INTERNATIONAL
AYURVEDIC
MEDICAL JOURNAL

IAMJ

Research Article ISSN: 2320 5091 Impact Factor: 5.344

A CLINICAL STUDY OF EFFICACY OF *GUDAVLEHA* IN *TAMAK SHWAS* W.S. R. TO BRONCHIAL ASTHAMA

Sunil J Kendhale[1], Anand Gurav[2]

[1]PG Scholar, [2]Professor;
Department of Kaumarbhrityatantra, Late Kedari Redekar Ayurved College, Gadhinglaj, Kolhapur, Maharashtra, India

Email: sunilkendhale@gmail.com

ABSTRACT

Ayurveda is primarily the science of positive health and secondary is the science for the cure of disease. Bronchial Asthma is a chronic inflammatory disease of the airways that is characterized by bronchial hyper reactivity and variable airway obstruction which results in recurrent episodes of wheezing, breathlessness, chest tightness and/or coughing that can vary over time and in intensity. The features of bronchial asthma are quite comparable with the disease "*tamak-swasa*" described in *Ayurveda*. This study was designed to assess efficacy of *Gudavleha* and *Bharangyadileha* in *Tamak Shwas* with special reference to Bronchial Asthama. The raw material of *Gudavleha and Bharngyadileha* was procured from field and authenticated by Department of *Dravyaguna*. *Avaleha* was prepared in *Rasashala* prepared under the guidance of Rasshastra & Bhaisajyakalpana Department of College. This was a Randomized clinical study. The Child Patients having sign and symptoms of *Tamak shwas* of age group 6-14yrs. The result of the clinical study will be assessed on the basis of observations of clinical features. Improvement of percentage of relief of scoring grade was done. From the observations, it can be concluded that the asthma is more common in boys and also 6 to 10 years of both sex. *Tamaka shwasa* is *vata-kaphaja vyadhi* having *pitta* origin. It was observed the significant improvement in symptoms of both groups.

Keywords: Bronchial Asthma, *Tamak-swasa, Gudavleha and Bharngyadileha*

INTRODUCTION

Ayurveda is primarily the science of positive health and secondary is the science for the cure of disease. Thus *Ayurveda* consists of the science of long and happy life.[1] It is *Vedas*-the ancient most literature of human world that details of *Ayurveda* system of medicine are found. *Ayurveda* is by and large a conceptual science here concept have been evolved around principles of health, etiopathogenesis of diseases and approaches to treatment, which include not only drug but also therapeutic diets and modern medicine which is basically an experimental science. Once among the eight *angas* of *Ayurveda*, *Kaumarbhritya* specially deals with the problems related with infants and children.[3-4] It is a unique peculiarity of *Ayurveda* that Ayurvedic pediatric start well with the conception. It deals with antenatal perinatal and postnatal care along

