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AN OPEN RANDOMIZED COMPARATIVE CLINICAL STUDY OF NAYOPAYAM KASHAYAM AND VASADI KWATHA IN TAMAKA SHWASA W.S.R TO BRONCHIAL ASTHMA

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ABSTRACT

Breathing is the foremost sign of life. This primordial sign of life gets impaired in the disease Shwasa and especially in TamakaShwasa. Proper movement of Prana vayu in pranavaha srotas is essential in maintainence of health. Tamakashwasa is a disease akin to bronchial asthma in modern parlance. It is a disease afflicting pranavaha srotas with episodic and chronic nature. Due to the alarming industrialization as well as urbanization prevalence of respiratory disorders also increasing day by day. So it is the need of an hour to provide effective treatment. Snehana, Swedana, Sodhana, Dhumapana, Shamana, Rasayana line of treatments forms the complete treatment of Tamakaswasa. It is not possible to do Shodhana in all the conditions and all patients. Despite that it is a yapya vyadhi, Shamana medications have a great role in the management. Hence this study is intended to evaluate and compare the therapeutic effect of Nayopayam Kashayam and Vasadi kwatha, two Shamana medications indicated in Shwasa roga among patient suffering from Tamaka Shwasa. The drugs used in this preparations are moderate in number and have properties like vatakaphahara, kapha vilayana, kapha nissarana, brumhana and rasayana. Hence it is taken into consideration in the management of Tamaka shwasa. This was a open randomized comparative clinical study conducted with special proforma where in 30 patients suffering from Tamaka shwasa of either sex between age group 16 -60 years were subjected to trial. The therapeutic effect of the treatment was assessed based on specific subjective and objective criteria. Results obtained by stastistical analysis showed that both Nayopayam kashayam and Vasadi kwatha are highly effective in pacifying the symptoms of Tamaka shwasa.

KEYWORDS: Bronchial Asthma, Nayopayam kashayam, Vasadi kwatha, Tamaka shwasa.

INTRODUCTION

Tamakashwasa is a vatakapha predominant disease afflicting pranavahasrotas.[1] Breathing is the function of pranavaha srotas. The moment it ceases the person is no more. This prime function is afflicted in Tamaka shwasa. It is compared with Bronchial Asthma in contemporary science. Even though TamakaShwasa is considered as a YapyaVyadhi and it becomes Sadhya if it is of recent onset and when the rogibala is more.[2] Early diagnosis and treatment is essential to minimize further progression. Bronchial asthma is a global health problem affecting all age groups.[3]The prevalence of asthma has risen in affluent countries over the last 30 years. The rate now appears to have stabilized with ~10–12% of adults and 15% of children affected by the disease. This rising prevalence is associated with increased urbanization where as in developing countries where the prevalence of asthma had been much lower.[4] It imposes an unacceptable burden on healthcare system and on society through loss of productivity on work place.[5] Current estimate suggests that Asthma affects 300 million people worldwide and an additional 100 million people will be diagnosed by 2025.[6] Asthma is a heterogeneous disease, usually characterized by chronic airway inflammation and associated with airway hyper responsiveness to direct or indirect stimuli. It is defined by the history of respiratory symptoms such as shortness of breath, chest tightness, wheeze and cough and its intensity differs over time and in intensity, along with variable expiratory airflow limitation. The goals of Asthma management include symptom control and risk reduction.[7] The practice of any medicine scheme doesn't claim effective treatment that eliminate this disease from root, along with that lack of awareness of

following step wise management approach, adverse effects associated with treatment and inability to afford medicine cost are important issues in its management. There is need for evolving more effective management for reducing the suffering of patient. Ayurveda can provide promising results in Tamakashwasa in both curative and preventive aspect. Sodhana is not possible in all conditions. So the role of shamana is inevitable in Tamaka shwasa but proof of effectiveness lies in outcome that analysed through proper statistical tests. Therefore the current research work has been made to evaluate the comparative efficacy of Nayopayam kashayam and Vasadi kwatha in Tamaka shwasa patients.

MATERIALS AND METHODS

Source of data: A minimum of 30 Patients suffering from Bronchial Asthma will be selected irrespective of their gender, caste, creed with special Proforma already prepared with details of history taking, including signs and symptoms as mentioned in Ayurveda and allied science from IPD/OPD of Sri Dharmasthala Manjunatheshwara Ayurveda Hospital, Kuthpady, Udupi after fulfilling the inclusion criteria.

