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ROLE OF *AYURVEDIC* FORMULATION (*BHARANGYADI MADHUKA*) IN THE MANAGEMENT OF *TAMAKA SHWASA* WITH SPECIAL REFERENCE TO BRONCHIAL ASTHMA- A STUDY PROTOCOL

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ABSTRACT

Background: Most Individuals are suffering from respiratory ailments such as bronchitis, bronchiolitis, COPD, Bronchial Asthma, etc. Asthma is a common disease that affects 300 million people of all ages world-wide. The disease, *Tamaka Shwasa* is characterized by paroxysmal attacks of Breathlessness, Cough, Coryza, Chest tightness, Rapid Respiration, Distress due to inability to expectorate and prolonged expiration. When the *Prana Vayu* is not performing its normal physiological functions (vitiated) and become Defiles (*viguna*); obstructed by *Madhuka* and moves upwards i.e., unable to function properly, then the condition is known as *Shwasa Roga*. This definition seems to be very scientific and describes all the aspects of Dyspnoea. Modern treatment modalities for bronchial asthma include the use of bronchodilators, corticosteroids, anticholinergics, and a number of other medications with dose dependency and long-term side effects. Modern terminology correlates *Tamaka Shwasa*, which is defined in *Ayurved* as a disease entity with signs and symptoms, pathogenesis, prognosis, and treatment.

Aims and Objective

1. To Study the effect of drug on clinical parameters and biochemical finding associated with *Tamaka Shwasa* (Bronchial Asthma)

2. To explain the *Tamaka Shwasa* on the basis of critical review in classical text of *Ayurved* and with the help of Modern Literature.
3. To fill the research gap and to explain the solution for research question on the basis of clinical and literary parameter.

Methodology: *Bharangyadi Madhuka* drug will be prepared in the form of fine powder and then given in the dose of 3gram BD with unequal amount of *Madhu sarpi (2:1) as Anupana* daily for two months to 40 patients of either sex & age group (25-60 year) will be selected Randomly for study from OPD & IPD of *Kayachikitsa* Department of Shri Krishna govt *Ayurvedic* College and Hospital, Kurukshetra. (HARYANA).

KEYWORDS: *Tamaka Shwasa*, Asthma, breathlessness, etc.

INTRODUCTION

Tamaka Shwasa is a very common disease in India. The prevalence of respiratory disease is increasing day to day due to genetic susceptibility, environmental factors, drugs, infection, smoking, change in diet and life style. *Tamaka Shwasa* vis-a-vis Bronchial asthma is one of the important diseases pertaining to the respiratory disorder. It affects the people of all age groups. Sometimes, it is severe and fatal also. It is a serious public health problem in the countries throughout the world. Nearly 5 to 10% of the world population at some stage during life suffers from Asthma. The disease can occur at any age and affects 5% of adults and 7-10% children commonly. In Today's scenario, most Individuals are suffering from respiratory ailments such as bronchitis, bronchiolitis, COPD, Bronchial Asthma, etc. Asthma is a common disease that affects 300 million people of all ages world-wide. A systemic analysis for Global Burden of Disease (GBD) study in 2017, they found that close to 545 million people in world had a chronic respiratory disease a in 2017 an increase of 39.8% since 1990. As stated by W.H.O, 100–150 million of Global Population are suffering from Bronchial Asthma, out of which $1/10^{th}$ are Indians and the prevalence of Asthma is increasing everywhere. Today's life style habits increasing the Prevalence of Asthma.[1] Smoking is chief risk factor for respiratory diseases. 85-90% of COPD caused by Cigarette smoking, air pollution, industrial pollution allergens etc. The most important causal factors of Asthma in terms of numbers of people exposed are probably inhaled allergens. Allergens sensitize Atopic subjects by stimulating the development of specific T lymphocyte clones and the production of specific IgE Antibodies. Some foods and other ingested substances (such as salicylates, food preservatives, monosodium glutamate and some food colouring agents) have

