
Male	14	70.00	10	50.00	24	1.667	0.197
Female	6	30.00	10	50.00	16		
Age							
4 -5yrs	10	40.00	9	15.00	19	2.519	0.472
6-7yrs	4	5.00	2	10.00	3		
8-9 yrs	3	15.00	7	10.00	10		
10 yrs	3	15.00	2	10.00	5		

PRAKRUTI :

Factors	Group A	%	Group B	%	Total
K	1	5%	1	5%	2
KP	6	30%	4	20%	10
KV	10	50%	11	55%	21
VP	3	15%	4	20%	7

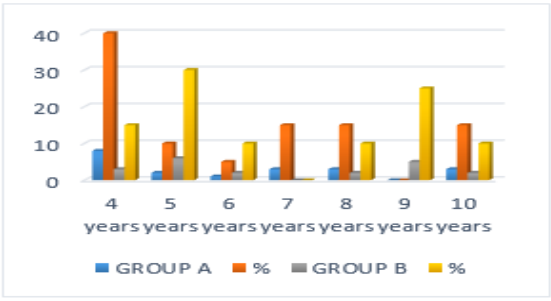


Figure 01: Distribution of patients based on age

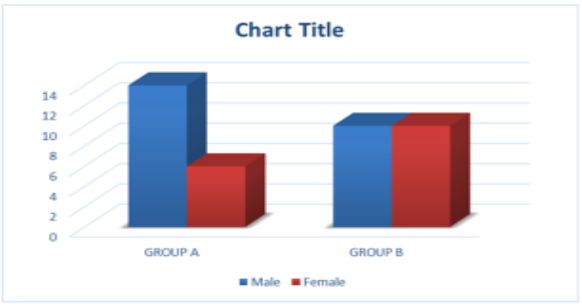


Figure 02: Gender wise distribution

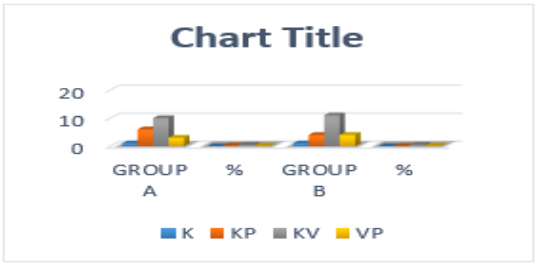


Figure 03: Distribution of patients based on age

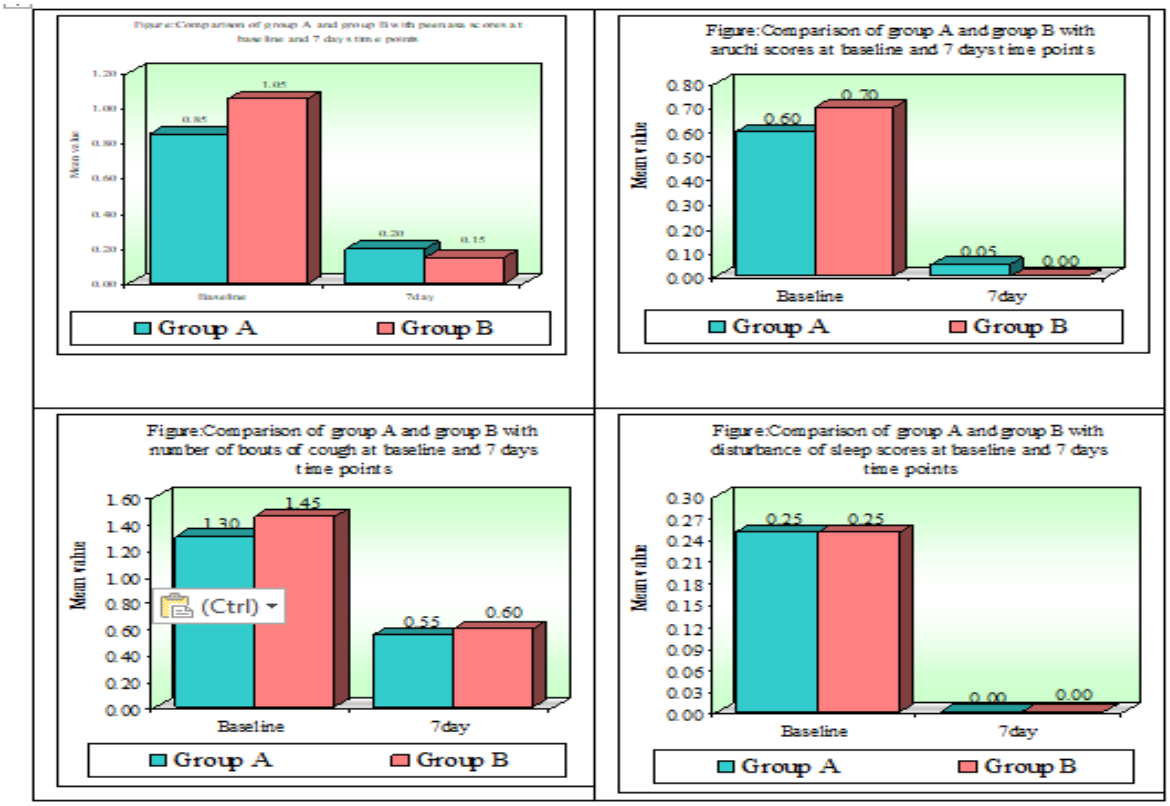
RESULTS

The assessment of parameters was done on 0th day (day of enrollment) and 7 th day (follow up) and reoccurance of symptoms were assessed on 10 th day of study.

Effect of interventions on Peenasa, Aruchi, No. of bouts of cough , Duration of cough , Disturbance of sleep , crepitations and sputum with standard deviations (S.D and p value.

Sr. No	Parameter	Intervention period	Group A (S.D)	Group B(S.D)	p value
1	Peenasa	0 day	0.49	0.22	0.3040
		7 day	0.41	0.37	0.7868

		p	0.0015	0.0002	
2	Aruchi	0 day	0.82	0.73	0.5700
		7day	0.22	0.00	0.7868
		p	0.0077	0.0033	
3	No. of bouts of cough	0 day	0.47	0.51	0.4171
		7day	0.51	0.50	0.7868
		p	0.0007	0.0003	
4	Duration of cough	0 day	0.47	0.69	0.3302
		7 day	0.51	0.50	0.7868
		p	0.0007	0.0003	
5	Disturbance of sleep	0 day	0.44	0.44	1.0000