Inclusion criteria

Patients with Prathyatmalakshana of TamakaShwasa – Shwasa, Kasa, Kaphanishtivana, Ghurghuratvam with

- Intermittent, mild persistent, moderate persistent asthma according to global initiative for asthma (GINA) guidelines.
- Patients fitting into diagnostic criteria of TamakaShwasa.
- Patients aged 16-60 years.
- Patients having history more than 6 months.
- Peak Expiratory Flow Rate 50-80% (moderate exacerbation)

Exclusion criteria

- Severe persistent asthma according to global initiative for asthma (GINA) guidelines.
- Peak Expiratory Flow Rate less than 50% (severe exacerbation).
- Patients with other respiratory illness like Tuberculosis, Emphysema, Corpulmonale, Bronchiectasis.
- Patients with other systemic disorders which will interfere the treatment.

Investigations

- Hb%
- RBS
- Total Count
- Differential Count
- Erythrocyte Sedimentation Rate
- Absolute Eosinophil Count
- X ray (if necessary)
- Sputum AFB (if necessary)

Assessment criteria

Objective and subjective parameters will be scored by standard method and will be assessed before and after treatment on 0,14th and 42nd day and will be analysed statistically using paired‘t’ test for the numerical data and Wilcoxon signed rank test for ordinal data, on comparing 0 to 28th day within group and in between the group the numerical data will be compared using unpaired ‘t’test and ordinal data will be compared using Mannwhitney test.

Objective criteria

- Quantity of sputum
- Breath sounds
- Chest expansion
- PEFR(Peak Expiratory Flow Rate)
- Respiratory rate
- Laboured breathing
- Erythrocyte sedimentation rate

Subjective criteria

- Cough
- Dyspnoea
- Wheeze
- Running nose
- Night wheeze
- Tightness of chest
- Severity
- Asthma control Questionnaire

Scoring of parameters have been done according to severity and shown in table no:1

Study design

Study type	: Interventional
Allocation	: Randomized
End point classification	: Comparative study
Interventional Model	: Double group
Primary purpose	: Treatment

Table 1. Grading of assessment parameters.

S. NO	CRITERIA	DETAILS	SCORE
1.	DYSPNOEA	CAN WALK INDEFINETLY	0
		SHORT BREATH BY STRENOUS WORK	1
		SHORT BREATH BY MODERATE WORK	2
		SHORT BREATH BY MINIMUM WORK	3
		SHORTNESS OF BREATH AT REST	4
2.	WHEEZE	NO DISCOMFORT	0
		ONCE AWHILE IN A DAY	1
		TWICE A DAY	2
		THREE TO FOUR TIMES A DAY	3
		MORE THAN FIVE TIMES A DAY	4
3.	COUGH	NO COUGH	0
		OCCASIONAL COUGH BUT DO NOT DISTURB WORK	1
		COUGH TROUBLESOME DURING ATTACKS	2
		COUGH VERY TROUBLESOME AND FREQUENT	3
4.	NIGHT WHEEZE	SLEEP THROUGHOUT NIGHT	0
		AWAKENED ONCE	1
		AWAKENED TWICE	2
		AWAKENED THREE TO FOUR TIMES	3
		AWAKENED ALMOST ONE HOUR	4
5.	SEVERITY	NIL	0
		INTERMITTENT	1
		MILD PERSISTENT	2
		MODERATE PERSISTENT	3
6.	RUNNING NOSE	NIL	0
		CONTINUOUS WITH REGULAR ACTIVITIES	1
		WITH RESPONDS TO TREATMENT	2
		CANNOT RESPONDS TO TREATMENT	3
7.	TIGHTNESS OF CHEST	NO SYMPTOMS	0
		OCCASIONAL CHEST TIGHTNESS ON IRRITATION TO RESPIRATORY TRACT	1
		TIGHTNESS OF CHEST EVERYDAY	2
		TIGHTNESS OF CHEST TWICE OR THRICE A WEEK	3
		VAGUE DISCOMFORT IN CHEST FREQUENTLY IN A WEEK.	4
8.	BREATH SOUNDS	ABSENCE OF ADVENTIOUS SOUNDS	0
		END INSPIRATORY	1
		EXPIRATORY	2
		BOTH INSPIRATORY AND EXPIRATORY	3
9.	LABOURED BREATHING	NONE	0
		MILD OCCASIONAL USE	1
		MODERATE CONTINOUS USE	2
		MARKED EXCESS USE	3
10.	QUANTITY OF SPUTUM	NILL	0
		LESS THAN 2.5ML/DAY	1
		RANGING FROM 2.5ML TO 10ML	2
		RANGING FROM 11-20ML	3
		MORE THAN 21ML / DAY	4

Intervention

30 patients were randomly grouped into two groups of 15 each by using permuted block randomization method.