with the different aspect of child health and disease.[5] Bronchial Asthma is a chronic inflammatory disease of the airways that is characterized by bronchial hyper reactivity and variable airway obstruction which results in recurrent episodes of wheezing, breathlessness, chest tightness and/or coughing that can vary over time and in intensity.[6] The features of bronchial asthma is quite comparable with the disease "*tamak-swasa*" described in *Ayurveda*. In fact *swasa* is a major clinical condition according to *Ayurveda* that includes classes & sub-classes in it, carries symptoms can closely resembles with chronic obstructive pulmonary disease situation. Ayurveda describes etiology & pathogenesis of all classes of *swasa* including *tamak-swasa* (bronchial asthma) almost similar with just little difference.[7] Asthma occurs in all countries regardless of the level of development but varies greatly between populations, even with countries. There is evidence that over the last 20 years its prevalence has considerably increased, especially among children.[8] The prevalence of asthma symptoms in children varies from 0 to 30 percent in different population. Worldwide childhood asthma appears to be increasing in prevalence, despite considerable improvement in management of asthma. [9] In India prevalence of asthma has been found to be around 6% in majority of survey. However it has been reported to vary from 2-17% in different study population.[10] Pulmonary function testing is an important tool in the diagnosis and management of Asthma, especially pulmonary function tests provide an objective and reproducible method to evaluate the disease and follow the response to therapy. In particular, PEFR measurement has gained worldwide acceptability as a method of recognition, assessment of severity and planning of therapy. [11] PEFR measurements has been suggested by all international guidelines as an important tool in asthma management. It is simple to use the equipment and portable. With proper instruction the results can be used to monitor improvement, intervene early worsening and measure response to therapy. [12-13] In contemporary medical science, management of Bronchial Asthma is carried out with usage of bronchodilator, leukotriene antagonist, mast cell stablizers, & corticosteroids. Long lasting usage produces adverse effects also reduces the effectiveness of therapy.[14] Avoidance of triggers is a key component of improving control & preventing attacks. The most common triggers include allergens, smoke, air pollution, non- selective beta blockers, sulfite containing foods.[15] So by this, contemporary medical science can only control the episode of attack. Thereby possible palliative treatment is only with Ayurveda, which is much better & very effective. For this reason I intend to take up this study, to come out with effective remedy of *Tamaka Shwasa* with *Gudavleha* and *Bharangyadi leha*.[16] The easily available ingredients of this formulation are found to be *deepana*, *amapachak*, *kaphavatahara*, *Shwasahara* etc *Tamak Shvasa* is such type of disease in which recurrent attacks of shvasa is hampering the life of patients. *Tamak shvasa* is troublesome disease, because most of *Acharyas* have described it as *Yapya* to treat.[17] Disease *Tamaka shvasa* is having *Kapha*, *Vata* predominance. While mentioning management *Acharyas* explained that those Diet & Drugs having *Kaphavataghna*, *Ushna* & *Vatanulomana* properties are useful in *Tamaka Shvas*[18]. *Arundutta* further says – Drug having *Deepana-Paachana* activities are used for the management of *Tamaka Shvasa*. Many drugs mentioned in classics are having above properties. Few of these have been tried satisfactorily in controlled & planned clinical studies. On the basis of these studies present compound has been selected. All these drugs are mostly having *Vatakaphahara* & *Vatanulomana* property. *Bharangi* is already proved to be act on *Pranavaha srotas*, *Sunthi* is *grahi*, *deepan* and *amapachak* and is supposed to alleviate the *Vata* and *Kapha* and also which increase the strength of patients by relieving *Kapha*.[19]

AIM: Comparison of efficacy of *Gudavleha and Bharangyadileha in Tamak Shwas* with special reference to Bronchial Asthama.

OBJECTIVES

1. To study the efficacy of *Gudavleha* in *Tamak Shwas* with special reference to Bronchial *Asthama.*
2. To study the Comparative effect between *Gudavleha* and *Bharangyadileha*.

METHODOLOGY

Procurement of Medicine: The raw material of *Gudavleha and Bharngyadileha* was procured from field and authenticated by Department of *Dravyaguna*. *Avaleha* was prepared in *Rasashala* prepared under the guidance of *Rasshastra* & *Bhaisajyakalpana* Department of College.

Study Design- This was a Randomized clinical study.

Sample size – 60 Sample size was calculated from previous epidemiological study of asthma in India.[20]

Sampling- 60 Patients were selected from Balroga OPD& IPD of the Hospital for this research study. Criteria for selection of patients: The Child Patients having sign and symptoms of *Tamak shwas* of age group 6-14yrs.will be selected irrespective of sex, religion and Prakruti from the Kaumarbhrutya O.P.D. and I.P.D. of Our Hospital. Patients will be selected on the basis of simple random sampling technique.

Criteria for diagnosis: For diagnosis purpose the classical signs and symptoms of *Tamakshwasvyadhi* described in different Samhitas and modern textbooks would be considered.

A detailed proforma including all the classical signs and symptoms of the disease will be prepared.

