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A COMPARATIVE STUDY OF HARIDRADI CHURNA AND SHRANGYADI CHURNA IN MANAGEMENT OF BRONCHIAL ASTHMA

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ABSTRACT :

Bronchial asthma is very distressing disease of respiratory system producing dyspnoea & discomfort. The prevalence of disease is continuously on toll due to increasing pollution and faulty lifestyle habits. In initial stage, it is curable, but once the chronicity sets, it becomes difficult to cure. Based *on* its symptoms it can be well correlated with *Tamaka Shwasa* which is one of the prime disease of *Pranvaha Srotas*. Considering all these facts this study is an attempt to search better remedy from the natural resources with object of providing well effective and safe treatment along with measures and medicines to provide strength to *pranavaha srotas.* Literally it has been mentioned that *Shrangyadi Churna and Haridradi churna* have specific effect on *Tamaka Shwasa*. In the present work, effect of above two *churnas* has been evaluated with promising results.

Keywords : Bronchial asthma, Ayurveda, *Tamaka shwasa*

INTRODUCTION: Bronchial asthma is the disorder characterized by hyper responsiveness of tracheo-bronchial tree. It may be defined as chronic inflammatory reversible airway disorder having genetic component affecting peoples of all age and sometimes may be fatal. In susceptible individuals the non specific inflammation causes recurrent episodes of wheezing, breathlessness, Chest tightness & Cough particularly at night or in the early morning. These symptoms are usually associated with wide spread but variable air flow limitation that is atleast partly reversible either spontaneously or with treatment. The bronchospasm along with hypertrophy of mucus glands and muscle cells forms the main pathological cascade in the manifestation of symptoms.

AIMS AND OBJECTIVES:

To study the etiology, pathology and symptomatology of the disease according to modern science as well as *Ayurveda*[1].

1) To assess the role of *Haridradi churna*[2] and *Shrangyadi*[3] *churna* in the management of bronchial asthma.

2) To develop cheap, safe & effective drug therapy.

1. Inclusion criteria:

a) Patient between the age group of 16-60 years.

b) Patients with cardinal sign and symptoms of asthma like chest Tightness, Cough, Wheezing and Dyspnoea.

c) Positive test of reversibility and improvement of 60L/min or >20% in PEFR, 10 min. after the inhalation of 200 mcg of Salbutamol.

d) Patient willing and able to participate for 45 days.

2. Exclusion criteria:

a) Patients below 16 years and above 60 years of age.

b) Pregnant and lactating women.

c) Patient who having history of CAD (Coronary Artery Disease).

d) Patient with evidence of malignancy.

e) History of hypersensitivity to the drug or any of its ingredients.

f) Patients who have completed participation in any other clinical trial during the past 6 month.

MATERIALS AND METHODS

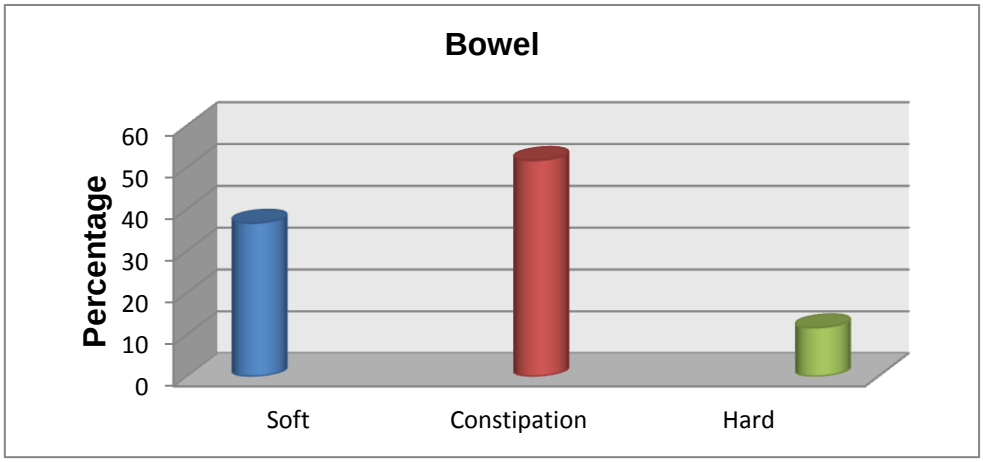
Type of study: Open Comparative study

	Group A	**Group B**
Number of Patients	30	30
Drug and Dose	*Haridradi churna* 5gm twice daily	*Shrangyadi churna* 5 gm twice daily
Anupan	*Sarshapa tail*[4]	*Luke warm water*[5]
Follow up	15 days	15 days
Study Duration	45 days	45 days
Study centre	Shubhdeep Ayurved Medical college and Hospital, Indore.	