Group A – Nayopayamkashayam

Diagnosed 15 Patients of Tamaka Shwasa will be administered Nayopayam kashayam 6 capsules Which is equivalent to 50ml of kashayam twice a day for 14 days.

Group B – Vasadikwatha

15 Patients diagnosed to be suffering from TamakaShwasa will be administered Vasadi kwatha 7 capsules equivalent to 50ml of kwatha twice a day for 14 days.

Duration of clinical study

Intervention : 14 days Follow up : 28 days

RESULTS

In this study statistical analysis was done using sigma stat statistics software version 3.5.The effect of therapy on clinical features and objective parameters in the selected sample of study is shown in table 2-7 and illustrations 1-7.

Effect of treatment

In Nayopayam group all the parameters shown improvement. Dyspnoea (92.2%), cough (76.24%), wheeze (75.77%), sputum (69.53%), chest tightness (85.18%) night wheeze (66.6%), breathsounds (79.18%), labored breathing (94.11%) chest expansion (29.51%), respiratory rate(10.2%), severity (49.96%), running nose (83.37%), ACQ (34.60 %), PEFR (39.2%), Hb (1.09%), TC (8.9%), ESR (37.3%), AEC (7.19%).

In Vasadi kwatha the parameters like Dyspnoea (68.16%), cough (66.64%),wheeze (61.29%), sputum (62.5%), chest tightness (81.25%) night wheeze(66.66%), breathsounds (61.92%), labored breathing (74.4%), chest expansion (26.5%), respiratory rate(9.56%), severity (59.7%), running nose (75.04%), ACQ (34.94%), PEFR(40%),Hb (1%),TC (8.25%), ESR (41.24%), AEC(8.85%).

Overall improvement showed maximum (46.6%) number of patients in Nayopayam group had shown Complete improvement, minimum (13.3%) have shown average remission whereas in Vasadikwatha the complete improvement is observed (26.6%) number of patients and average remission in (33.3%) number of patients. Thus study revealed that both the formulations have almost equal therapeutic effects without any much difference in statistically. Hence both group are almost found to be effective in Tamakashwasa.

Table 2. Effect of treatment on subjective parameters.

PARAMETER	GROUP	MEAN			% OF RELIEF	SD	SEM	MEDIAN	Z VALUE	P VALUE
		BT	AT	BT-AT						
DYSPNEA	GROUP 1 N	1.333	0.133	1.2	90.20%	BT:.488 AT:.352	BT:0.126 AT:0.09	BT:1.000 AT:0.00	-3.626	<0.001
	GROUP 2 V	1.467	0.467	1	68.16%	BT:.516 AT:.516	BT:0.133 AT:0.133	BT:1.000 AT: 0.00	-3.578	<0.001
WHEEZE	GROUP 1 N	2.2	0.533	1.667	75.77%	BT:.755 AT:.743	BT:0.200 AT:0.192	BT:2.000 AT:0.00	-3.473	<0.001
	GROUP 2 V	2.067	0.8	1.267	61.29%	BT:0.704 AT:0.862	BT:0.182 AT:0.223	BT:2.00 AT:1.000	-3.578	<0.001
COUGH	GROUP 1 N	1.4	0.333	1.067	76.24%	BT:0.507 AT:0.488	BT:0.131 AT:0.126	BT:1.000 AT:0.00	-3.771	<0.001
	GROUP 2 V	1.4	0.467	0.933	66.64%	BT:0.507 AT:0.516	BT:0.131 AT:0.133	BT:1.000 AT: 0.00	-3.742	<0.001
NIGHT WHEEZE	GROUP 1 N	1.2	0.4	0.8	66.66%	BT:0.561 AT:0.507	BT:0.145 AT:0.131	BT:1.000 AT:0.00	-3.207	<0.001
	GROUP 2 V	1.2	0.4	0.8	66.66%	BT:0.414 AT:0.507	BT:0.107 AT:0.131	BT:1.000 AT: 0.00	-3.464	<0.001
SEVERITY	GROUP 1 N	1.333	0.667	0.666	49.96%	BT:0.488 AT:0.488	BT:0.126 AT:0.126	BT:1.000 AT:1.000	-3.162	0.002
	GROUP 2 V	1.33	0.733	0.597	59.70%	BT:0.488 AT:0.458	BT:0.126 AT:0.118	BT:1.000 AT:1.000	-3	0.004
RUNNING NOSE	GROUP 1 N	0.8	0.133	0.667	83.37%	BT:1.014 AT:0.352	BT:0.262 AT:0.090	BT:0.00 AT:0.00	-2.279	0.031
	GROUP 2 V	0.533	0.133	0.4	75.04%	BT:0.915 AT:0.00	BT:0.236 AT:0.00	BT:0.00 AT:0.00	-1.857	0.125
CHEST TIGHTNESS	GROUP 1N	1.33	0.2	1.13	85.18%	BT:0.617 AT:0.414	BT:0.159 AT:0.107	BT:1.00 AT-0.0	-3.494	<0.001
	GROUP 2 V	1.06	0.2	0.86	81.25%	BT:0.704 AT:0.414	BT:0.182 AT:0.107	BT:1.00 AT-0.0	-3.357	<0.001
ACQ	GROUP 1 N	21	13.733	7.267	34.60%	BT:3.92 AT:5.24	BT:1.014 AT:1.354	BT:20.00 AT:15.00	-3.41	<0.001
	GROUP 2 V	21.00	13.667	7.34	34.94%	BT:3.82 AT:5.27	BT:0.988 AT:1.362	BT:20.00 AT:15.00	-3.41	<0.001