		7 day	0.00	0.00	1.0000
		p	0.0431	0.0431	
6	Crepitation	0 day	0.37	0.55	0.7557
		7 day	0.00	0.00	1.0000
		p	0.1088	<0.0679	
7	Sputum	0 day	0.50	0.49	0.7868
		7 day	0.37	0.41	0.7868
		p	0.0077	0.077	



DISCUSSION

Discussion on effect on Peenasa (nasal discharge)

Between the groups no significant result were seen . But by Wilcoxon matched pair test within the group significant improvement was present in both groups. But in Group B (% Of change 85.71%) and Group A (% of change 76.47%) was recorded. In Group A – *Ativisha , karkatshringi , Nagarmotha* and in Group B -*Talisha, Maricha, Pippali and Shunthi* in which are

having *Tikta* , *Katu* Rasa and *Ruksha* Guna , Usna Virya having action of Kaphahara and Kaphashoshana , showed a good result in the reduction of Peenasa. Even *Nagarmotha* having action of antihistaminic might also shown good effect.

Discussion on effect on Aruchi (loss of appetite)

no significant result was seen between the groups . But within the groups significant improvement was observed i.e. in Group B (% of change 100%) and Group A (% of change 91.67%) with p value <0.05. In Group B presence of *Trikatu* having Deepana and Pachana properties which might have increased the Appetite where as in Group A also contains deepana ,pachana and rochana guna and having action of nagarmotha as appetizer and digestant might shown a good effect on Aruchi.

