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## A Clinical Study to Evaluate the Effect of *Katphaladi Kwatha* on *Manovikara* in Bronchial Asthma

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### ABSTRACT

**Objective:** In literatures available, reference reveal that long standing *sharirika vyadhi* can cause *manasika vyadhi* or *manasika* can lead to *sharirika vyadhi*. Both *tamaka shwasa* and *manovikara* can be manifested as primary independent disease or as a secondary disease to each other. Hence objective was to evaluate the therapeutic effect of *Kataphaladi Kwatha* in bronchial asthma and to evaluate the effect of *Kataphaladi Kwatha* in *Manovikara* of Bronchial Asthma. **Method:** Interventional non-randomized open labelled single group study with pre-test and post-test design. Twenty patients diagnosed with *tamaka shwasa* having *manovikara* satisfying inclusion and exclusion criteria were selected from OPD/IPD of SDM Ayurveda Hospital, Udupi. The selected patients were administered with 50ml of *katpahaldi kwatha* twice a day for 14 days. Statistical analysis was done using students paired 't' test and Wilcoxon signed rank test. **Result:** All subjective and objective parameters showed marked reduction after the intervention. Except for heart rate, labored breath, *shoka*, haemoglobin and random blood sugar others all showed statistically significant value after the treatment. **Conclusion:** *Katphaladi kwatha* is effective in parameter of *manovikara* and *tamaka shwasa*.

### KEYWORDS

*Tamaka shwasa, Manovikara, Katpahaladi kwatha, Bronchial asthma*



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## INTRODUCTION

Diseases manifesting in both body and mind are unique in nature, as they need a unique line of treatment. When *sharirika vyadhi* retains in the body for long time gets worsened due to varied factors it ends up in *manasika vyadhi* and vice-versa<sup>1</sup>. *Manovikara* caused due to the derangement in *tamasika* and *rajasika guna* of *manas*, thus affecting the *manovahasrotas* leading to manifestation of disease<sup>2</sup>.

Likewise the disorder *tamaka shwasa* produced due to vitiation of *vatakapha dosha* has an involvement of the *manovikara* in its manifestation and exacerbation. *Tamaka shwasa* is a *kaphavataja* predominant disorder with derangement in *pranavaha srotas* and site of origin as *pitta sthana*. *Vayu* gets obstructed by *kapha* and moves in opposite direction in turn causes *tamaka shwasa*. *Shwasa* (dyspnoea), *kasa* (cough) and *kaphanishtivana* (sputum) are cardinal features of *tamaka shwasa*<sup>3</sup>. Asthma is a chronic, episodic illness characterized by extensive narrowing of the tracheobronchial tree. Symptoms include dyspnoea, cough, sputum and wheeze. Psychological factors can initiate and worsen asthma<sup>4</sup>. Emotional stress acts as stimuli that incite acute episodes of asthma. The fear of dyspnoea can directly trigger

asthma attack and high level of anxiety or depression is associated with increased rate of hospitalization and asthma related morbidity<sup>5</sup>.

## MATERIALS AND METHODS

Ethical Committee Approval Number Ref. No.- SDMCAU/ACA-49/ECA80/16-17

### OBJECTIVES OF THE STUDY:

- To evaluate the therapeutic effect of *Katphaladi Kwatha*<sup>6</sup> in bronchial asthma.
- To evaluate the effect of *Katphaladi Kwatha* in *Manovikara* of Bronchial Asthma

### Study design

It is an open labelled Interventional clinical study with pre and post-test design.

### Intervention:

Patients were administered with 50ml of *Katphaladi Kwatha* twice a day for 14 days.

### Duration of clinical study:

Intervention: 14 days

Follow up: 28<sup>th</sup> day

### Diagnostic criteria:

- Patient with *prathyatma lakshana* of *tamaka shwasa* – *shwasa*, *kasa*, *kaphanishtivana*.
- Patient with *krodha*, *bhaya*, *shoka*, *udvega*, *chinta* (any one).

### Inclusion criteria:

- Mild intermittent, mild persistent, moderate persistent asthma according to



global initiative for asthma (GINA) guidelines.