Table 3. Effect of treatment on objective parameters.

PARAMETER	GROUP	MEAN			% OF RELIEF	SD	SEM	MEDIAN	Z VALUE	P VALUE
		BT	AT	BT-AT						
BREATH SOUNDS	GROUP 1 N	1.6	0.333	1.267	79.18%	BT:0.632 AT:0.488	BT:0.163 AT:0.126	BT:1.00 AT:0.00	-3.416	<0.001
	GROUP 2 V	1.4	0.533	0.867	61.92%	BT:0.507 AT:0.516	BT:0.131 AT:0.131	BT:1.00 AT:0.00	-3.606	<0.001
LABOURED BREATHING	GROUP 1 N	1.133	0.066	1.066	94.11%	BT:0.74 AT:0.25	BT:0.192 AT:0.066	BT:1.00 AT:0.00	-3.176	<0.001
	GROUP 2 V	1	0.256	0.744	74.40%	BT:0.75 AT:0.45	BT:0.195 AT:0.118	BT:1.00 AT:0.00	-3.317	<0.001
SPUTUM	GROUP 1 N	1.5	.467	1.06	69.53%	BT:0.516 AT:0.516	0.133 0.133	2.00 0.0	-3.771	<0.001
	GROUP 2 V	1.6	.6	1	62.5%	0.507 0.507	0.131 0.131	2.00 1.0	-3.638	<0.001
Paired T test										
									T value	**P value**
PEFR	GROUP 1 N	226	314.6	88.6	39.20%	BT:82.877 AT:81.053	BT:21.399 AT:20.928	BT:250 AT:320	-8.035	<0.001
	GROUP 2 V	218	305.3	87.3	40%	BT: 89.05 AT:90.38	BT:22.99 AT:23.33	BT:200.0 AT:310	-13.89	<0.001
CHEST EXPANSION	GROUP 1 N	3.5	4.533	1.033	29.51%	BT:0.681 AT:0.640	BT:0.176 AT:0.165	BT:3.00 AT:5.00	-7.278	<0.001
	GROUP 2 V	3.467	4.4	0.933	26.91%	BT:0.743 AT:0.910	BT:0.192 AT:0.235	BT:2.00 AT: 2.00	-5.137	<0.0 01
RESPIRATORY RATE	GROUP 1 N	19.6	17.6	2	10.20%	BT:1.121 AT:1.056	BT:0.289 AT:0.273	BT:20.00 AT:18.00	12.7	<0.001
	GROUP 2 V	20.2	18.267	1.933	9.56%	BT:1.612 AT:1.613 AT:58.09	BT:0.416 AT:0.300 AT:15.0	BT:20.00 AT:18.00 AT: 420	12.5	<0.001

Table 4. Effect of treatment on lab parameters.

