

## CLINICAL STUDY OF TAMRAPARNA (*Nicotiana tabacum* Linn.) W.S.R. TO SWASAHARA KARMA (ANTI-ASTHAMATIC EFFECT)

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### Abstract

Properly administered medicine showed good therapeutic effects, even though it is a toxic drug. Thus we can use poisonous drug/herbs in treatment by appropriate ways. The work was carried on the plant *Nicotiana tabacum* Linn. for its swasahara effect in Tamaka swasa. This plant has well known toxic effect; till the work was carried out on this plant to evaluate the classical references based on therapeutic criteria. But in classical references the drug delivery system of the drug is not explained. As the work is on respiratory track disease, the drug administered to the target system. In addition, the drug has well known toxic drug, so it was administered in smaller dose as possible. For that purpose, the aerosol therapy was selected. Tamaka swasa is a life threatening disease, and very fast acting drug. Due to the Vyavai, Vikasi and Tikshna guna *Nicotiana tabacum* Linn. can act quickly and by giving it as a inhalation drug can be delivered directly to the respiratory tract, in minimal dose and can reduce the adverse effects.

**Key words:** Tamaka Swasa; *Nicotinia tabacum*; Tamra parna; Swasahara Karma.

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## INTRODUCTION

The present study has been carried out to assess the antiasthmatic potential of the drug *Nicotiana tabacum* Linn. This plant is indigenous to South America named in honor of John Nicot of names, who introduced the plant to France. It reached China via Manila During 1620 A.D. Entry of tobacco in India is reported in the later half of the 16<sup>th</sup> century by Portugal's. The first reference of Tobacco is reported in 160A.D. Yogaratnakara, the author of 17<sup>th</sup> century is the first who mentioned about Tamaku in Ayurvedic literature.<sup>[1][2][3]</sup> This plant has well known toxic effect.<sup>[4][5][6]</sup>

Clinical study has been conducted biopathologically, radiologically as well as by other investigations. The references available in the Ayurvedic text for this plant do not show the route of administration as well as the dose.

In this study an attempt was to use as smaller dose as possible. In present study worked on respiratory track diseases, so trying to give medicine directly into the respiratory track. For this purpose two aerosol forms have been chosen. First one was oral spray and second one was the form of Rota capsule.

## AIMS AND OBJECTS

- To know the therapeutic efficacy of the drug Tamra parna on Tamaka Swasa.
- To find out side effects of the selected drug in human beings.
- To use newer form of drug administration in herbal plant.

## MATERIALS AND METHODS

### Selection of Patients

For the present study, uncomplicated patients fulfilling the clinical criteria for diagnosis of Tamaka Swasa were selected irrespective of their age, sex, religion, etc. randomly from

O.P.D. and I.P.D. section of I.P.G.T. & R. A., Jamnagar.

### Criteria for Diagnosis

A special proforma was prepared incorporating all the signs and symptoms based on both Ayurvedic and Allopathic descriptions. It also includes the points regarding the state of dosha, dushya and srotaspariksha. At the outset, a detailed clinical history was taken and complete physical examination of each patient was done on the basis of the proforma. But to confirm the diagnosis as well as to exclude other conditions, respiratory function test, hematological examinations, and routine and microscopic urine examinations were carried out. Sputum test for A.F.B. and X-Ray chest was also done wherever necessary. These investigations were carried out before and after the treatment to assess the effect of drug under trial.

### Diet Restrictions

Patients were advised to avoid the provocative stimuli and kept on their routine diet with excessive intake restrictions.

### Management

In all patients, those were diagnosed as Tamaka Swasa, were included in the present clinical study and tried in two groups. The willing patients were admitted in the hospital and unwilling patients treated as O.P.D. patients.

### Group 1: Drug group

It is further sub-divided into two groups

**Group A - Rota capsule made of water soluble extract of *Nicotiana tabacum* (D.G.1) Capsule is made by own.**

Dose: 1 Capsule thrice a day

Duration: 28 days

**Group B - Nicoasthama oral spray made of water soluble extract of *Nicotiana tabacum* (D.G.2)**

Dose: One puff thrice a day-in every puff the liquid drug is 0.14 ml

Duration: 28 days

**Group 2: Placebo group rostedsuji (P.G.)**

Dose: One capsule thrice a day- in one capsule 200 mg drug

Duration: 28 days

**Drug Collection**

The green leaves of the plant *Nicotiana tabacum* Linn. were collected from fields near Charotarregion, Gujarat.