- Patient of *tamaka shwasa* with *manovikara*
- Patient aged 16-60 year
- Patient having history more than 6 months

Exclusion criteria:

- Severe persistent asthma according to global initiative for asthma (GINA) guidelines
- Patients of *tamaka shwasa* with other respiratory illness like tuberculosis, emphysema. Corpulmonale, bronchiectasis.
- Patient of *tamaka shwasa* with other systemic disorder.
- Other psychiatric illness.

Assessment criteria:

- Objective and subjective criteria parameter were scored by standard method and was assessed before and after treatment on 0,7<sup>th</sup>,14<sup>th</sup> and 42<sup>nd</sup> day and were analysed statistically using students paired t test and Wilcoxon signed rank test.

Objective criteria:

- Quantity of sputum,
- PEFr

Subjective criteria:

- Cough
- Dyspnoea
- Night wheeze
- Breath sound

- Labored breath
- Respiratory Rate
- Heart Rate
- *Bhaya, Krodha, Shoka, Udvega, Chinta* (any one)
- Hamilton's anxiety and depression scale

Investigations

- Hb%
- RBS
- Total Count
- Differential Count
- Erythrocyte Sedimentation Rate
- Absolute Eosinophil Count

**Observation:** As per observation, maximum patients were from middle age group, females were more in number, majority of patients were Hindu, most of them were married, belonged to middle class, most of them were house makers, maximum were having mixed dietary habit and maximum had tea/coffee as addiction. Maximum patients were having *vatakapha prakruti*, majority of patient had *tamasika manasika prakruti*, and maximum had *madhyama sara, samhanana, pramana, satva, aharashakti, vyayamashakti*. In the study maximum had cold season, dust and stress as aggravating factor and hot treatment as relieving factor. *Chinta* was seen in maximum patients as the *manovikara*.



## RESULTS

*Katphaladi kwatha* showed improvement on Dyspnoea by 82.14%, Cough by 88.5%, Night wheeze by 85.2%, Labored breath by 22.2%, Respiratory Rate by 94%, Breath sound by 91.6%, Heart rate by 50.33%,

*Bhaya* by 75%, *Krodha* by 62.5%, *Shoka* by 72.71%, *Udvega* by 71.42%, *chinta* by 83.3%, Hamilton's depression scale by 37.14%, Hamilton's anxiety scale by 36.04% [Table 1].

**Table 1** Showing the Statistical Results of Subjective Criteria's

SYMPTOMS	n	MEAN		SD		Z - VALUE	P - VALUE
		BT	AT	BT	AT		
DYSPNOEA	20	1.400	0.250	0.598	0.550	-4.234	<0.001
COUGH	20	1.300	0.150	0.470	0.366	-4.065	<0.001
NIGHT WHEEZE	20	1.350	0.200	0.489	0.410	-4.234	<0.001
LABORED BREATH	20	0.450	0.350	0.759	0.671	-1.414	0.500
RESPIRATORY RATE	20	0.900	0.0500	0.447	0.224	-4.123	<0.001
BREATH SOUND	20	1.200	0.1000	0.410	0.308	-4.119	<0.001
HEART RATE	20	0.550	0.0500	0.686	0.224	-2.887	0.004
HAMILTONS DEPRESSION SCALE	20	15.750	9.900	4.655	3.370	-3.832	<0.001
HAMILTONS ANXIETY SCALE	20	14.150	9.050	2.943	2.665	-3.933	<0.001
BHAYA	04	0.200	0.0500	0.410	0.224		
KRODHA	04	0.400	0.150	0.598	0.366		
SHOKA	09	0.650	0.200	0.813	0.410	-2.460	0.016
UDVEGA	05	0.350	0.1000	0.671	0.308		
CHINTA	13	0.900	0.150	0.788	0.366	-3.419	<0.001

Quantity of sputum by 93%, PEFR by 58.6%, Hb% by 1.9% , RBS by 2.9%, TC

by 36.4%, Neutrophils by 19.78%, ESR by 61.57%, AEC by 20.44% [Table 2].