PARAMETER	GROUP	MEAN			% OF RELIEF	SD	SEM	MEDIAN	PAIRED T TEST	
		BT	AT	BT-AT					T VALUE	P VALUE
HB	GROUP 1 N	12.733	12.873	0.14	1.09%	BT:1.125 AT:1.060	BT:0.290 AT:0.274	BT:12.700 AT:12.700	-2.617	0.02
	GROUP 2 V	12.733	12.86	0.127	1%	BT:1.125 AT:1.104	BT:0.290 AT:0.285	BT:12.700 AT:12.500	-1.986	0.067
TC	GROUP 1 N	8466.6	7706.6	760	8.90%	BT:1604.7 AT:2001.5	BT:414.3 AT:516.8	BT:9500.0 AT:8300.0	1.69	0.113
	GROUP 2 V	8800	8073.3	726.67	8.25%	BT:1559.7 AT:1550.3	BT:402.7 AT:400.2	BT:9400 AT: 8500	4	<0.001
ESR	GROUP 1 N	36.533	23	13.533	37.03%	BT:27.30 AT:13.27	BT:7.04 AT:3.42	BT:24.00 AT:20.00	3.22	0.006
	GROUP 2 V	33.13	19.46	13.67	41.24%	BT:19.37 AT:5.46	BT:5.00 AT:1.41	BT:28.0 AT: 20.0	2.49	0.026
AEC	GROUP 1 N	364.13	337.93	26.2	7.19%	BT:96.95 AT:36.5	BT:25.03 AT:9.42	BT:333 AT:333	0.994	0.337
	GROUP 2 V	434.26	395.8	38.46	8.86%	BT:75.75 AT:58.09	BT:19.56 AT:15.0	BT:426 AT: 420	1.768	0.099

Table no 5. Comparison between the groups on subjective parameters.

PARAMETER	GROUP	MEAN	SD	SEM	MEDIAN	Mann –Whitney U Test		
						T	U	P
DYSPNEA	GROUP 1 N	1.2	0.414	0.107	1	253.5	91.5	P =0.189
	GROUP 2 V	1	0.378	0.0976	1			
WHEEZE	GROUP 1 N	1.667	0.724	0.187	1	266.5	78.5	0.108
	GROUP 2 V	1.267	0.458	0.118	2			
COUGH	GROUP 1 N	1.067	0.724	0.187	1	247	98	0.179
	GROUP 2 V	0.933	0.458	0.118	1			
NIGHT WHEEZE	GROUP 1 N	0.8	0.561	0.145	1	231	114	0.957
	GROUP 2 V	0.8	0.414	0.107	1			
SEVERITY	GROUP 1 N	0.666	0.486	0.126	1	240	105	0.728
	GROUP 2 V	0.597	0.507	0.131	1			
RUNNING NOSE	GROUP 1 N	0.667	0.9	0.232	0	249.5	95.5	0.41
	GROUP 2 V	0.4	0.737	0.19	0			
CHEST TIGHTNESS	GROUP 1N	1.133	0.516	0.133	1	258	86.5	0.173
	GROUP 2V	0.867	0.516	0.133	1			
ACQ	GROUP 1N	7.6	4.453	1.15	9	237	108	0.867
	GROUP 2V	7.4	4.339	1.12	8			

Table no 6. comparison between the groups on objective parameters.

PARAMETER	GROUP	MEAN	SD	SEM	MEDIAN	Mann –Whitney U Test		
						T	U	P
BREATH SOUNDS	GROUP 1 N	1.267	0.594	0.153	1	272.5	72.5	0.035
	GROUP 2 V	0.867	0.352	0.352	1			
LABOURED BREATHING	GROUP 1 N	1.066	0.743	0.192	1	241	103.5	0.685
	GROUP 2 V	0.744	0.458	0.118	1			
SPUTUM	GROUP 1 N	1.066	0.258	0.066	1	239.5	105.5	.605
	GROUP 2 V	1	0.378	0.097	1			

PARAMETER	GROUP	MEAN	SD	SEM	MEDIAN	Unpaired T Test	
						T	U
PEFR	GROUP 1 N	88.6	42.74	11.03	-70	-0.347	0. 732
	GROUP 2 V	87.3	41.54	10.72	-100		
CHEST EXPANSION	GROUP 1 N	1.033	0.550	0.142	1.0	-0.434	0. 668
	GROUP 2 V	0.933	0.704	0.182	1.0		
RR	GROUP 1 N	2	0.845	0.218	2	0.202	0.842
	GROUP 2 V	1.93	0.961	0.248	2		

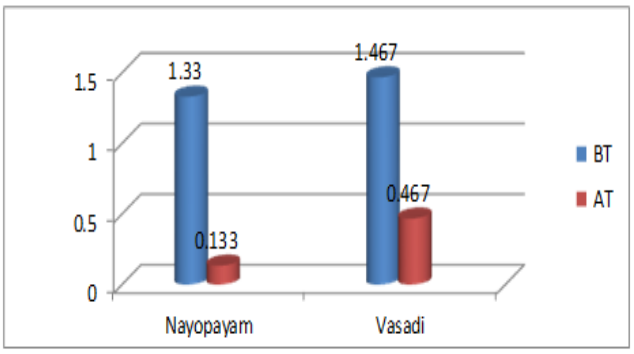
Table no. 7 comparison between the groups on laboratory parameters.