a recognized effect of causing asthma exacerbations. Smoking, pollution, Dust allergens may act as a trigger for exacerbations of asthma. This Alarming raise in the prevalence of *Tamaka Shwasa* can be accounted to factors such as atmospheric pollution, rapid environmental changes, adaptation of newer lifestyle. The need to standardize cost-effective and highly efficacious *Ayurvedic* approaches based on principles like *Agni*, *Tridosha*, and *Panchbhoutik* laws for addressing the etiopathogenesis of *Tamaka Shwasa* (Bronchial Asthma) is evident. While numerous clinical trials have been conducted on *Tamaka Shwasa*, the absence of studies or clinical trials involving *Bharangyadi Madhuk* in randomly selected cohorts of 40 *Tamaka Shwasa* patients highlights a research gap or lacuna in this area.

The absence of prior research on *Bharangyadi Madhuka*, a potential *Ayurvedic* remedy, underscores the need for investigating its efficacy, safety, and affordability in treating *Tamaka Shwasa*. This pursuit aims to identify the most potent, secure, and economically feasible *Ayurvedic* management strategy for this chronic respiratory condition, addressing the limitations and side effects associated with conventional pharmacological interventions. Therefore, conducting well-designed clinical trials that involve *Bharangyadi Madhuka* in a cohort of *Tamaka Shwasa* patients becomes essential. Such trials can shed light on the effectiveness, safety profile, and potential advantages of this *Ayurvedic* formulation as an alternative or adjunct to conventional treatments, offering valuable insights into novel and potentially superior therapeutic options for managing *Tamaka Shwasa*.

ETYMOLOGY OF *TAMAKA SHWASA*

Tamaka and *Shwasa* are the two words that make up *Tamaka Shwasa*. These two words have the following etymologies:

(a) A sense of darkness, or *tamyati tama*.

(b) *Tamaka* is defined as *Udvega*, *Tivruta*, *Krodha*, *Tosha*, *Tamtmahata*, and a kind of *Shwasaroga* in *Pt. Ram Chandra Pathak's Adarsha Hindu Sabdakosha*.

SHWASA

Inhalation and exhalation of air is *Shwasa*.

Shwasa is the mechanism through which air exchange occurs, which implies *Shwasa* is the respiratory physiology.[2]

The word *Shwasa* is used as synonym of *Prana* (Life).[3]

DEFINITION OF *SHWASA*

Since the word "*Shwasa*" refers to both phases of respiration and the exchange of air within the body, a simple definition of *Shwasa Roga* would be a disease in which these processes are disrupted. In *Uttartantra, Acharya Sushruta* provides a thorough explanation of *Shwasa Roga. Acharya Dalhana* defines *Prakriti Vihaya as Viguno Bhutva* and goes on to say that:

Based on the definition given above, it is evident that *Shwasa Roga* is the state in which *Prana Vayu* becomes vitiated, becomes defiled (*Viguna*), becomes obstructed by *Madhuka*, and moves upward, i.e., becomes unable to perform its normal physiological functions.[4]

This definition covers every facet of dyspnea and appears to be highly scientific. First of all, the following is *Kalyanakaraka's* definition of *Shwasa*:
It indicates that *Pratiloma Gati of Prana Vayu* occurs as a result of obstruction of *Madhuka*, and this condition is called *Shwasa*.

REVIEW OF LITERATURE

The entire body of classical *Ayurvedic* literature, including the *Nighantu, Bruhadtrayee, and Laghutray*ee, will be examined for study, in addition to contemporary textbooks. Websites such as PubMed, Google Scholar, Scopes, Articles, Journals, and Research Papers, among others, will be searched for relevant content.

REVIEW OF MODERN LITERATURE

Worldwide, bronchial asthma is a significant chronic respiratory condition that poses a major public health risk. The illness is described as a chronic inflammatory disorder of the airways that causes frequent episodes of wheezing, dyspnoea, chest tightness, and coughing, especially at night or in the early morning. It is also linked to airway hyperresponsiveness. The episodes are typically linked to pulmonary airflow obstruction, which is frequently treatable or reversible on its own. Worldwide, there is currently a rising incidence of chronic recurrent airway disorders. For over 2,000 years, asthma has been recognized and documented as a medical condition. The word "panting" itself comes from a Greek word.