**Authentication of Drug**

The drug is authenticated by Dr.Usnas Bhat, Department of Pharmacognocny, I.P.G.T. & R.A., Gujarat.

**Criteria of assessment**

I.P.D. patients were examined daily whereas O.P.D. patients were examined weekly during the treatment period. Criteria of assessment were kept on the bases of relief in the signs and symptoms of the disease Tamaka Swasa. For this purpose, cardinal signs and symptoms<sup>[2][4]</sup> were given scores accordingly to their severity before and after treatment with the help of scoring pattern. (Table 1)

**Criteria for the assessment of total effect of the therapy**

The total effect of the therapy was assessed on the basis of following criteria-

1. Cured - 100% relief in signs and symptoms
2. Markedly improved - more than 75% relief in signs and symptoms

3. Moderately improved - More than 50% relief in signs and symptoms
4. Minor improvement - more than 25% relief in signs and symptoms
5. Unchanged - less than 25% relief in signs and symptoms

**OBSERVATIONS**

Total 47 patients of Tamaka Swasa were registered in the present study. Out of which, 12 patients discontinued the treatment before the completion of the course of therapy. The clinical observation of 47 patients are presented in the study and the effect of therapy was evaluated in 35 patients who completed the duration of treatment studied in three groups i.e. 16 patients in D.G.1 Group, 11 patients in D.G.2 Group and 8 patients in placebo group.

Majority of the patients i.e. 42.55% were reported in the age group of 21-30 yrs followed by 21.28 %patients in the age group of 31-40 yrs. In this study majority of patients were male i.e.55.32 % followed by 44.68 % female patients. Religion wise distribution of patients indicates that 82.98% of the cases were Hindus followed by 17.02% of Muslims. Occupation wise distribution showed that majority were 31.91% in the housewives, followed by 23.40 % in business. In this study majority of the patients i.e. 34.04% were graduates followed by 25.53% uneducated and high school. Majority of the patients were of upper middle socio-economic status i.e. 40.43% followed by 38.30% of middle class. Habitat wise maximum number of patients i.e. 74.47% was from the urban area followed by 25.53% from rural areas. According to family history majority of the patient i.e.51.06% has positive history of asthma, Koch's etc. In this study all the patients' i.e.63.83% used to take tea or coffee, followed by patients addicted to tobacco chewing i.e.36.17% and 19.15% to smoking. The majority of patients i.e. 61.70% in this study reported to have disturbed sleep, whereas rest 38.30% of patients had sound sleep.

**Table 1: Assessment Criteria**

Signs & Symptoms	0	1	2	3	4
Swasa vega sankhya	No Swasa Vega	Mild Swasa (1 Or 2 bouts of Swasa in a week)	Moderate Swasa (3 to 5 Swasa in a week)	Severe Swasa (6 and more bouts of Swasa in a week)	-
Swasa Kasthta (Dyspnoea)	No dyspnoea	Feels better on seating	Feels better by using hot drink/fomentation	Feels better by expectorations/bronchodilation	Require hospitalization
Kasa	No cough	Dry cough without pain/wet with easy expectoration	Dry cough with pain/ wet with slight difficulty expectoration	Dry cough with severe pain sabbing of cutting felling restless. Because of difficulty in expectoration	Frequent coughing & due to point becomes unconscious
Urhashula (chest pain)	No pain	Pain during attack & subside immediately after attack	Pain during attack & persists at least 2 days after attack	Pain always, but not severe to enough to restrict the routine Activity	Pain always & restrict the routine activity
Peenasa	No Peenas	Peenas during attack & subside 1-2 days	Peenas during attack & persist for a week after the attack	Peenas very often even without attack	-
Crepts / ronchi	Absent on normal breathing but a few r/s on forced breathing	A few scattered bilateral r/c on normal deep breathing	R/c in between grade 1 & 3 on normal deep breathing	Innumerable high pitched bilateral r/c on normal deep breathing	-
Griva sirah sangraha	No griva sirah sangraha	During attack & subside immediately after attack	During attack & persist at least for two days after attack	Always but not severe enough to restrict the routine activities	Always & restrict the routine activities
Lalate / sarvangasweda	Absence	Pressure during attack in mild form	Pressure during attack in moderate form	Pressure during attack in severe form	Persist even in & after attack
On dosha	No symptoms	Presence of symptoms	Exaggerated symptoms	-	-
On mala	No stool	Hard stool	Normal stool	Loose stool	-

**Table 2: Group wise distribution of 47 patients**

Group	No. of patients Completed	No. of patients Discounted	Total
D.G. 1	16	5	21
D.G. 2	11	5	16
Placebo Group	8	2	10

In the study majority of the patients i.e. 70.21% were vegetarians followed by 29.79% patients were having a mixed diet. According to Agni 42.55% patients were of visamagni

and mandagni 36.17 respectively, followed by tikshanagni 17.02%. Maximum number of patients i.e. 51.06% was of Madhyama Kostha followed by 31.91% Krura kostha.