PARAMETER	GROUP	MEAN	SD	SEM	MEDIAN	Unpaired T Test	
						T	P
HB	GROUP 1 N	0.14	0.207	0.0535	0	-0.037	0.971
	GROUP 2 V	0.137	0.279	0.0721	0		
TC	GROUP 1 N	760	1741.4	449.6	600	0.0687	0.946
	GROUP 2 V	726.6	703.5	187.6	900		
ESR	GROUP 1 N	13.53	16.26	4.2	8	0.0193	0.985
	GROUP 2 V	13.67	21.18	5.47	6		
AEC	GROUP 1 N	26.2	102.08	26.3	7	0.3	0.766
	GROUP 2 V	38.46	84.21	21.7	24		

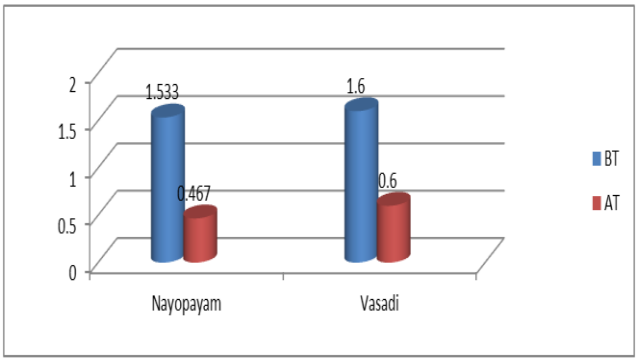
Table no: 8 showing overall effect of the intervention.

Extent of change	Change of category	No of patients			% of Patients		
		Group N	Group V	Total	Group N	Group V	Total
100% Improvement	Complete Improvement	7	4	11	46.60%	26.60%	36.60%
Improvement from 76-99%	Good remission	2	2	4	13.30%	13.30%	13.30%
Improvement from 51-75%	Moderate remission	4	4	8	26.60%	26.60%	26.60%
Improvement from 26-50%	Average remission	2	5	7	13.30%	33.30%	23.30%
Improvement From 1-25%	Poor remission	0	0	0	0	0	0
Worsening	Worsening	0	0	0	0	0	0

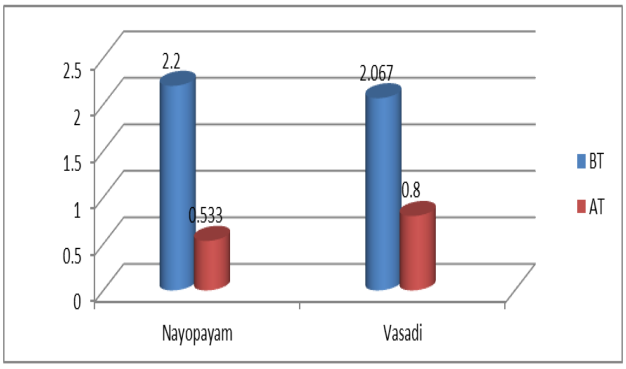
Illustrations



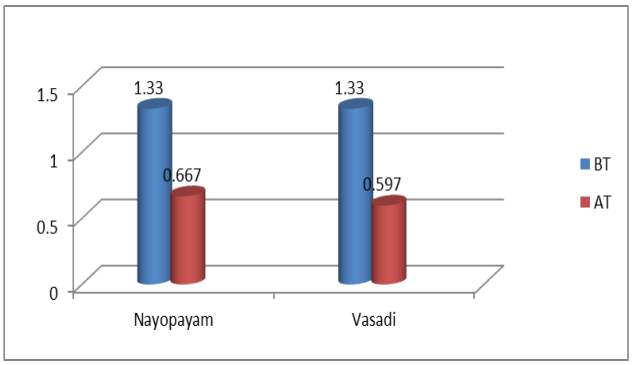
Ill 1. Effect of treatment on Dyspnea.



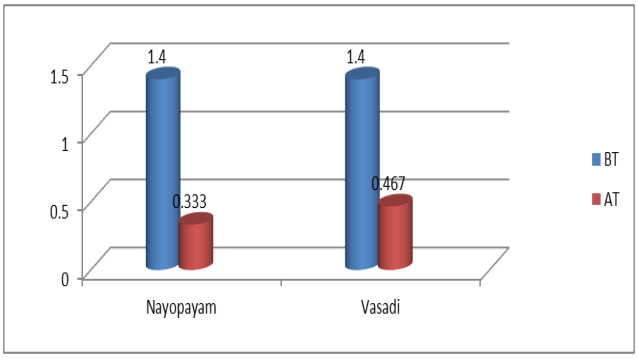
Ill 4. Effect of treatment on Sputum.



