

## A COMPARATIVE STUDY ON *BRIHATI* AND *KANTAKARI* IN *SHVASA* AND *KASA*

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*Various preparations of whole parts of Brihati and Kantakari have been used in Shvasa and Kasa in ancient Ayurvedic literature. Botanically, Brihati is identified as Solanum indicum Linn while Kantakari as solanum surattense Burm. f. In this study water decoction of Brihati and Kantakari were prepared according to authentic process. The decoctions were studied to evaluate the efficacy of the drugs in the patients of Shvasa (bronchial asthma) and Kasa (cough). Results of study suggest that the effect of Kantakari decoction was better than Brihati decoction on different clinical parameters like dyspnoea, cough, daily bouts of asthma per week, frequency of asthmatic attacks per week, severity of asthmatic attack in 24 hours and vital capacity in the patients of Shvasa and Kasa.*

### Introduction

Different parts of *Brihati* and *Kantakari* have been traditionally used for

various medicinal properties. The extract of the whole plant has been tested for a wide range of biological activities. These drugs are administered in cough, asthma and chest pain, being used in the form of decoction. Roots and seeds of *Kantakari* are also reported as an expectorant in asthma and cough. The main glycoalkaloids are solanine, solasonine and diosgenine present in different parts of *Brihati* and *Kantakari*.

In Ayurvedic texts, many *Shvasahara* and *Kasahara* drugs have been described which have anti-asthmatic and anti-tussive actions but these two drugs *Brihati* and *Kantakari* are mentioned in *Kanthyamahakashya* and *Hikka Nigrahanamahakashya*. They are also indicated in *Kasa*, *Shvasa*, *Jvara*, *Agnimandya* and *Amadosha* at various place. Vagbhata first gave due importance that *Kantakari* is the best drug for *Kasa*.

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The present clinical study was designed to evaluate the efficacy of *Brihati* and *Kantakari* in the patients of *Shvasa* and *Kasa* which is based on the observations of *Shvasahara* (anti-asthmatic) and *Kasahara* (anti-tussive) effects of these two drugs in Ayurveda.

## Materials and Methods

Based on the random distribution 30 cases were selected and divided into two groups as group A : 15 cases were treated with *Brihati* decoction and group B : 15 cases were treated with *Kantakari* decoction.

All these patients were kept on uniform diet and essential bio-chemical investigations were done before & after treatment of first and second groups. The patients of group A were advised to take 25 gm of coarse powder of *Brihati Panchanga*, boil it with 200 ml of distilled water on moderate heat to 50 ml. It was to be filtered and the patient was advised to take 25 ml. twice daily for a period of one month and was observed at the intervals of 15 days. The patients of group B were also advised to follow the same process for decoction preparation of *Kantakari* and to take same dose for a same period and observed at the same intervals.

To evaluate the therapeutic response of these drugs the parameters were adopted, dyspnoea and cough, days of asthma per week, frequency of asthma per week,

severity of asthmatic attack in 24 hours & vital capacity.

The effect of treatment of these two drugs on the above parameters were noted. To know the improvement the mean of scores and mean differences before and after treatment were calculated on 15th and 30th day. Grading of the patients were done and given scores according to grades. As for example in dyspnoea :

Grade 1 : (score-1) Dyspnoea on rest

Grade 2 : (score-2) Dyspnoea while doing less than accustomed work

Grade 3 : (score-3) Dyspnoea on accustomed work

Grade 4 : (score-4) Dyspnoea on more than accustomed work.

## Result & Observations

The clinical effects of these two drugs on the different clinical parameters have been in Table 1.

On statistical analysis as given in the table, the clinical improvement in patients on above parameters were mostly significant at all level of treatment of these two drugs but highly significant in case of dyspnoea, cough and vital capacity after 30 days of treatment of *Kantakari* decoction. The improvement in severity of asthma was also observed to be highly significant after 15 days of treatment of

Table 1

**'P' values of *Brihati* and *Kantakari* decoction after treatment in the patients of *Shvasa* and *Kasa* (N = 15 for each drug)**

Parameters	'P'/15 days of treatment		'P'/30 days of treatment	
	<i>Kantakari</i>	<i>Brihati</i>	<i>Kantakari</i>	<i>Brihati</i>
Dyspnoea	< 0.02*	< 0.01*	< 0.01*	< 0.001**
Cough	> 0.05	< 0.01*	< 0.02*	< 0.001**
Days of asthma/week	< 0.02*	< 0.01*	< 0.01*	< 0.01*
Frequency of asthma/week	< 0.05*	< 0.01*	< 0.02*	< 0.01*
Severity of asthma/day	< 0.02*	< 0.001**	> 0.01*	< 0.01*
Vital capacity	< 0.02*	< 0.01*	< 0.01*	< 0.001*

\* Significant, \*\* Highly significant

*Kantakari* decoction. The improvement on cough was not significant after 15 days of treatment of *Brihati* decoction. The patients on both drugs appeared to tolerate the preparations well and there was no adverse effects in either group.

### Discussion and Conclusion

The problem of bronchial asthma is increasing throughout the country. There is no curative medicine available for this disease and the available drugs are only for the control of symptoms. Asthma is a chronic disease and drugs are used for a long time which cause various side effects

and can produce other complications. There is need of special type of herbal formulations which produce minimal side effects or any other complications but also improve all the symptoms related with bronchial asthma. Present study was designed to evaluate the efficacy of these herbal drugs (*Brihati* and *Kantakari*) which may be helpful in treating the patients without producing any side effects. In summary, it can be concluded that the effect of *Kantakari* decoction was found better than the effect of *Brihati* decoction in the patients of *Shvasa* (bronchial asthma) and *Kasa* (cough) on different clinical parameters.

## REFERENCES

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## सारांश

### श्वास एवं कास में वृहती एवं कण्टकारी का तुलनात्मक अध्ययन

परमात्मा प्रसाद गुप्ता, एस.डी. दुबे, जे.के.मिश्रा एवं जे. के ओझा

प्रस्तुत विषय में शास्त्रोक्त श्वास एवं कांस रोग में वृहती एवं कण्टकारी का तुलनात्मक अध्ययन आतुरीय विभागों में किया गया। आतुरीय अध्ययन हेतु ३० रोगियों को दो समूहों में विभाजित किया गया। प्रथम समूह में १५ रोगियों को शास्त्रीय विधि से वृहती का क्वाथ निर्मित कर तथा द्वितीय समूह में १५ रोगियों को कण्टकारी का क्वाथ, २५ मि.ली. की मात्रा में प्रातः सायं प्रतिदिन दिया गया। १५ दिन के अन्तराल पर रोगियों को दो बार निरीक्षण किया गया।

चिकित्सावधि की समाप्ति पर काष्ठौषधि वृहती की अपेक्षा कण्टकारी का प्रभाव तुलनात्मक दृष्टि से ज्यादा अनुकूल परिलक्षित हुआ। विभिन्न रोगियों में किये गए प्रयोगों ने दर्शाया कि वृहती एवं कण्टकारी के क्वाथ से श्वास एवं कास के लक्षणों में पर्याप्त सुधार हुआ।