**Table 2** Showing the Statistical Results of Objective Criteria's

SYMPTOMS	n	MEAN		SD		t - VALUE	P - VALUE
		BT	AT	BT	AT		
QUANTITY OF SPUTUM	20	1.600	0.1000	0.598	0.308	11.052	<0.001
PEFR	20	1.450	0.600	0.510	0.681	10.376	<0.001
HAEMOGLOBIN	20	12.840	13.088	2.151	2.044	-3.655	0.002
RBS	20	100.800	103.700	25.827	20.378	-0.927	0.365
TOTAL COUNT	20	8705.00	5535.00	2355.3	968.05	7.617	<0.001
AEC	20	435.000	346.050	93.813	73.294	6.825	<0.001
ESR	20	42.550	16.350	29.685	2.777	4.177	<0.001

## DISCUSSION

In the present study, 20 patients suffering with *tamaka shwasa* and *manovikara* were

selected. *Shwasa* (dyspnoea), *kasa*(cough), *kaphanishtivana* (sputum), *krodha* (anger), *bhaya* (fear), *shoka* (sorrow), *udvega* (depression), and *chinta* (worry) was were



taken as the diagnostic criteria. Patients fulfilling the inclusion criteria of GINA guidelines, age group of 16-60 years were considered. GINA guidelines have grading based on mild, moderate and severe form of asthma. In present study mild to moderate form of asthma was considered. Age limit was kept as 16 to 60 years because below 16yrs is considered as paediatric age group and above 60yrs patients will have multiple systemic illnesses. In this study, intervention with *Katphaladi kwatha* was done for 14 days with dosage of 50ml BD after food. In literature the quantity of *Kashaya* for a day is 2 *pala* which comes around 96 ml, hence 100ml was selected as the dosage.

Mode of Action: As *tamaka shwasa* is *vata* and *kapha* predominant *dosha vyadhi*, the formulation having *vatahara*, *kaphahara*, *ushna virya* and *vatanulomana* property drugs was chosen. As the purpose of the study is to identify the *manovikara* in bronchial asthma and to treat both *shwasa* and *manasika vikara* this formulation was selected. **Katphala** have *kshaya*, *tikta*, *katu rasa*, *Laghu*, *tikshna guna*, *ushna veerya* and *katuvipaka*. It is *kaphavata shamaka*. Have *kaphagna*, *shothahara*, *deepana* as *karma*, *rogagnata* is *shwasa*, *kasa*, *udarashoola*. Have Anti septic, Anti pyretic, vasodilator activity. Hence *katphala* would have given result

in *Tamakashwasa* due to its *vatakapha shamaka*, *ushna veerya* property and vasodilator activity. **Musta** have *tikta*, *kashaya* and *katu rasa*, *laghu*, *ruksha guna*, *sheeta veerya*, *katu vipaka* and *kaphapitta shamaka*. **Musta** have *krimigna*, *jwaragna*, *medhya* as *karma*. Have *apasmara*, *kasa*, *shwasa* as *rogagnata*. Have tranquilizer, anti-inflammatory, antipyretic activity. **Musta** would have given result in *Tamaka shwasa* due to its anti-inflammatory action. Due to its *medhya karma*, have *apasmara* as *rogagnata* and its tranquilizer activity might have helped in *manovikara*. **Haritaki** have *pancha rasa* except *lavana*, *laghu*, *ruksha guna*, *ushna veerya*, *madhura vipaka* and is *tridosahara*. **Haritaki** have *shothahara*, *medhya* as *karma*, *rogagnata* are *hikka*, *shwasa*, *swarabheda*. Have antimicrobial, anti-stress activity. **Haritaki** would have acted in *tamaka shwasa* due to its *ushna veerya*, *shothahara karma*, have *shwasa* as *rogagnata* and is *tridosha shamaka*, Due to *medhya* property and anti-stress activity it would have shown result in *manovikara*. **Parpata** have *tikta rasa*, *laghu guna*, *sheeta virya*, *katu vipaka*, and is *kaphapittahara*. **Parpata** have *jwaragna*, *deepana* as *karma*, *rogagnata* are *bhrama*, *murcha*, *madatyaya*. Have antimicrobial, anticonvulsant, CNS depressant, anti-inflammatory properties. **Parpata** might have given result in *tamaka shwasa* due to