Inclusion Criteria:

1. Patients ranging from age group of 6 year- 14 years.
2. Patients with *Lakshana's* of *Tamakshwas* described in texts of Ayurveda and modern.
3. Patients with history of *Tamaka Shwasa* less than 3 years.
4. Peak flow meter Rate more than 80 Lit/min & less than 300 Lit/min 21.
5. Patients who willing to take treatment.

Exclusion Criteria:

1. Patient aged less than 6 yr and more than 14 yrs.
2. Patients with history of *Tamaka Shwasa* more than 3 yrs.
3. Peak flow meter rate less than 80 Lit/min are excluded.
4. *Asthama* due to other systemic disorders, and other respiratory disorders.
5. Emergency condition of the patient, who requires oxygen inhalation.

Assessment of Clinical Result

SUBJECTIVE PARAMETERS

Following Clinical Findings were assessed before, during and after treatment.

Shwasavega	
Frequency of *Shwasavega*	Gradation
No attack during 1 month	0
Frequency of attack once in a 1 month	1
Frequency of attack once in 2 week	2
Frequency of attack once in a week	3
Frequency of attack twice in a week	4
Frequency of attack one or more than 1 in a day	5
***ShwasaKashtata* (Dyspnoea)**	
Absence of dyspnoea	0
Present but does not disturb routine	1
Present, which disturbs routine	2
Dyspnoea continuously present even at rest	3
***Kanthoddhwansanam* (Irritation in throat)**	
No *Kanthoddhvansanam*.	1
Occasional *Kanthoddhvansanam*	2
Very often *Kanthoddhvansanam*	3
Always present	4
AsinolabhateSoukhyam	
No dyspnoea on lying position	0

Dyspnoea on lying position	1
Temporarily feels better in sitting position	2
Dyspnoea on sitting position	3
Kasa	
No cough	0
Dry cough without pain	1
Cough with mild pain & slight expectoration	2
cough with severe pain & feelings of Restlessness because of difficulty in expectoration	3
Frequent coughing due to which patient becomes fainting	4
KaphaNistivanam	
No *Kaphanistivanam*	0
Kaphanistivanam. only in the early morning	1
Kaphanistivanam2-3 times /day	2
Always *Kaphanistivanam*	3
Ghurghurakam	
No wheezing	0
wheezing only at early morning	1
Wheezing at early morning, required medicine	2
Wheezing at early morning,&occasionally during day time	3
Wheezing throughout the day & require medicine	4
Wheezing throughout the day & not responding any medicine requires hospitalization	5
Peenasa	
No *peenasa*.	0
Peenasa during attack & subsided 1-2 days after attack.	1
Peenasa during attack & persist for week after attack	2
Peenasa very often without attack	3
Peenasa always persisting	4
Urashoola / Parshwashoola	
No *Urashoola*	0
Urashoola along with attack	1
Urashoola without attack also	2

Follow up during the course of Treatment all the clinical signs and symptoms will be noted on day 7th, 14th and 21stdays.

Overall Assessment Criteria:
Improvement of percentage of relief of scoring grade will be done in following manner.

Table 2: Overall Assessment Criteria

Sr.No.	Class	Percentage of Improvement
1	Good Improvement	75-100%
2	Marked Improvement	50-74%
3	Mild Improvement	25-49%
4	No Improvement	0-24%

DISCUSSION

Total 60 patients of age group between 6 to 14 years were selected for the study. Out of that 83.33% were between age group of 6 to 10 years and 16.66% were between 11 to 14 years of age group. Total 60 patients were selected (30 in each group). Out of that 39 were boys and 21 were girls. Several studies have shown that asthma is more common in boys than in girls. [114] 40 patients were hindu, 11 patients were muslim and 9 patients of others religion were selected for study. Results in this study show that in the groups (experimental group and control group), sex, height, weight and age were nearly equally distributed among cases and controls with nearly equal mean SD. Since cases and controls were sampled from the same population, they have same socioeconomic background. Thus this ensures adequate matching for comparability between cases and controls.