**Table 3: Distribution of 47 patients of tamaka swasa according to nidana reported**

Nidana	Number of patients			Total	Percentage
	D.G.1	D.G.2	P.G		
<b>Aharaja</b>					
Viruddhanna	4	5	1	10	21.28
Ruksanna	3	3	3	9	19.15
Vistambhi/Abhisyandi	7	6	3	16	34.04
Visamasana	8	4	4	16	34.04
Sitasana/pana	8	1	2	11	23.40
<b>Viharaja</b>					
Ativyayama	3	2	3	8	17.02
Raja/Dhoma	4	5	1	10	21.28
Karmahata/Bharakarsita	7	8	3	18	38.30
Sitasthana/Sitavata	8	6	2	16	34.04
Divaswapna	7	7	4	18	38.30
<b>Nidanarthakara roga</b>					
Anaha	4	3	1	8	17.02
Amapradosaja	3	2	3	8	17.02
Kshaya	7	6	3	16	34.04
Dourbalya	8	8	4	20	42.55
Peenasa	8	7	2	17	36.17
Kasa	5	4	6	15	31.91

**Table 4: Seasons reported for the exacerbation of the symptoms in 47 patients of tamaka swasa**

Seasons	Number of patients			Total	Percentage
	D.G.1	D.G.2	P.G		
Sisira	4	3	3	10	21.28
Vasanta	2	3	2	7	14.89
Grishma	1	1	0	2	4.26
Varsha	2	1	1	4	8.51
Sharad	5	2	1	8	17.02
Hemanta	7	6	3	16	34.04

**Table 5: Factors aggravating the disease in 47 patients of tamaka swasa**

Factors	Number of patients			Total	Percentage
	D.G.1	D.G.2	P.G		
Megha	6	3	5	14	29.79
Sitapadatha	9	5	3	17	36.17
Sitavata	5	2	5	12	25.53
Raja	8	7	4	19	40.43
Dhooma	5	6	5	16	34.04

**Table 6: Distribution of 47 patients of tamaka swasa on cardinal and associated symptoms**

Cardinal and associated symptoms	Number of patients			Total	Percentage
	D.G.1	D.G.2	P.G		
Shwashavegasankhya	21	16	10	47	100
Shwashakastata	21	16	10	47	100
Kasa	18	14	8	40	85.10
Urhasoola	15	13	7	35	74.47
Peenas	10	10	5	25	53.19
Kanthyaghurghurakam	8	12	4	24	51.06
Ronchi /Crepts	15	14	9	38	80.85
Grovagraja	6	6	3	15	31.91
Aruchi/Agnimandhya	14	10	6	30	63.83
Pratisyaya	12	8	8	28	59.57
Pratymati	13	4	3	20	42.55

**Table 7: Effect of *Nicotiana tabaccum* Linn. rota caps (D.G.1) on cardinal signs & symptoms of 16 patients of tamaka swasa**

Cardinal signs & symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	T	P
Shwashavegasankhya	33	1	2	66.66	0.70	0.18	12.14	<0.001
Shwashakastata	2.38	0.06	2.32	97.48	2.39	0.6	3.85	<0.01
Kasa	1.8	0.42	1.38	76.60	0.75	0.19	7.05	<0.001
Urhasula	2	0.11	1.69	94.50	0.96	0.24	3.5	<0.01
Peenas	1.6	0.33	1.27	79.30	0.51	0.13	6.32	<0.001

**Table 8: Effect of *Nicotiana tabaccum* Linn. Nicoasthama oral spray (D.G.2) on cardinal signs & symptoms of 11 patients of tamaka swasa**

Cardinal signs & symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	T	P
Shwashavegasankhya	1.8	0.42	1.38	76.60	0.75	0.23	5.65	<0.001
Shwashakastata	2.9	0.6	2.3	79.30	0.43	0.13	6.32	<0.001
Kasa	2	0.66	1.34	67	0.70	0.21	4.5	<0.001
Urhasula	1.8	0.42	1.38	76.60	0.51	0.15	4	<0.01
Peenas	1.6	0.33	1.27	79.30	1.69	0.21	4.5	<0.001