DEFINITION

Increased tracheobronchial tree responsiveness to a variety of stimuli is a hallmark of the airway disease asthma. The physiological manifestation of this condition is a generalized constriction of the airways, which can be resolved on its own or through treatment.

Eosinophils and mast cells are just two of the numerous cells that contribute to asthma, a long-term inflammatory illness of the airways. When this inflammation occurs alone in a susceptible person, it typically results in symptoms that are linked to a wide-ranging, variable obstruction of airflow, which is frequently reversible with treatment or on its own. It also increases the sensitivity of the airways to a range of stimuli.[5]

The characteristic symptoms of bronchial asthma include wheezing fits and dyspnoea brought on by a broad narrowing of the intrapulmonary airways, with varying degrees of narrowing occurring over brief intervals of time. When it comes to its Etiology, asthma is a varied illness. For epidemiological and therapeutic purposes, categorizing asthma patients according to the main triggers or factors connected to acute episodes is helpful. There are two categories of etiological factors for bronchial asthma:

(1) Predisposing factors

"Atopy" is the main factor predisposing to asthma. The hallmark of this illness is an overabundance of IgE produced in reaction to allergens. Those who have a history of allergic illnesses, which frequently manifest in the early years of life, are referred to as "atopic." As serum IgE concentrations rise, so does the prevalence of asthma; most asthmatics express IgE that is specific to inhaled allergens. Asthma and other atopic diseases have a tendency to run in families, with heritability contributing up to 50% of the clinical manifestation.

Gender: Boys are more likely than girls to experience childhood asthma, but this difference ends around the age of ten. There is some evidence to suggest that the reason for this discrepancy is the sensitivity of boys and girls to different allergens.

Bronchial hyper responsiveness: An underlying issue in all forms of asthma appears to be abnormal airway reactivity, or the airways narrowing excessively in response to stimuli that would not affect healthy subjects. The reason for this brief rise in reactivity is that the infection reacts by exposing sensory receptors in the tracheal and bronchial mucosa. Still, neurological reflexes account for a small portion of airway responsiveness.

(2) Precipitating factors

The following are significant precipitating factors for bronchial asthma: infections, inhaled allergens, dust, pollution from the environment, exercise, drugs, food, occupation, hormonal, psychological, reflux of the stomach, etc.

Modern medicine typically employs bronchodilators and corticosteroids as the primary pharmacological interventions for bronchial asthma. However, these medications are associated with various side effects such as tremors, dry mouth, palpitations, peptic disorders, restlessness, and potential complications like the precipitation of diabetes and hyperlipidaemia. This emphasizes the necessity of exploring safer and more effective alternatives within *Ayurved* for the management of *Tamaka Shwasa*/ Bronchial Asthma.

SOURCE OF DATA

Patients visiting Shri Krishna Govt. *Ayurvedic* College and Hospital, Kurukshetra Haryana and full filling the inclusion criteria shall be enrolled for the study after obtaining informed consent.

AIM

Evaluation of *Bharangyadi Madhuka* in the management of *Tamaka Shwasa* (bronchial asthma).

RESEARCH QUESTION

Efficacy of *Bharangyadi Madhuka* in *Tamaka Shwasa* ?

HYPOTHESIS

RESEARCH HYPOTHESIS (H_1)

Bharangyadi Madhuka is Significantly effective in the management of *Tamaka Shwasa*.

NULL HYPOTHESIS (H_0)

There is no significant efficacy of *Bharangyadi Madhuka* in management of *Tamaka Shwasa*.

Study Type –Interventional.

Study design: A Randomized controlled open clinical study.

Sampling procedure - Random sampling procedure will be applied.

Methodology Study Setting - The study will be conducted in Shri Krishna Govt. *Ayurvedic* College and Hospital, Kurukshetra Haryana.