OBSERVATIONS Table 1 .Bowel wise Distribution

Bowel	**Number of Patients**		**Total Patients**	**Percentage**
	Group A	**Group B**		
Soft	13	9	22	36.67%
Constipation	15	16	31	51.67%
Hard	2	5	07	11.67%
Total	**30**	**30**	**60**	**100%**

Graph No. 1

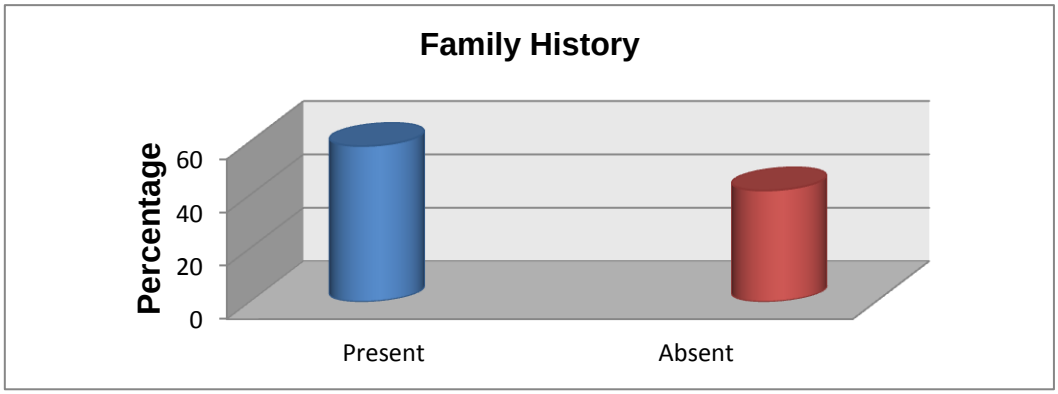


Above table and graph shows the Bowel wise distribution. It was observed that the 51.67 % patients were having constipation, 36.67 % patients were having soft bowel, and 11.67 % patients were having irregular bowel habit.

Table No.2 According to Family History

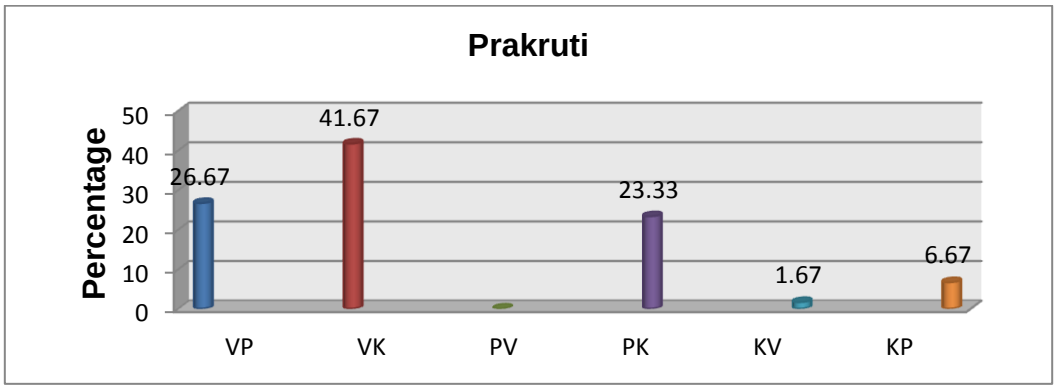
Family History	Number of Patients		Total Patients	Percentage
	Group A	Group B		
Present	3	2	05	58.33%
Absent	11	14	25	41.67%
Total	**30**	**30**	**60**	**100%**

Graph no.2



Above table and graph shows the family history wise distribution. It was observed that the 58.33 % patients have family history of disease, and 41.67 % patients do not have family history.

Graph No.3 Prakruti Wise Distribution



Above graph shows the *Prakruti* wise distribution. It was observed that the 41.67 % patients were having *Vata-kapha Prakruti*, 26.67 % patients were having *Vata-pitta Prakruti*, 23.33 % patients were having *Pitta-kapha Prakruti*, 6.67 % patients were having *Kapha-pitta Prakruti*, and 1.67 % patients were having *Kapha-vata Prakruti*.