**Table 9: Effect of *Nicotiana tabaccum* Linn. Rota cap (D.G.1) on general signs & symptoms of 16 patients of tamaka swasa**

Symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	t	P
Kanthyaghurghurakam	1.8	0.42	1.38	76.66	0.51	0.13	18.04	<0.001
Ronchi/crepts	2.38	0.06	2.32	97.48	2.39	0.60	5.32	<0.001
Grivagraha	2.38	0.06	2.32	97.48	2.39	0.60	3.85	<0.01
Aruchi/agnimandhya	1.6	0.33	1.27	79.37	0.69	0.17	13.35	<0.001
Pratishyaya	3	1	2	66.66	0.70	0.18	12.14	<0.001



**Table 10: Effect of *Nicotiana tabaccum* Linn. Nicoasthama oral spray (D.G.2) on general signs & symptoms of 11 patients of tamaka swasa**

Symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	t	P
Kanthyaghurghurakam	1.77	0.14	1.63	92	0.70	0.21	5.65	<0.001
Ronchi/crepts	1.8	0.4	1.4	77.77	0.56	0.16	5.50	<0.001
Grivagraha	1.8	0.42	1.38	76.6	0.51	0.15	4.0	<0.01
Aruchi/agnimandhya	2	0.66	1.34	67	0.70	0.21	4.5	<0.001
Pratishyaya	2.9	0.6	2.3	79.3	0.43	0.13	6.32	<0.001

**Table 11: Effect of *Nicotiana tabaccum* Linn. Rota caps (D.G.1) on pulmonary function tests in 16 patients of tamaka swasa**

Pulmonary function	BT	AT	Mean	%	SD	SE	t	P
Breath holding time	16	18.6	2.6	67.3	0.64	0.16	16.25	<0.001
Chest expansion	0.46	0.71	0.25	36.7	0.064	0.016	15	<0.001
Respiration rate	16.6	19.2	2.6	67.3	0.64	0.16	16.25	<0.001

**Table 12: Effect of *Nicotiana tabaccum* Linn. Nicoasthama oral spray (D.G.2) on pulmonary function tests in 11 patients of tamaka swasa**

Pulmonary function	BT	AT	Mean	%	SD	SE	t	P
Breath holding time	16.2	18.8	2.4	67.3	0.44	0.14	11.25	<0.001
Chest expansion	0.51	0.7	0.19	27.14	0.044	0.014	7	<0.001
Respiration rate	16.3	19	2.7	14.21	0.44	0.14	11.25	<0.001

**Table 13: Effect of *Nicotiana tabaccum* Linn. Rota caps (D.G.1) on haematocrit values in 16 patients of tamaka swasa**

Haematocrit values	BT	AT	Mean	%	SD	SE	t	P
Hb%	13.57	13.13	1.22	13.5	1.11	0.35	3.6	<0.01
E.S.R.	28.2	16.4	12.2	45.1	7.04	2.22	5.31	<0.001
T.L.C.	9200	8895	2195	24.1	3250.84	1.25.5	2.2	<0.05
Eosinophil	13	9.1	4.2	30.2	3.04	0.96	4	<0.01
Lymphocyte	36.6	34.2	6.8	52.28	3.65	1.15	5.1	<0.001

**Table 14: Effect of nicoasthama oral spray (D.G.2) on haematocrit values in 11 patients of tamaka swasa**

Haematocrit values	BT	AT	Mean	%	SD	SE	t	P
Hb%	13.87	13.43	1.22	13.12	1.20	0.38	3.9	<0.01
E.S.R.	28	16.2	11.8	42.14	6.66	2.1	5.6	<0.001
T.L.C.	9100	8795	2290	22.79	3254.32	1026.6	4.1	<0.01
Eosinophil	13.1	9.2	3.9	29.77	2.54	0.8	3.8	<0.01
Lymphocyte	36.4	6.5	6.5	57.28	3.8	1.2	5.8	<0.001

**Table 15: Effect of *Nicotiana tabaccum* Linn. Rota caps (D.G.1) on dosa values in 16 patients of tamaka swasa**

Dosa	BT	AT	Mean	%	SD	SE	t	P
Vatadusti	1.7	0.7	-1.2	70.59	1.2	0.3	8	<0.001
Pittadusti	0.6	0.4	0.5	83.33	1.76	0.44	2.1	<0.1
Kaphadusti	1.7	0.5	-1.1	64.7	0.92	0.23	6.2	<0.001