Posology

Total 40 patients of either sex & age group (25-60 yr) will be selected Randomly for study from OPD & IPD of Kayachikitsa Department of Shri Krishna govt *Ayurvedic* College and Hospital, Kurukshetra. (HARYANA)

Criteria for diagnosis

A Special Proforma incorporating all the points of detailed history and physical examination mentioned in *Ayurved* as well as Modern parameters will be prepared. Each patient will be examined on the basis of this proforma where complete history, signs and symptoms, *nidana panchaka* etc. will be filled. All the vital signs like Blood Pressure, Pulse, respiratory rate, *temperature* will be monitored keenly in each patient. All the patients selected for trial were explained the nature of study and their consent will be taken before starting of the trial.

Inclusion Criteria

1. Patient willing to sign the Consent.
2. Patients between the age group of 25-60 years of either sex.
3. Patient possessing sign and symptom of *Tamaka Shwasa* (Bronchial Asthma)
4. Patients fulfil the diagnostic criteria of *Tamaka Shwasa* (Bronchial Asthma).

Exclusion Criteria

1. Patient not willing for Clinical Trial
2. Patients not fulfilling the Inclusion Criteria
3. Patient having Age below 25 and Above 60.
4. CAD (coronary artery disease) / Heart Failure /Stroke
5. Uncontrolled Hypertension.
6. Uncontrolled Diabetes Mellitus.
7. Impaired Renal Function.
8. During Pregnancy, Lactation period
9. Patients on Steroid therapy.
10. Patient Suffering from Secondary Respiratory Disease.

Criteria for Withdrawal

1) Patient himself wants to withdraw from the Clinical Trial.
2) During the course of trial if any serious condition or any serious adverse effect occurs this requires Treatment.

Protocol of Research

- Fulfilment of Inclusion Criteria.
- Registration of Patient.
- Written Informed Consent will be taken from the patient before starting study.

- Research Performa

DRUG REVIEW[6]

	Drugs name	Botanical name	Part used	Quantity
Bharangyadi Madhuka	*Bharangi*	Clerodendrom serratum	Root	1 part
	Madhuka	Glycyrrhiza glabra	Root	1 part
	Haritaki	Termenalia chebula	Fruit	1 part

METHOD OF PREPARATION

Bharangyadi Madhuka drug will be prepared in the form of fine powder and then given in the dose of 3 gram BD with *unequal amount of Madhu Sarpi (2:1) as Anupana* daily for two months. This Preparation will be made as per *Shloka* mentioned in *Yogratnakara.*

ANALYTICAL STUDY - PH test, Moisture test.

SAFETY ASSESSMENT

Safety assessment of drug will be done by assessing the medicine for heavy metals analysis and microbial contamination as referred above in analytical parameters in 9th and 12th.

ASSESSMENT OF CRITERIA

Subjective parameters	Objective parameters
Frequency of Shvasa Vega	Rhonchi
Duration of attack	Wheeze
Intensity of attack	
Shvasakrichchhrata	
Asino labhate Saukhyam	
Presence of Pranavaha Sroto dushti lakshana	
Kasa	
Madhuka Nistivanam	
Kasatah sannirudhyate	
Shleshma vimokshante muhurtam sukham	
Peenasa	
Urahshula / parshvashula	
Kanthoddhvansanam (Irritation in Throat)	
Trit (trishna) / vishushkasyata	
Ushnabhinandati:	

a) Subjective Parameters

Following Symptoms (*Charak chikitsa.17th adhyay- HikkaShwasa)* were Assessed.[7]