EFFECT OF THERAPY

Frequency of *Shwasavega*

In experimental group, there was reduction in frequency of *shwasavega* after 7th , 14th and 21th days and its p value was 0.025, 0.008 and 0.0001 respectively which is statistically significant. In control group, there was reduction in frequency of *shwasavega* after 7th , 14th and 21th days and its p value was 0.003, 0.0001and 0.0001 respectively which is statistically significant. In comparison of experimental and control group the p value at baseline, 7th, 14th and 21th day was 0.080, 0.050, 0.66 and 0.80 respectively which was statistically non-significant. This may be due to the combined effect of the trial drugs. It is because of *vatakaphahara*, *vatanulomana*, *shothahar*, *kasahara* properties of the drugs. The results were statistically significant in both groups but comparatively insignificant.

***Shwasa Kashtata* (Dyspnoea)** In experimental group remarkable reduction in *shwasa kashtata* and its p value at 7th, 14th and 21th were 0.014, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *shwasa kashtata* and its p value at 7th, 14th and 21th were 0.001, 0.0001 and 0.0001 respectively which is statistically significant. This may be due to the combined effect of the trial drugs. It is because of *kaphashoshana*, *srotoshodhak*, *shothahara*, *vataanulomana* and *shwasahara* properties of the drugs. *P.kurroa* has been studied extensively for its anti-asthmatic activity. The crude extract of *P.kurroa* roots reduced the frequency and severity of asthmatic attacks and the need for regular bronchodilators. The activity has been attributed to compounds such as androsin and apocynin, which have been shown to inhibit allergen and PAF- induced bronchoconstriction.[21] *In vivo* studies of bronchial obstruction indicate that the drosin constituent of *Picrorhiza kurroa* prevented allergen- and platelet activating factor-induced bronchial obstruction when given to guinea pigs via inhalant and oral routes. *In vitro* histamine release was also inhibited by the plant extract.[22] Picrorhiza extract given orally at 25 mg/kg to mice and rats resulted in a concentration-dependent decrease in mast cell degranulation. However, induced bronchospasm was not prevented, indicating a lack of direct post-synaptic histamine receptor blocking activity.[23] Although, there is remarkable reduction in *Shwasa Kashtata* (Dyspnoea) at all the intervals but comparatively there is no significant change in experimental and control group.

***Kanthoddhwansanam* (Irritation in throat)** In experimental group remarkable reduction in Kanthoddhwansanam (Irritation in throat)and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Kanthoddhwansanam* (Irritation in throat) and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. Although there is remarkable reduction in *Kanthoddhwansanam* (Irritation in throat) at all the intervals but comparatively there is no significant change in experimental and control group.

***Asinolabhate Soukhyam*:** In experimental group remarkable reduction in *Asinolabhate Soukhyam* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Asinolabhate Soukhyam* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. Remarkable reduc-

tion in *Kanthoddhwansana* (Irritation in throat)at all the intervals but comparatively there is no significant change in experimental and control group.

***Kasa*:** In experimental group remarkable reduction in Kasa and its p value at 7th, 14th and 21th were 0.008, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Kasa* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. There were significant changes in both the group at each intervals but comparatively non-significant results found in experimental and control group. This may be due to the combined effect of the trial drugs. It is because of *vatakaphahara*, *vatanulomana*, *shothahar*, *kasahara* properties of the drugs. The drugs also have showed anti-microbial, anti-inflammatory, mucolytic and expectorant action and thus minimize the bouts of cough or frequency of attacks.

***Kapha Nistivanam*:** In experimental group remarkable reduction in Kapha Nistivanam and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Kapha Nistivanam* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant.

There were significant changes in both the group at each intervals but comparatively non-significant results found in experimental and control group.

***Ghurghurakam*:** In experimental group remarkable reduction in *Ghurghurakamin* and its p value at 7th, 14th and 21th were 0.003, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Ghurghurakamin* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant.

There were significant changes in both the group at each intervals but comparatively non-significant results found in experimental and control group. The results were statistically significant, owing to its *kaphashoshana*, *sroto vishodhak* & *shwasahara* property along with broncho dilatory and anti-inflammatory action, thereby minimizing the obstruction. As a result of reduced resistance to the flow of air the *ghurghuraka* will be reduced.