**Table 16: Effect of nicoasthama oral spray (D.G.2) on dosa values in 11 patients of tamaka swasa**

Dosa	BT	AT	Mean	%	SD	SE	t	P
Vatadusti	1.6	0.5	-1.1	62.5	0.32	0.1	11	<0.001
Pittadusti	0.8	0.2	0.4	66.66	0.7	0.22	1.8	<0.1
Kaphadusti	1.7	0.5	-1.2	70.58	0.41	0.13	9.2	<0.001

**Table 17: Effect of *Nicotiana tabaccum* Linn. Rota caps (D.G.1) on mala values in 16 patients of tamaka swasa**

Mala	BT	AT	Mean	%	SD	SE	t	P
Mala	1.4	2.6	1.2	46.15	0.52	0.13	9.23	<0.001

**Table 18: Effect of nicoasthama oral spray (D.G.2) on mala values in 11 patients of tamaka swasa**

Mala	BT	AT	Mean	%	SD	SE	t	P
Mala	1.1	2.6	1.5	57.77	0.57	0.18	8.33	<0.001

**Table 19: Effect of placebo drug on cardinal signs & symptoms of 8 patients of tamaka swasa**

Signs & symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	t	P
Shwashavegasankhya	2	1.25	0.75	37.5	.71	0.25	3	<0.05
Shwashakastata	2	1.84	0.16	8.5	0.45	0.16	1	<0.5
Kasa	1	0.67	0.33	33.33	0.67	0.21	1.57	<0.5
Urhashoola	1.5	1	0.5	33.33	0.7	0.22	2.23	<0.05
Peenas	2	1.84	0.16	8.5	0.45	0.16	1	<0.5

**Table 20: Effect of placebo drug on general signs and symptoms of 8 patients of tamaka swasa**

Symptoms	Mean score			% Of relief	Paired test			
	B.T.	A.T.	Diff.		S.D.	S.E.	t	P
Kanthyagurghurakam	1.67	1.5	0.17	10.18	0.45	0.16	1.06	<0.5
Ronchi/crepts	2	1.6	0.4	20	1.9	0.67	0.6	>0.5
Grivagraha	1.67	1.5	0.17	10.18	0.45	0.16	1.06	<0.5
Pratishyaya	2	1.33	0.67	33.5	0.96	0.34	1.97	<0.1



**Table 21: Effect of placebo drug on pulmonary function tests in 8 patients of tamaka swasa**

Pulmonary function tests	Mean score			% Of relief	S.D.	Paired test		
	B.T.	A.T.	Diff.			S.E.	t	P
Breath holding	18.17	18	-0.17	-0.93	0.85	0.3	-0.54	>0.5
Chest expansion	0.68	0.7	0.016	2.43	0.04	0.016	1	<0.5
Respiration rate	23.67	22.83	0.83	3.51	1.53	0.54	1.53	<0.5

**Table 22: Effect of placebo drug on haematocrit values in 8 patients of tamaka swasa**

Haematocrit values	Mean score			% Of relief	S.D.	Paired test		
	B.T.	A.T.	Diff.			S.E.	t	P
Hb%	12.8	13.15	0.35	2.66	0.25		3.88	<0.01
ESR	15	11.83	3.17	21.13	6.62	0.09	1.35	<0.5
T.L.C.	8366.6	12133.3	3766.7	31.32	4193.78	1482.341.9	2.54	<0.05
Eosinophil	5.66	9.83	4.17	42.42	3.51	1.24	3.36	<0.02
Lymphocyte	38.66	52.66	14	26.59	14.77	5.22	2.68	<0.05

**Table 23: Effect of placebo on dosa and mala values in 8 patients of tamaka swasa**

Dosa	B.T.	A.T.	Mean	%	S.D.	S.E.	t	P
Vatadusti	0.33	2	0.33	16.5	0.62	0.22	1.5	<0.5
Pittadusti	0.5	1.06	0.56	52.83	0.45	0.16	6.63	<0.001
Kaphadusti	0.5	1.6	0.5	31.25	0.59	0.21	2.38	<0.05
Mala	1.35	1.18	0.17	12.59	0.59	0.21	0.8	<0.5