Subjective Parameters	Following Symptoms	Grade
Frequency of Shvasa Vega	No Attack during last 1 month	0
	Frequency of Attack once in a month	1
	Frequency of Attacks once in two weeks	2
	Frequency of Attacks once in a week	3
	Frequency of Attacks twice in a week	4
	Frequency of Attacks once or more than once in a day.	5
Duration of attack	No Episode of Attack -	0
	Attack lasting for Duration of 1/2 - 1 hr.	1
	Attack lasting for Duration of 1 - 6 hr.	2
	Attack lasting for Duration of 6 - 12 hr	3
	Attack lasting for Duration of 12 hr	4
	Attack lasting for Duration of more than 12 hr	5
Intensity of attack:	Asymptomatic and normal lung function between exacerbations.	0
	Intermittent Symptoms < once a week. Brief exacerbation (From a few hours to fewdays), night time symptoms < 2 times a month.	1
	Symptoms > once a week but < once per day, exacerbation affect activity & sleep,night time asthma symptoms > twice a month.	2
	Symptoms daily exacerbations affecting activity and sleep, night time symptoms > 1 times a week.	3
	Continuous Symptoms, frequent exacerbations, frequent night time asthmasymptoms& physical activity limited by asthma symptoms.	4
Shvasakrichhrata:	No sign of Shvasakrichhrata	0
	Mild intercostal retraction, Nasal alae furring & can speak complete sentencesduring dyspnoea.	1
	Intercostal retraction, S ternocleidomastoid muscle use & speaks in phrases orpartial sentences during dyspnoea	2
	Tracheo Sternal retraction, Intercostal retraction, sternocleidomastoid use & speakin single words during dyspnoea.	3
	Nasal alae furring & cannot able to speak during dyspnoea	4
	All accessory muscles are working & not able to speak, expresses by bodylanguage.	5
Asino labhate Saukhyam:	Relief on lying Position	0
	Temporarily feels better in Sitting posture	1
	Sitting Posture gives relief.	2
	Spontaneous Sitting posture, can't sleep.	3
Presence of *Pranavaha Sroto dushti lakshana*:	Absent	0
	Less than 25%	1
	Between 25 - 50%	2
	Between 50 - 75%	3
	More than 75%	4

Kasa / coughing	No cough.	0
	Cough dry without pain / wet with easy expectoration.	1
	Dry cough with pain &expectoration with slight difficulty.	2
	Dry cough with severe pain stabbing, cutting / feeling of restlessness because of difficulty expectoration.	3
	Frequent coughing due to which patient becomes unconscious / Fainting.	4
Madhuka Nistivanam:	No *Madhuka*nishtivanam	0
	Madhuka Nistivanam only in the early morning	1
	Madhuka Nistivanam 2 - 3 times daily	2
	Always *Madhuka Nistivanam*.	3
Kasatah Sannirudhyate	No such feeling	0
	Occasional *Kasatah Sannirudhyate*	1
	Very often *Kasatah Sannirudhyate*	2
	Always *Kasatah Sannirudhyate*	3
Shleshma Vimokshante Muhurtam Sukham:	No such feeling	0
	S.V.M. *Sukham* during attack	1
	Very often *S.V.M. sukham*	2
	Always *S.V.M. sukham*	3
Peenasa	No *Peenasa*	0
	Peenasa during attack & subside 1-2 days after attack	1
	Peenasa during attack & persists for a week after attack	2
	Peenasa very often without attack	3
	Peenasa always persisting	4
Urahshula / Parshvashula:	No *Urahshula*	0
	Urahshula along with the attack	1
	Very often *Urahshula* even without attack but relieved by local *Snehana & Swedana*	2
	Very often *Urahshula* without attack & not relieved by local *Snehana & Swedana*	3
	Always *Urahshula*	4
Kanthodhvansanam (Irritation in Throat)	No *Kanthoddhvansanam*	0
	Occasional *Kanthoddhvansanam*	1
	Very often *Kanthoddhvansanam*	2
	Always *Kanthoddhvansanam*	3
Trit (Trishna) / Vishushkasyata:	No *Trit / Vishushkasyata*	0
	Occasional *Trit / Vishushkasyata*	1
	Very often *Trit / Vishushkasyata*	2
	Always *Trit / Vishushkasyata*	3
Ushnabhinandati:	No particular	0
	Likes if available	1
	Always prefer	2
	Can't take cold things	3
OBJECTIVE PARAMETERS		
Rhonchi	Absent on normal breathing but few rhonchi on forced breathing.	0
	Few scattered bilateral rhonchi on normal deep breathing.	1
	Rhonchi in between grade 1 & 3 on normal deep breathing.	2