its *kaphapitta shamaka*, anti-inflammatory activity. Due to its CNS depressant and anticonvulsant activity might have acted on *manovikara*. **Karkatashringi** have *tikta, kashaya rasa, laghu, ruksha guna, ushna veerya, katu vipaka* and is *Kaphavata shamaka*. *Karkatashringi* have *vatanulomana, kaphagna, deepana karma, rogaghnata* are *shushkakasa, shwasa, kasa*. Have expectorant, CNS depressant, antibacterial, anti-inflammatory. *Kartakashringi* might have acted due its *kaphavata shamaka, ushna veerya, vatanulomana, kaphagna*, expectorant, anti-inflammatory activity. CNS depressant activity might have reduced *manovikara* symptoms. **Devadaru** have *tikta rasa, laghu guna, ushna veerya, katu vipaka* and is *kaphavata shamaka*. *Devadaru* have *jwaragna, krimigna, hridyaottejaka karma, peenasa, hikka, shwasa, kasa* are its *rogaghnata*. Have anti-inflammatory, immunomodulatory activity. *Devadaru* might have given result in symptoms of *tamaka shwasa* due to its *kaphavata shamaka* property, *ushna veerya*, and anti-inflammatory properties. **Rohisha** have *tikta, katu rasa. Laghu, ruksha, tikshana guna. Ushna veerya, katu vipaka* and is *kaphavata shamaka*. *Rohisha* have *anulomana karma, rogaghnata* is *shwasa, kasa, pratishyaya*. Have antimicrobial, CNS depressant, antifungal properties.

*Rohisha* might have shown result due its *ushna veerya, kaphavata shamaka* property and have *shwasa, kasa* as its *rogaghnata*. Due to CNS depressant property it might have shown result in *manovikara*. **Bharangi** have *tikta, kashaya rasa, laghu guna, ushna veerya, katu vipaka*, and is *kaphavata shamaka*. *Bharangi* is *deepana, pachana, kaphagna, kasahara, shwasahara karma*, have *rogaghnata* as *kasa, shwasa, pratishyaya*. Have CNS depressant, anti-allergic, anti-asthmatic activities. *Bharangi* might have acted in *tamaka shwasa* due to its *kaphavata shamaka* property, it has *kasa, shwasahara karma, rogaghnata* is *kasa, shwasa* and have anti-allergy, anti-asthmatic activities. It might have acted on *manovikara* due to its CNS depressant activity. **Vacha** have *tikta rasa, laghu guna, ushna veerya, katu vipaka* and is *kaphavata shamaka, vacha* have *medhya, anulomaka, kasashwasahara karma, rogaghnata* being *pratishyaya, apasmara, unmada, apasmara*. Have CNS depressant, anti-convulsion, anti-bacterial properties. *Vacha* might have acted on *tamaka shwasa* due to its *kasashwasahara, kaphavatahara, anulomana* properties. *Vacha* is *medhya*, have *rogaghnata* as *apasmara, unmada* and CNS depressant activity which would have helped in showing results on symptoms of *manovikara*. **Shunti** have *katu rasa, laghu guna, ushna veerya, madhur vipaka* and is



*vatakapha shamaka*. Have *Vatanulomana*, *deepana*, *pachan*, *shwasahara karma* and *rogaghnta* as *shwasa*, *kasa*, *pratishyaya*. Have Anti-inflammatory, anti-depressant, cardiovascular property. *Shunti* might have worked in *tamaka shwasa* due to its *vatanulomana*, *shwasahara karma*, *vatakaphahara* property, *ushna veerya* and anti-inflammatory property. Due to anti-depressant activity it would have given result in *manovikara*.

The parameters like Dyspnoea, Cough, Night wheeze, Respiratory rate, Breath sound, Hamilton's anxiety & depression scale, *Chinta*, Quantity of sputum, PEFr, Total count, AEC and ESR showed statistically highly significant result with  $p < 0.001$ .

## CONCLUSION

*Katphaladi kwatha* showed highly significant result with P value ( $< 0.001$ ) in most of the subjective and objective criteria's. Overall effect of *katphaladi kwatha* showed maximum average remission of 60% and minimum moderate remission of 40%.

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