

ROLE OF SODHANA AND RASAYANA THERAPIES IN THE CLINICAL MANAGEMENT OF TAMAKA SWASA (BRONCHIAL ASTHMA)

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(Received on 24.2.2004)

Tamaka Swasa (Bronchial Asthma) is the commonest disease prevalent all over the world. It is manifested by narrowing of air passages causing dyspnoea, cough and wheezing. In Ayurveda, the drugs seem to possess a long-term effect by the purificatory treatment that is preferred to palliative therapy. So it has been planned to evaluate their palliative effect and the effect likely to be rendered if preceded by a Sodhana Therapy. To evaluate the comparative efficacy of a combined potent herbomineral recipe i.e. Pippali Vardhamana Ksheera Paka along with Samira Pannaga Ras, Sirisa Twak Kwatha with and without eliminative procedure like Sneha, Sweda, Vamana and Virechana

have been grouped I, II, and III respectively. 150 cases were studied and were distributed equally in three groups for the period of six weeks. The results were assessed in terms of clinical recovery and functional improvement. The results obtained by this treatment are highly significant on both subjective and objective parameters ($P < 0.001$).

Introduction

Tamaka Swasa is a disease affecting both the sexes of primitive as well as civilized population. It is characterized by hyper-reactive airways to various stimuli. Modern science observes increased susceptibility to generate IgE in response

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to external allergens. Where as Ayurveda identify the role of vitiated *Vata* and *Kapha* in the pathogenesis. In spite of recent advances and researches the treatment remained palliative and unsatisfactory. Considering all these an attempt to evaluate an effective therapy, a clinical trial is being carried out at Regional Research Institute (Ayurveda), Vijayawada with *Pippalivardhamana Ksheerapaka* along with *Samirapannaga Rasa / Sirisa Twak Kwatha* with and without *Sodhana* therapy in the management of *Tamaka Swasa* (Bronchial Asthma).

Materials and Methods

1. Criteria for Selection of the Patients:

- i. Difficulty in breathing.
- ii. Episodes of dyspnoea.
- iii. Wheezing sounds.
- iv. No or difficult expectoration.
- v. Relief of dyspnoea in erect position or after expectoration.
- vi. Decreased Pulmonary Function.
- vii. Age between 12 years to 70 years.
- viii. Duration of the disease up to 10 years.

2. No. of Groups : Three.

3. No. of Patients : 50 in each group (Randomly allocated).

4. Drug, Dose and processes according to the groups:

1. *Samira Pannaga Rasa* - 60 mg, thrice

daily after food and *Pippalivardhamana Ksheera Paka* in 50 patients of group-I.

ii. ***Sirisa Twak Kwatha*** - 30 ml. thrice daily after food in 50 patients of group-II.

iii. ***Sodhana Chikitsa*** - Both *Vamana* and *Virechana* given in 50 patients of group-III.

Snehana- (*Dasamula ghritam snehapana vardhamana paddoti* and *Karpuradi tail Abhyanga*), *Svedana* (*Bhaspa sweda*).

Vamana - *Madanaphala* 10 gms. *Vacha* 10 gms., *Pippali* 10 gms. *Saindhava lavana* 5 gms and Honey 15 gms. with warm milk.

Virechana with *Trivrit churna* 10 gm. bed time with warm water in 50 patients of group-III.

Samsarjana Krama was followed by *Vamana* and *Virechana*. After the process the patients was advised not take food on same day until getting the appetite, Very light diet like *Kanji*, *Vilepi* etc. was given for 3-5 days.

Sodhana was given prior to medication of the above two groups i.e. group- I & II, 25 patients each group.

5. Duration of the study : 6 weeks in all the groups.

6. Type of the study : Open Comparative

7. Criteria for assessment of Results:

- i. Good Response: 75% or more relief in clinical symptomatology, pathological features and improvement in vital capacity.
- ii. Fair Response: 50% to 74% relief in symptomatology, pathological findings and improvement in Pulmonary Function Test.
- iii. Poor Response: 25% to 49% relief in symptomatology, pathological features and improvement in vital capacity.
- iv. No Response: Relief below 25% in symptomatology, pathological findings and improvement in vital capacity.

The study was carried out and followed up at I.P.D. / O.P.D. level on 150 patients who were grouped equally in to three. In Group-I out of 50 patients, 29 were male

and 21 female, in Group-II of the 50 Patients 29 were male and 21 female and in Group-III, among the 50 patients 26 were male and 24 female their age ranging from 12 to 68 (Table I). Only *Samana* therapy was given in both group I, II and in group-III *Sodhana* was given prior to the *Samana*.