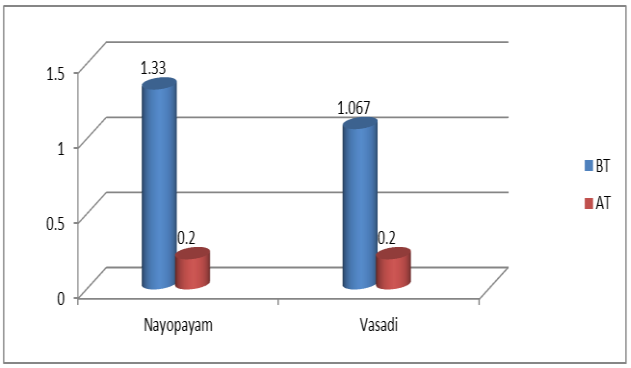
Ill 2. Effect of treatment on Wheeze.



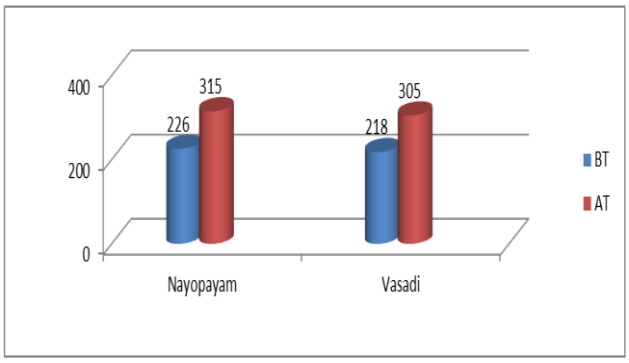
Ill 5. Effect of treatment on Severity.



Ill 3. Effect of treatment on Cough.



Ill 6. Effect of treatment on Chest Tightness.



Ill 7. Effect of treatment on PEFR.

DISCUSSIONS

General description of patients

Out of 30 Patients of TamakaShwasa (Bronchial Asthma) registered in this study maximum number of 11(36.66%) patients belonged to the age group 46-60years. It was recorded that 63.33% were females and maximum 22 (73.33%) patients were belonging to Hindu religion. As per observation 20 (66.66%) patients were married and maximum number of patients belonged to category of middle class (50%).Most of the patients are educated, in that 9 (30%) were graduates.

As per observation, maximum patients 14(46.66%) were housewife and 17 patients were from sadharanadesha. 23 (76.66%) patients had mixed diet. Out of 30 patients enrolled for study most of the patients 23(76.66%) had addictions towards tea and coffee 12 (40%) patients. It was found that maximum 10 (73.33%) patients had samagni and maximum 25 (83.33%) patients had Madhyama koshta. Majority of the patients 15(50%) belonged to the Vata-Kaphaja Prakriti. Study shows that maximum 27 (90.00%) patients were Madhyama Sara and 27 (90.00%) patients were Madhyama Samhanana. Analysis of the Patients 28 (93.33%) were Madhyama Satva and 29 (96.66 %) patients were Madhyama Satmya. Analysis shows 28 (93.33%) belongs to Madhyama aharashakti. The observation revealed that most patients 25(83.33%) had Madhyama Vyayamashakti. 20 patients had negative family history of illness. Vatakapha predominant patients were 22 (73.33%).it was found that Dust is the aggravating factor among 16(53.33%) patients. 4(13.33%) where as exposure to smoke cause aggravation among 7(23.33%) patients. Out of 30 patients, 17(56.66%) patients had relief from the symptoms by hot treatments, Maximum 12 (40%) patients had history since 11-15 years, Among 30 patients, 7 (23.33%) patients had sudden and 23(76.6%) patients had gradual onset. Among 30 patients, 20(66.6%) patients were belongs to intermittent in severity. Among the 30 patients, all 3 patients had breathlessness, wheeze, cough, sputum, nightwheeze whereas 26(86.6%) patients had tightnesss of chest. 14(46.6%) patients had throat irritation and hoarseness of voice. 12(40%) patients and 10(33.3%) patients had sneezing and running nose respectively.