***Peenasa*:** In experimental group remarkable reduction in Peenasa and its p value at 7th, 14th and 21th were 0.020, 0.0001 and 0.0001 respectively which is statistically significant. In control group there is also remarkable reduction in *Peenasa* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. There were significant changes in both the group at each interval and also comparatively significant results found in experimental and control group.

***Urashoola* / *parshwashoola*:** In experimental group remarkable reduction in *Urashoola* / *parshwashoola* and its p value at 7th, 14th and 21th were 0.16, 0.16 and 0.083 respectively which is statistically non-significant. In control group there is also remarkable reduction in *Urashoola* / *parshwashoola* and its p value at 7th, 14th and 21th were 0.0001, 0.0001 and 0.0001 respectively which is statistically significant. There were non-significant changes found in experimental group but significant results found in control group. Comparatively significant results found in experimental and control group, at the intervals of 7th day but not on 14th and 21th day.

Overall Assessment: Out of 60 patients 50% get good improvement, 36.67% get marked improvement and 13.33% mild relief. There were none patients found of no improvement.

PROBABLE MODE OF ACTION OF *GUDAVLEHA*

The main force of action of any drug is either its *Rasa* or *Veerya* or *Guna* or *Vipaka* or *Prabhava* or the combination of any above and finally it shows different action. In this study attention was paid more on the action of drugs and to utilize it in the treatment of diseases. The drug *Bharangyadileha* consists many ingredients which excellently balancing each other in *Rasa-Panchaka* and enhancing the *Vatakaphahara*, *Deepana*, *Pachana* and *Vatanulomana* due to *madhur*, *tikta rasa*, *ushna virya* and *laghu* and *ruksha* properties. *Vata-Kaphahara* property of most of the content alleviates both *Vata* and *Kapha*, which are the main *Doshas* in the pathogenesis. The main factor in this disease as in many other diseases is *Ama* and the

Deepana-Pachana properties of the drug will digest the *Ama* by kindling the *Jatharagni* as well as *Rasagni* and *Bhutagni*. Further the *Sothaharatwa Karma* of most of the contents will neutralize the *Srotorodha* in *Pranavaha srotas* due to *Sotha* created by *Sama Vata*.

CONCLUSION

This study was conducted to assess efficacy of *Gudavleha* and *Bharangyadileha* in *Tamak Shwas* with special reference to Bronchial Asthama. From the observations, it can be concluded that the asthma is more common in boys and also 6 to 10 years of both sex. *Tamaka shwasa* is *vata-kaphaja vyadhi* having *pitta* origin. It was observed the significant improvement in symptoms of both groups while no significant difference was found between two groups except in *peenasa* and *urashoola*.

Group of *Bharangyadileha* was not found any dissimilar effect from *Gudavleha* in all parameters. No side effects have been observed during the present study. It is also recommended to conduct further studies in this direction are essential in a good number of cases, for a longer period, to establish probable mechanism of action of the drug.