Discussion on effect on Disturbance of sleep

between the groups no significant result was observed . Within the groups significant results were seen in Group A and Group B (% of change 100%) with $p < 0.05$.Bouts of coughing at night is main etiology for sleep disturbance in the cases seen. Since both yogas have a good kasahara and have antitussive action of Ativisha, it has probabaly helped in reducing disturbed sleep. Because of significant reduction in symptoms improved the sleep quality.

Discussion on effect on No. of bouts of cough and Duration of cough bouts

between the groups no significant result were observed .Within the groups in Group B (% of change 58.62%) and in Group A (% of change 57.69%)was seen . The Kaphaja Kasa is due to the morbidity of the Kapha and Vata. Kaphaja kasa has avaran pathology by morbid kapha to vata is process behind the illness. But the drugs present in both the groups has action as astringent ,

expectorent, antibacterial, anti-inflammatory, anti-asthmatic activity, anti-allergic, immuno-modulatory activity, so these property helps to reduce the symptoms.

Discussion on effect on Crepitation

Between the groups result seen was not significant .In within the groups both groups Group A and Group B showed significant result with 100% change. These two preparations have kapha shoshana property, does not enhance the further pathology. The Lekhana karma and Srotoshodhaka property of the *Ruksha , Usna and Laghu* guna present in *Talisha, Maricha* and *Vanshalochana* might have helped in reduction of Crepitation in group B and in group A the ingredients - *Ativisha , Nagarmotha* having *Tikta and Katu* rasa - Lekhana karma and kaphahara property and *Karkatshringi* having action as expectorent , thus might have helped in reducing the Crepitation . Madhu also do the kapha chedana and act as kapha nissaraka. So releases the obstruction might helped in expulsion of kapha and normalizing the vata movement .

Discussion on effect on Sputum

Between the groups result was not significant .But within the groups significant result was noticed in which Group A(% of change 75%) and Group B (% of change 69.23%) showed significant improvment with $p< 0.05$.Due to irritation produced by the excessive Kapha in pranavaha srotas leads obstruction to the normal movement of Vata causing abnormal upward movement which will cause severe cough and expectoration. Both the drugs have kapha vilayana properties along with *Madhu* which acts as kapha nissaraka ,thereby Reduction in the sputum is there.In shringyadi Leha – *Ativisha* having the action as antitussive[16] might showed a good effect on sputum.

Discussion on effect of Shringyadi Leha on prakruti

Peenasa- all prakruti showed improvement. Due to unequal and very less no. of patients in different prakruties , overall effect of drug on prakruti could not be derived in this study.

Discussion on Follow up : All the patients were followed up on 7th day for first time and for recurrence of kasa and its symptoms on Day 10th for final time. Out of 40 patients , in total 3 patients were there who didnot get complete relief in symptoms of kasa after the completion 3of study on 10th day. Other child who got relived in symptoms early are doing their all activities normally.

Discussion on Shringyadi Leha

Shringyadi Leha plays a major role to alleviate kasa , jvara, chardi and it contains three drugs Karkatshringi , Ativisha and Nagarmotha.

Ativisha is known as shishubhaisajya and even its churna if administered alone also alleviates kasa , jvara and chhardi. Due to its laghu , ruksha guna it helps in reducing kapha , because of its usna veerya it reduces both vata and kapha dosha . many recent researches also shown the anti inflammatory , antimicrobial , antisecretory , antispasmodic and antimalarial activity of ativisha[17,18].

Karkatshringi : due to its laghu, ruksha guna it reduces kapha and because of its usna veerya it alleviates both vata and kapha dosha . many researches shown its actions like expectorant , carminative , anti- inflammatory , anti allergic and anti microbial as well as anti-histaminic e.t.c.

Nagarmotha : It is having laghu , ruksha guna it helps to reduce kapha and because of tikta rasa it helps in deepana pachana , so acts as agnideepaka . Many researches exhibited its actions like appetizer, astringent , antihelminthic and digestant[18] e.t.c.