**Table 24: Overall effect of the *Nicotiana tabaccum* Linn. Rota caps (D.G.1) in 16 patients of tamaka swasa**

Treatment effect	Number of patients	%age
Cured	2	12.5
Markedly improved	6	37.5
Moderately improved	4	25
Minor improvement	2	12.5
Unchanged	2	12.5

**Table 25: Overall effect of the nicoasthama oral spray (D.G.2) in 11 patients of tamaka swasa**

Treatment effect	Number of patients	%age
Cured	1	9.09
Markedly improved	6	54.54
Moderately improved	2	18.18
Minor improvement	1	9.09
Unchanged	1	9.09

**Table 26: Overall effect of the placebo drug in 8 patients of tamaka swasa**

Treatment effect	Group A	
	No. of Patients	%
Cured	0	0
Markedly improved	0	0
Moderately improved	1	12.5
Minor improvement	3	37.5
Unchanged	4	50

In the study 51.06% of patients were observed to be of vata-kapha followed by 27.66% of pitta-kaphaprakriti. Majority of patients in this study i.e. 57.45% had madhyama Sara, followed by 31.91% patients had avara and 10.64% had pravara Sara. In the study 55.32% of patients was of madhyama samhanana followed by 34.04% and 10.64% of patients was of avara and pravara samhanana respectively. Majority of patients in this study i.e. 55.32% were of madhyamasatva, while 36.17% of avara and 8.51% were of pravarasatva. Maximum number of patients i.e. 59.57% was found to be of Madhyama followed by 29.79% of avarasatmya.

Majority of the patients i.e. 63.83% had madhyamaahara Shakti followed by 27.66% avaraahara and 8.51% had pravaraahara Shakti. In this study it was seen that 53.19% were of madhyama vyayama Shakti, while 36.17% were observed to be having avara vyayvma Shakti. Maximum number of patients got first attacks of Tamaka Shwasa in 4<sup>th</sup> decade of their life 34.04%.

### **Effect of therapies**

### **Statistical analysis**

The data are presented by the using of student's 't' test. Values of  $P < 0.05$  were considered as statically significant.

### **DISCUSSION**

The study shows that the effect of *Nicotiana tabacum* Linn. rota caps- 76.66% relief was observed in symptom kanthyaghurghurakam, 97.48% each in rhonchi / crepts and 97.48% in grivagraha and 97.48% in prtisysya in *Nicotiana tabacum* group. The drug shows highly significant i.e.  $P < 0.001$  in symptoms like kanthya ghurghurakam and ronchi/crepts, in Pratisyaya and Aruchi/agnimandhya. Significant result i.e.  $P < 0.01$  were found in Grivagraha.

The study shows that the effect of Nicoasthma oral spray- 92% relief was observed in symptom kanthya ghurghurakam, 77.77% each in rhonchi/crepts and 76.6% in grivagraha and 79.3% in prtisysya in *Nicotiana tabacum* group. The drug shows highly significant i.e.  $P < 0.001$  in symptoms like kanthya ghurghurakam and ronchi/crepts, in Pratisyaya and Aruchi/agnimandhya. Significant result i.e.  $P < 0.01$  in Grivagraha. The study shows the effect of placebo drug was no significant in all sign and symptoms ( $P > 0.1$ ).

Tamaka swasa is a life threatening disease, there is emergency can be create for that we must find some very fast acting drug and drug delivery system. Due to the Vyavai, Vikasi and Tikshna guna *Nicotiana tabacum* can fast act and by giving it through inhalation drug can be delivered directly to the respiratory tract, in minimal dose and can maintain the adverse effect. According to British Pharmaceutical Codex tobacco, mixed with stramonium, lobelia etc. is smoked for the relief of asthma. Nicotine is rapidly detoxified in the body and there is no cumulative effect. Fatal dose of nicotine orally for human beings is 40 mg. There is no evidence to show that moderate smoking is injurious to health but a high incidence of coronary heart diseases has been noticed among heavy smokers; it is still uncertain that whether smoking itself or the emotional stress that leads to smoking is the causal factor.<sup>[7]</sup>

### **CONCLUSION**

The drug *Nicotiana tabacum* Linn. is well known toxic drug. But due to its Vyavai, Vikasi and Tikshna guna it can be used in life threatening disease. There is some facts regarding the drug are *Nicotiana tabacum* usually contains 4% total alkaloid. Nicotine is the main alkaloid of *Nicotiana tabacum*. Study shows that there is need to do more experiments in the same directions can produce the good use of the plant.

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