To evaluate the therapeutic response of the *Sodhana* and *Rasayana* drugs on *Tamaka Swasa*, the subjective and objective parameters have been adopted and measured in all patients before treatment and at the interval of every two weeks for up to three subsequent assessments. In addition to these studies, clinical, pathological findings and pulmonary function tests were also recorded and analyzed to evaluate the efficacy of the drugs in *Tamaka Swasa* (Table II).

Table I**Demographic pattern of 150 *Tamaka Swasa* Patients**

Patients Particulars	Group-I	Group-II	Group-III
Male: Female	29: 21	29: 21	26: 24
Mean age in years	40.28 ± 16.336	42.76 ± 16.515	38.28 ± 16.837
Mean disease duration in days	1619.38 ± 1186.668	1882.80 ± 1276.924	1834.90 ± 1171.899
Mean on overall parameters	68.740 ± 9.187	68.60 ± 12.103	69.16 ± 12.256

Table II**Parameters adopted for the study**

S.No.	Parameter	Score
1.	Difficult breathing	20
2.	Paroxysmal of dyspnoea	10
3.	Wheezing	10
4.	Cough	08
5.	Expectoration of sputum	08
6.	Orthopnoea	04
7.	Tightness in the flanks / Mild tenderness in the chest	02
8.	Tachypnoea	06
9.	Ronchi	12
10.	Pulmonary Function Test	12
11.	E.S.R.	04
12.	Eosinophilia	02
13.	Leucocytosis	02
Total		100

Observations and Analysis of Results

Among the 50 cases studied in Group-I, 10 (20.00%) cases got good response,

24 (48.00%) got fair response, 12 (24.00%) got poor response and 4 (8.00%) cases did not get any response. In the 50 cases of Group-II, 6 (12.00%) cases got good response, 23 (46.00%) got fair response, 15 (30.00%) got poor response and 6 (12.00%) cases did not get any responses and in Group-III, out of 50 cases, 18 (36.00%) cases got good response, 25 (50.00%) got fair response, 5 (10.00%) cases got poor response and 2 cases did not get any response (Table III). On the statistical analysis, the mean difference of both subjective and objective parameters was not significant ($P > 0.05$) in Group-I patients at first assessment of results i.e. after 14 days of treatment, it was significant ($P < 0.01$) at the second assessment of results i.e. after 28 days of treatment and it was found highly significant ($P < 0.001$) at the end of the study i.e. after 42 days of treatment (Table IV). Similar analysis of results was found in Group-II patients (Table V), where as in Group-III cases highly significant ($P < 0.001$) results were found at all subsequent assessments (Table VI).

Table III
Results of the Treatment

Results	Group - I		Group -II		Group -III	
	No. of Pts.	%	No. of Pts.	%	No. of Pts.	%
<i>Good response</i>	10	20.00	06	12.00	18	36.00
<i>Fair response</i>	24	48.00	23	46.00	25	50.00
<i>Poor response</i>	12	24.00	15	30.00	05	10.00
<i>No response</i>	04	08.00	06	12.00	02	04.00
Total	50	100.00	50	100.00	50	100.00

Table IV**Statistical analysis in Group-I cases [N = 50]**

	BT	AT 1	DI	AT2	D2	AT3	D3
MGS	68.74	67.42	1.32	65.44	3.30	30.16	38.58
S.D.	± 9.1587	± 9.192	± 4.688	± 10.735	± 7.890	± 13.379	± 14.224
S.E.	1.299	1.300	0.663	1.518	1.116	1.892	2.012
t			1.991		2.957		19.179
P			>0.05		<0.01		< 0.001