	Innumerable high pitched bilateral rhonchi on normal deep breathing.	3
Wheeze	No wheezing	0
	Wheezing only at early morning; doesn't require any medicine	1
	Wheezing at early morning; requires medicine	2
	Wheezing at early morning & occasionally during day time.	3
	Wheezing throughout the day & requires medicine	4
	Wheezing throughout the day & not responding to any medicine, requires	5

Laboratory investigation

Following investigation will be done for safety of drugs and to exclude the cases as per the exclusion criteria mentioned earlier

- HB
- TLC
- DLC- Neutrophils

Lymphocyte

Monocytes:

Eosinophils:

Basophils:

- ESR
- CRP
- AEC
- Chest Xray PA view
- Sputum AFB
- Spirometry
- PFT

OBSERVATION AND RESULT

The Observation and Results will be analysed and presented in accordance with the respective and applicable statistical texts.

PATHYA-APATHYA

Specific diet (*Ahara),* Lifestyle modifications *(Vihara)* will be advised which is necessary in management of *Tamaka Shwasa Roga.*

ADVERSE DRUG REACTION(ADR)

Any Adverse Drug Reaction will be duly noted and reported.

DISCUSSION

The disease's history dates back to the *Vedic* era, indicating that it has undoubtedly been a part of society since the dawn of humankind. The *Yajurveda*, *Atharvaveda*, and *Upanishad kala* all contain references to disease, and there are also references to disease in *Ayurvedic* texts. *Tamaka Shwasa* appears in nearly all of the texts, including the *Sharangadhara Samhita, Kashyapa Samhita, Madhava Nidan, Bhela Samhita, Ashtanga Samgraha, Charak Samhita, and Sushruta Samhita.* From the perspective of modern medicine, bronchial asthma is a common chronic airway disorder that results from a complex interaction between underlying inflammation, bronchial hyperresponsiveness, and airflow obstruction. Over time, this interaction can vary greatly between patients as well as within patients. In rural India, COPD and bronchial asthma are the leading causes of death. It is a severe chronic airway disease that poses a major threat to global public health. Over 15 million people in India are thought to suffer from asthma overall. Day by day, the prevalence is rising. It's interesting to note that developed nations have higher prevalence of bronchial asthma than developing ones; the reason for this is still unknown.

Sr. no.	Drugs name	Botanical name	*Rasa*	*Virya*	*Vipaka*	*Guna*
1	*Bharangi*	*Clerodendrom serratum*	*Katu Tikta*	*Ushna*	*Katu*	*Laghu Ruksha*
2	*Madhuka*	*Glycyrrhiza glabra*	*Madhura*	*Sheeta*	*Madhura*	*Guru Snigdha*
3	*Haritaki*	*Termenalia chebula*	*Katu Tikta Kashaya Madhura Amla*	*Ushana*	*Madhura*	*Laghu Ruksha*

Most of the content of *Bharangyadi Madhuka Are Madhukaghan, Kasahar, Shwashar* beneficial in *Pratishyaya, Kasa, Shwasa and Yakshma. Madhuka* has *Snigdha Madhur Guna* due to which it is *Madhukanissarak and Kanthya*. *Acharya Yogratnakar* mentioned that *Bharangyadi Madhuka* is *Tikta* and *kshaya* in *rasa* having *Katu vipaka. Bharangi Mool twaka* has Phenolic Glycoside and Saponin. Saponin has Antihistamine and Anticholinesterase properties. As *Bharangi* has *Shwashar* property that helps in Dissolution of Etiopathogenesis of *Tamaka Shwasa*. *Bharangi/ kasaghni* is used to cure common cold, cough, tuberculosis, rhinitis, asthma, chronic respiratory disorders ad their underlying symptoms.[8] Decoction of leaves acts as bronchodilators and mucolytic in nature and it is used to break down phlegm,