ASSESSMENT CRITERIA

Subjective Criteria with Grading:

Grading for Dyspnoea

0 : No Dyspnoea
1 : Dyspnoea after heavy work
2 : Dyspnoea on slight exertion
3 : Dyspnoea even at rest

Grading of Cough

0 : No cough
1 : Cough during attack
2 : Cough very often
3 : Cough with restlessness

Grading of Tightness of Chest

0 : No symptom

1 : Tightness of chest during attack
2 : Very often tightness of chest
3 : Tightness of chest though out the day

Grading of Wheezing

0 : No wheezing
1 : Wheezing only during attack
2 : Very often wheezing sound
3 : Wheezing though out the day

Grading of Fatigue

0 : No fatigue
1 : Slight fatigue but routine work is not affected
2 : Fatigue with difficulty in routine work
3 : Can't do any work.

Objective Criteria:

Peakflow Meter Study

Table No.3: Statistical Analysis for Subjective Criteria: Dyspnoea

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	t	P
	B.T.	A.T.						
Group A	1.7	0.833	0.867	50.98	0.819	0.149	5.79	P<0.01
Group B	2.1	0.633	1.467	69.84	0.681	0.124	11.79	P<0.01

In Group A, the mean value for Dyspnoea before treatment was 1.7 which reduced to 0.833 after treatment. The reduction occurred is statistically significant, which means *Haridradi Churna* is effective for Dyspnoea. In Group B, the mean value before treatment for Dyspnoea was 2.1 which reduced to 0.633 after treatment. The reduction occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Dyspnoea. But as can be seen, % relief in Dyspnoea is more in Group B, therefore *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna*.

Table No.4 Subjective Criteria: Coughing

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	t	P
	B.T.	A.T.						
Group A	1.767	0.567	1.2	67.92	0.761	0.139	8.635	P<0.01
Group B	1.767	0.233	1.533	86.79	0.73	0.133	11.5	P<0.01

In Group A, the mean value for Coughing before treatment was 1.767 which reduced to 0.567 after treatment. The reduction occurred is statistically significant, which means *Haridradi Churna* is effective for Coughing. In Group B, the mean value before treatment for Coughing was 1.767 which reduced to 0.233 after treatment. The reduction occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Coughing. But as can be seen, % relief in Coughing is more in Group B, therefore *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna.*

Table No.5: Subjective Criteria:Tightness of Chest

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	T	P
	B.T.	A.T.						
Group A	1.533	0.7	0.833	54.35	0.912	0.167	5	P<0.01
Group B	1.7	0.333	1.367	80.39	0.809	0.148	9.256	P<0.01

In Group A, the mean value for Tightness of Chest before treatment was 1.533 which reduced to 0.7 after treatment. The reduction occurred is statistically significant, which means *Haridradi Churna* is effective for Tightness of Chest. In Group B, the mean value before treatment was 1.7 which reduced to 0.333 after treatment. The reduction occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Tightness of Chest. But as can be seen, % relief in Tightness of Chest is more in Group B, therefore *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna*.

Table No.6 Wheezing

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	t	P
	B.T.	A.T.						
Group A	1.433	0.933	0.5	34.88	0.731	0.133	3.74	P<0.01
Group B	1.733	0.6	1.133	65.38	0.73	0.133	8.5	P<0.01

In Group A, the mean value before treatment was 1.433 which reduced to 0.933 after treatment. The reduction occurred is statistically significant, which means *Haridradi Churna* is effective for Wheezing. In Group B, the mean value before treatment was 1.733 which reduced to 0.6 after treatment. The reduction occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Wheezing. But as can be seen, % relief in Wheezing is more in Group B, there for *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna*.

Table No.7 Subjective Criteria:Fatigue

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	t	P
	B.T.	A.T.						
Group A	1.2	0.3	0.9	75	0.803	0.146	6.139	P<0.01
Group B	1.433	0.2	1.233	86.05	0.774	0.141	8.729	P<0.01

In Group A, the mean value before treatment was 1.2 which reduced to 0.3 after treatment. The reduction occurred is statistically significant, which means *Haridradi Churna* is effective for Fatigue. In Group B, the mean value before treatment was 1.433 which reduced to 0.2 after treatment. The reduction occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Fatigue. But as can be seen, % relief in Fatigue is more in Group B, therefore *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna.*

Table No.8 Statistical Analysis for Peakflow Meter Study

Group	Mean		Diff^{n} of mean	% Relief	S.D.	S.E.	T	P
	B.T.	A.T.						
Group A	191	225.33	34.3	17.98	16.54	3.02	11.37	P<0.01
Group B	194	250.5	56.5	29.12	24.88	4.543	12.44	P<0.01

In Group A, the mean value before treatment for Peak Flow Meter Study was 191 which increased to 225.33 after treatment. The increased occurred is statistically significant, which means *Haridradi Churna* is effective for Peak Flow Meter Study.