Honey : Mainly it is used for its palatibility activity. It is having lekhana property as well as does kaphachhedana and helps in

kaphanissarana and releases obstruction of respiratory channels . Madhu normalizes vata dosha gati by expulsion of kapha[19]

These all together helps in samprapti vightana of kaphaja kasa and with the help of their anti inflammatory , anti microbial , antihistaminic , immuno modulatory , expectorant , appetizer, and digestant effect would helped in controlling the pathogenesis of kapha .

CONCLUSION

Shringyadi leha showed statistically significant results in the management of Kaphaja Kasa. Due to unequal and very less no. of patients in different prakruties , overall effect of drug on prakruti could not be derived. Shringyadi leha and Talisadi churna both are equally effective in the management of Kaphaja Kasa in children.

BIBILIOGRAPHY

1. Clinical Research Protocol for traditional Health sciences. Delhi: Central Council of Research Ayurveda & siddha Dept of AYUSH; 2010. p. 6.
2. W.Ross, Lawler MD, Texas. An office approach to the diagnosis of chronic cough.
3. Drake Lee AB. The catarrhal child In Kerr AG. Otolaryngology 1987;6(5):280 – 90.
4. Alastair D Hay, Knut Schroeder, Tom Fahey. Acute cough in children: BMJ.2004;328 1062.
5. Smucny JJ, Becker LA, et all. Are antibiotics effective treatments for acute bronchitis? A meta-analysis. J Fam Pract. 1998 Dec;47(6):453-60.
6. Http://www.ijrap.net/admin/php/uploads/1093_pdf.pdf
7. Peter V. Dicpinigaitis. Cough: an unmet clinical need. British Journal of Pharmacology 2011; 16(3):116–124.

8. Agnivesha. Charaka Samhita revised by Charaka &Dridabala with Ayurveda Dipika comentary by Chakrapanidatta, foreword by Acharya Yadav ji Trikam ji. 5th edition. Varanasi: Choukhamba Sanskrit Sansthan; 2001. p. 539-47.
9. cakrapanidatta's Cakradatta edited and translated by Priya vrat Sharma, chaukhamba prakasan 3rd edition 2002 ,Varanasi (Balarogadhikar ,64/28, pg. 548)
10. Bhaisajya ratnavali of Kaviraj Govind Das sen Edited with siddhiprada hindi commentary by Siddhi Nandan Mishra chaukhamba surbharti prakasan , Varanasi , (Balarogadhikara 71/ 67 , pg.1083).
11. Raja Nighantu of Pandit Narahari by Dr. Inderdeo Tripathi Varanasi ; Chaukamba Krishnadas academy 3rd ed. 2003. p_163.
12. Sharangadhara samhita by shailja shrivastava , madhyam khand 6/132-135.
13. Laxsmipati shastri. Yogaratnakar . Varanasi: Choukamba publications; 2008. p. 441(uttararda).
14. Laxsmipati shastri. Yogaratnakar . Varanasi: Choukamba publications; 2008. p. 443(uttararda).
15. Deeja CR , Satya Priya T , Venkat Shivudu , Ram Reddy GP , Clinical Evaluation Of Hareetkyadi Gutika On Kaphaja Kasa International Journal Of Ayurvedic Medicine , 2013 , 4(4), 394-404 ISSN:0976-5921 page no-399
16. Dr.Dhiraj Shingate An Open Randomized Controlled Trial Of Marich Churna and Pippli Churna In The management of Kaphaja Kasa in Bala Maharashtra University Of Health Science , Nashik 2015-16 .
17. Dr. Anantamati N. Bammagol Evaluation Of The Efficacy Of Ativishadi Yoga As An Antitussive Drug A Randomized Control Clinical Trial.
18. S.John.Adams et al "Pharmacognostic & Phytochemical studies on Ayurvedic drugs Ativisha & Musta" , Revista

Brasileira Farmacognosia Brazilian Journal of Pharmacognosy 23(3) may-june 2013page no-398-409.

19. Shadkam MN, Mozaffari-Khosravi H, Mozayan MR. A comparison of the effect of honey, dextromethorphan, and diphenhydramine on nightly cough and sleep quality in children and their parents. J Altern Complement Med 2010;16(7):787-93.