REFERENCES

1. Tripathi B, Agnivesha, Charak, Dridhabala, Charak Samhita, Charak-Chandrika. Sutrasthan, Dirghajivitaya, 1/41, Chaukhamba Surbharati Prakashan, Varanasi, 2009.p.13.
2. Tripathi B, Vagbhata, Astang Hridyam. Nirmala Hindi Commentary, Sutrasthan, Ayushkamiyadhyay 1/5, Chaukhamba Sanskrit Pratishthan, Delhi, 2009, p.4.
3. Acharaya Kashyapa, Kashyapa Samhita, Premvati Tewari ed. Chaukhamba Visvabharti, Varanasi;2016: Vimansthan 2/10 PAGE.97
4. Behrman RE, Kliegman RM. Nelson Essentials of Pediatrics. 2nd ed. Saunders, 1994, Chapter8.
5. Sharma RK, Dash B. Caraka Samhita. Vol IV. Varanasi: Chowkhamba Sanskrit series office; 2004: 117-155.
6. Global Initiative for Asthma, Global strategy for Asthma Management and prevention, National Institute of Health, Updated 2012, National Heart, Lung, and Blood institute Revised, 2002.
7. Liv AH, Spahn JD, Leung DYM. Childhood Asthma. In Nelson Textbook of pediatrics 17th Edition, Editor Behrman R.E. Kliegman R.M., Janson HB, Philedelphia, WB Saunders company. 2004:760-78. 10. Singh V. Bronchial Asthma in API textbook of Medicine, 7th Edition, Editor Shah S.N. Paul M.A. National Book Depot, Mumbai. 2003:291.
8. National Institute of Health, National Heart, Lung and Blood Institute. National Asthma Education and prevention programme. Export panel Report 2: Guidelines for the Diagnosis and Management of Asthma. 1997:1143.
9. Perks WH, Tams IP, Thampson DA, Prowse K. An evaluation of mini Wright Peak Flow Meter. Thorax. 1979;34:79-81.
10. Oldman HG, Bevan MM, McDermott M. papers comparison of new miniature Wright peak flow meter with the standard Wright Peak Flow Meter. Thorax. 1989;34:807-9.
11. K.D.TripathiEssentils of medical Pharmacology,5thEdition,reprint 2004, Published by Jaypee Brothers Medical [p] Ltd. New Delhi. Chapter 15th section 4, page no-199.
12. http://en.wikipedia.org/wiki/Asthma ,100 British Guideline on the Management of Asthma"(PDF). Scottish Intercollegiate Guidelines Network. 2008.Archived from the original on 19 August 2008. Retrieved 2008-08-04.(101) NHLBI Guideline 2007, p. 69.
13. Vd. Laxmipatishashtri Shahstri. Yogratnakar, Shwashchikitsa, edited by Shri Brhmashankar Shastri, Chaukhambha Sanskrita Sansthana, Varanasi, Reprint 2015, page no.433.
14. Agnivesha, Charka Samhita Chikitsasthana, 17/9,62, edited by Acharya Priyavrat Sharma, Acharya Vidyadhar Sukhla and professor RavidattaTripathy, part-2 by Choukhamba Orienalia Varanasi. vol 2, 2nd Edition (2006). page.417
15. Agnivesha, Charka Samhita Chikitsasthana, 17/147, edited by Acharya Priyavrat Sharma, Acharya Vidyadhar Sukhla and professor Ravidatta Tripathy, part-2 by Choukhamba Orienalia Varanasi. vol 2, 2nd Edition (2006). page.437
16. The Ayurvedic Pharmacopoeia of India Editor Govt. Of India, Ministry of health and Family Welfare. Dept. of Indian System of Medicine and homeopathy New Delhi (ISMH) Edition 2001, Published by the controller of publication civil lines Delhi.
17. Srinivasa K. et al. Clinical study of bronchial asthma in children aged 5 to 12 years with special reference to peak expiratory flow rate, International Journal of Contemporary Pediatrics , October-December 2015 ,

Vol 2, Issue 4, Page 297.
18. Picrorrhiza root: Pharmacology (http://www.mdidea.com/products/new/new04806.html). Accessed on 20 September,2011.
19. Dorsch W, Wagner H. New antiasthmatic drugs from traditional medicine. *Int Arch Allergy Appl Immunol* 1991;94:262-265.
20. Baruah CC, Gupta PP, Nath A, et al. Anti-allergic and anti-anaphylactic activity of picroliv – a standardised iridoid glycoside fraction of *Picrorhiza kurroa*. *Pharmacol Res* 1998;38:487-492.

Source of Support: Nil
Conflict Of Interest: None Declared

How to cite this URL: Sunil J Kendhale & Anand Gurav: A Clinical Study Of Efficacy Of Gudavleha In Tamak Shwas W.S. R. To Bronchial Asthama. International Ayurvedic Medical Journal {online} 2019 {cited October, 2019} Available from: http://www.iamj.in/posts/images/upload/1738_1745.pdf