In Group B, the mean value before treatment was 194 which increased to 250.5

after treatment. The increased occurred is statistically significant, which means *Shrangyadi Churna* is also effective for Peak Flow Meter Study. But as can be seen, % relief in Peak Flow Meter Study is more in Group B, therefore *Shrangyadi Churna* is comparatively more effective than *Haridradi Churna.*

RESULT:

Efficacy of *Haridradi Churna* (Group A) and *Shrangyadi Churna* (Group B) has been statistically proved on all Sign and Symptoms of *Tamaka Shwas*. *Haridradi Churna* and *Shrangyadi Churna* separately had good effect on subjective and objective criteria of *Tamaka Shwasa*. Comparatively *Shrangyadi Churna* (Group B) is much more effective than the *Haridradi Churna* (Group A) on all the subjective and objective criteria (Peak Flow meter).

DISCUSSION*:*

Probable Mode of action of *Shrangyadi Churna:*

Shrangyadi churna has lots of constituents. Few are *Tridoshshamaka*, few are pitta-*kaphashamaka* and remaining are *vatakapha shamaka*. Over all it shows *kaphvata shamak* property. *Karkatshrangi*[6], *shunthi*[7], *marich*[8], *pippali*[9], *nagarmotha*[10], *pushkarmool*[11], *kachur*[12], has *kaphavatashamak, vatanulomak, deepana and pachan* properties, whereas *Mishri* is *dahashamak* in nature. Looking at the taste and quantity of various ingredients present in this *churna*, it has *Madhura, katu and Tikta rasa* predominance. In Addition *pippali* and *pushkarmool* provides bronchodilator action, *marich* is mucolytic in action and *sunthi* has *amapachan* property.

Probable Mode of action of *Haridradi Churna:*

Contents of Haridradi Churna have madhur and tikta rasa predominance with kaphashamak and vatanulomak property. In addition *haridra* has anti allergic and anti inflammatory property. *Pippali* is bronchodilator in action. *Marich* has mucolytic action. *Kachur* has *kaphvata shamak* and *amapachan* property. *Draksha*[13] and *guda* have *balya* property.

Discussion on observations and result

Bronchial Asthma in relation to *prakruti:*

Maximum no. of patients i.e. 41.67 % patients were having *Vata-kapha prakruti* and 26.67 % patients were having *Vata-pitta prakruti*. It means almost 2/3rd patients in this study were having *Vatapradhan prakruti*. It reveals that *Vatapradhana Prakrut* individuals are more susceptible to *Tamaka Shwasa.*

The Reason of better result of *Shrangyadi churna* than *Haridradi churna*.

***On the basis of* Ayurveda concept:** *Shrangyadi churna has karkatshrangi,pushkarmool* and *kachur.* They direct work in *pranvahasrotas. Trikatu* has *amapachana* property,and *sarkara* has *pitta shamaka* property. Whereas contents of *Haridradi Churna have vatanulomaka and kapha shamak property but show less amapachan guna compared to shrangyadi churna. Hence Shrangyadi Churna is comparatively better medicine with respect to Haridradi Churna.*

***On the basis of experimental study*:** On the basis of observation and clinical finding described in clinical study, *shrangyadi churna* is comparatively better medicine than *haridradi churna* as it has shown more relief in symptoms considered for present study.

CONCLUSION: Bronchial asthma is reversible airway obstructive lung disease caused due to *pranvahasrotas dushti.* It is *kaphavatatmak vyadhi* with predominance of *kaphavata dosha.*

In modern era, high consumption of junk and much exposure to dust and allergens are main cause of bronchial asthma**.** Drug having properties like *kaphaghna, vata-shamak, Anulomaka* and *Amapachana* property are useful in treatment of Bronchial asthma The overall effect of the *Shrangyadi churna* with proper diet and regimen was more significant and better than the effect of the *Haridradi churna* after treatment and even follow-up.

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