extra mucus and eases it out from body. *Madhuka*, also known as liqourice, is *kanthya* in nature and is a great treatment for throat problems, voice problems, phlegm in the lungs, and respiratory illnesses.[9] As stated in *Ashtanga Hrudayam, Kasa Chikitsa Adhyaya*[10], 48 millilitres of fresh licorice juice (or its decoction) should be taken every day with milk in cases of chronic cough, chest injury, chronic bronchitis, tuberculosis, etc. Every day, the dosage is raised by 6 millilitres. For a month, this went on. The patient should refrain from eating solid food during this time and should only drink milk. The greatest recipe for enhancing immunity, longevity, strength, and skin health is this one.

Haritaki is considered as the ultimate remedy for all sorts of respiratory troubles.[11] Owing to its predominating anti-inflammatory, anti-biotic, and anti-asthmatic properties, it holds high significance in treating various respiratory problems like the common cold, cough and flu, bronchitis, asthma etc. It also thins and loosens accumulation of phlegm from within the chest and nasal cavities and hence eases breathing and helps the body to get rid of mucus. Daily intake of this herb reinforces the lung tissues and augments lung health.

STATISTICAL ANALYSIS

The information gathered on the basis of above observations was subjected to statistical analysis in terms of mean (x), standard deviation (S.D.) and standard error (S.E.). Student T-test will be applied for parametric parameters, and for non- parametric objective parameters Chi square test will be used to analyse the data. The obtained results were interpreted as:

- Insignificant - $P < 0.10$
- Significant - $P < 0.05, < 0.01$
- Highly Significant - $P < 0.001$

CRITERIA FOR THE ASSESSMENT OF OVERALL EFFECT OF THE THERAPIES

The Results was Evaluated on the basis of Clinical Parameters obtained before and after the completion and the Assessment was carried out on further finding in below mention tabulated form.

S. No.	Positive Result Findings	Assessment
1.	Less than 25%	Non-satisfactory
2.	25% to 50%	Good
3.	50% to 75%	Satisfactory
4.	75% to 100%	Excellent

ETHICS AND DISSEMINATION

Research ethical approval, after critical evaluation and presentation the ethical committee has taken the research topic.

Consent or Assent

Subjects will be given detail information regarding their treatment in their own language. Then written consent will be taken from patients before starting the study.

DEPARTMENTAL COLLABORATION

a. Pharmacy/ *Rasa Shastra and Bhaishajya Kalpana* Department, Institute for *Ayurved* Studies & Research, Shri Krishna AYUSH University, Kurukshetra. Pin 136118.
b. Central Research laboratory, Institute for *Ayurved* Studies & Research, Shri Krishna AYUSH University, Kurukshetra. Pin 136118.
c. Pathology laboratory, Institute for *Ayurved* Studies & Research, Shri Krishna AYUSH University, Kurukshetra. Pin 136118.

As per the need cooperation will be taken from other departments of Institute for *Ayurved* Studies & Research, Shri Krishna AYUSH University, Kurukshetra and various advance laboratories with the due permission from concerned authority of Shri Krishna Govt. *Ayurvedic* College, Kurukshetra.

FINANCIAL IMPLICATIONS

Financial allotment shall be given by the university for the purpose of study will be utilized and will be completed within financial limit provided by the institute.

DISSEMINATION POLICY

Will be in the form of paper publication, presentation and Monograph.

STRENGTHS

If proposed study will result in the positive outcome, then it will be established new mode of management for the *Tamaka Shwasa*. In society, we will be providing economical and effective for treatment modality for bronchial asthma.

LIMITATIONS

- For the main review tasks in this study, we used a thorough search strategy that included all of the studies that evaluated factors affecting the severity of *Tamaka Shwasa*.

- The study will be conducted for a limited study duration
- For this study, only 40 subjects were recruited.
- Patients of just One hospital will be included in the study.

RESULTS AND DISCUSSIONS

The result obtained from the literary review, study and clinical study will be discussed.

SUMMARY AND CONCLUSION

The work will be summarized and the result will be concluded after the above-mentioned study with the help of statistical data.

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