Nayopayam kashayam and Vasadi kwatha are mentioned in the context of shwasaprakarna which has three and eight drugs respectively. The Nayopayamkashayam consists of Bala, Jeeraka and Shunti. Bala is mainly vatapittahara in nature and by virtue of all properties it has strong shwasahara action. It is a drug known for its rasayana, brumhana and anulomana action. Second drug jeeraka is a drug frequently used in patients suffering from shwasa. Its Doshagnata is vatakaphahara. it is also agnideepana and anulomana . And the third drug is Shunti that is having vatakaphahara action. Considering all properties it is mainly shothahara, vatanulomana, shwasahara, deepana, pacana, jwaragna, sleshmahara and swarya. Bala mainly helps in rejuvenation of cells and it rectify the khavaigunya of rogaadhistana. Anulomana action relieves shwasakrichrata by correcting prana vayu vilomata. Deepana and pachana property reduces the malaroopikapha in srotas generated due to agnimandya and there by reduces the srodhorodha. This formulation is tridoshahara and it rectify doshadushti, there by helps in sampraptivighatana of vyadhi. Hence Nayopayamkashayam by its action like tridoshagna, brumhana, deepana and rasayana is effective in relieving symptoms in Tamakashwasa. The anti inflammatory, antispasmodic, anti spasmolytic, anti histamine action, anti tussive action reduces the airway inflammation, relieves the bronchospasm, reduces the airway hyper responsiveness in tracheo bronchial tree and helps in remission of symptoms in Bronchial Asthma.[8-10]

Vasadi kwatha consists of eight ingredients Vasa, Haridra, Dhanyaka, Guduchi, Bharangi, Pippali, Shunti, Brihati, and consumed with water along with the addition of maricha churnam. Almost all drugs are having Tridoshahara Vatakaphagna, Shwasakasahara action. Mainly vasa, brihati, bharangi, pippali, maricha, haridra are shwasakasahara and vatakaphaghna. Drugs like guduchi, pippali are having rasayana and balya action. Brhati, Bharangi, Guduchi, Maricha, Shunti, Dhanyaka, Pippali are having deepana and pacana action. Many drugs are having anulomana, jwaraghna and shothahara action. Pippali is having mriduvirechana and shirovirechana action while Dhanyaka and Maricha are having srotosodhaka property. Maricha also possess lekhana, kaphanissaraka action. vatakaphaghna, vatanulomana breaks the samprapti of vyadhi and helps in chikitsa where as srodhosodhaka, kaphanissaraka, kaphahara relieves the obstruction of pranavahasrotas and thus vilomagati of vata become normal. Rasayana and Brumhana action provides strength to the srotas , reduces the upashoshana of dhatu. Deepana and pacana action reduces the ama associated agnimandya that lead to the formation of malaroopikapha. Hence the ingredients of Vasadi kwatha are effective in relieving symptoms of Tamakashwasa. Vasa, Dhanyaka, Pippali are having expectorant action. Guduchi and haridra are having anti allergic action. Anti inflammatory and anti spasmodic action of dhanyaka, anti histamine action of haridra, antispasmodic and bronchodilator action of vasa .Carminative action of pippali and brihati. The antistress,

antiantipyretic, antioxidant action of guduchi. The anti inflammatory, antispasmodic, anti spasmolytic, anti histamine action, anti tussive, bronchodilator action, reduces the airway inflammation, relieves the bronchospasm, reduces the airway hyper responsiveness in tracheo bronchial tree and anti stress action of guduchi specially reduces the psychiatric related symptoms in asthma. Thus it is effective in the management of Bronchial Asthma.[11-18]

CONCLUSION

In Nayopayam group all the parameters like Dyspnoea (92.2%), Cough (76.24%),Wheeze (75.77%), Sputum (69.53%), Chest tightness (85.18%) showed statistically significant result with p value <0.00 In Vasadi kwatha the parameters like Dyspnoea (68.16%), Cough (66.64%),Wheeze (61.29%), Sputum (62.5%), Chest tightness (81.25%) showed statistically significant result with p value <0.001. Apart from this other associated symptoms like Night wheeze, breathsounds, labored breathing, chest expansion, respiratory rate also shown good improvement in both groups with statistically significant results with p value <0.001. Difference in mean of all the individual parameters of Nayopayam and Vasadi kwatha showed better relief. The Overall effect of Nayopayamkashayam and Vasadikwatha specify that 36.7% patients showed 100% improvement, 26.6% showed Moderate remission, 23.3% showed average remission and 13.3% showed Good remission. Thus study revealed that both the formulations have almost equal therapeutic effects without any much difference in statistically. Hence both group are almost found to be effective in Tamakashwasa.

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