Table V**Statistical analysis in Group-II cases [N = 50]**

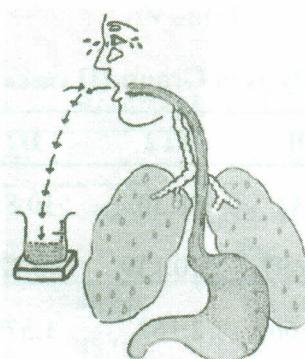
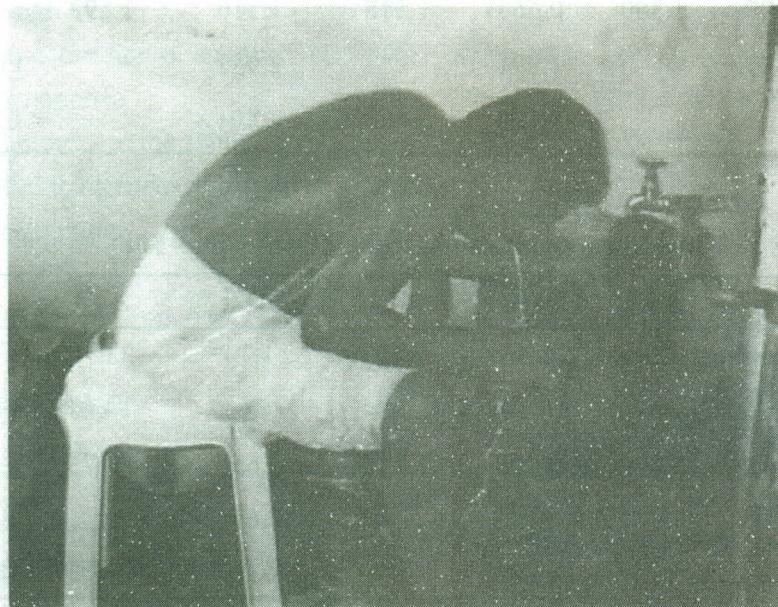
	BT	AT 1	DI	AT2	D2	AT3	D3
MGS	68.60	67.14	1.46	66.86	1.74	33.76	34.84
S.D.	± 12.103	± 14.701	± 6.348	± 12.345	± 4.633	± 14.659	± 15.248
S.E.	1.712	2.079	0.898	1.746	0.655	2.073	2.156
t			1.626		2.656		16.157
P			>0.05		<0.01		< 0.001

Table VI**Statistical analysis in Group-III cases [N = 50]**

	BT	AT 1	DI	AT2	D2	AT3	D3
MGS	69.16	67.84	1.32	58.30	10.86	22.66	46.50
S.D.	± 10.817	± 10.299	± 1.697	± 10.139	± 6.420	± 18.480	± 19.444
S.E.	1.733	1.673	0.266	2.167	1.570	1.795	1.887
t			4.969		6.915		24.644
P			< 0.001		< 0.001		< 0.001

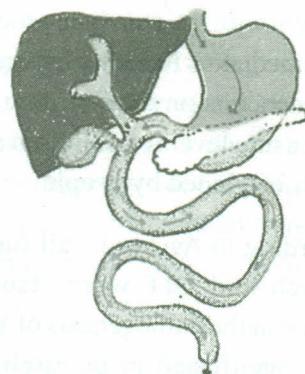
BT-Before Treatment; ATI-After 14 Days Treatment; D1-Difference between BT & AT after 14 days; AT2-After 28 days Treatment; D2-Difference between BT & AT after 28 days; AD-After 42 Days

Treatment; D3-Difference between BT & AT after 42 days; MGS-Mean Grade Score; S.D.-Standard Deviation; S.E. - Standard Error; t - Student paired 't' test; P - Probability.



Upper half of body showing
emetic action of *Vamana*

ROLE OF SODHANA AND RASAYANA



Purgation from small intestine through anal orifice



Testing the lungs function test by PEFR Machine

Discussion and Conclusion

Tamaka Swasa is hyper responsiveness due to initial sensitization by inhaled antigens resulting in IgE production growth of mast cells with intermediate production of chemo-mediators like inter leukins 4 and 5. Its incidence is on the rise now a days with increasing levels of pollution and the stressful lifestyle led by people.

According to Ayurveda, all functions of stomach and OIT were also given importance in the pathogenesis of *Tamaka swasa* as manifested in the preliminary stage where the patient complains indigestion, constipation or diarrhoea. According to Ayurveda vitiation of *Vata* and *Kapha* was identified as main causative factor, which ultimately leads to *Pranavaha srotas dushti* in the form of *Avarodha* or obstruction disturbing its functions. The therapies constitute *Samana, Brihma* measures. However the role of *Sodhana* therapy is of paramount important and cannot be replaced by other measures.

The result was highly significant in group-III. The procedures that accompany the *Purvakarma* processes induce tissues to give up accumulated toxins and enhanced secretions through which the toxins are transported for elimination. They dilate the channels of circulation facilitating easy transportation of the toxin from tissues and medicaments to tissue. They pacify *Vata* counter *Kapha* and nourishes *Dhatus* to promote longevity.

The Pradhana karmas like Vamana and Virechana acts as gastric dialysis for histamine and play a vital role in elimination *Kapha dosha*. Besides this they also play a major role in cleaning and calming the emotional factors. The *Sodhana* therapy is in principle supposed to enhance the digestion and metabolism as an ultimate effect. This particular character is very much valuable in clearing the digestive disturbances that are usually associated with *Tamaka Swasa* and an evident in *Purvakarma* stage of the condition.

As said by *Charaka*, the *Sodhana* therapy owing to its subtle nature it penetrates deep in to the tissues and brings out physiological and psychological changes and accomplishes sustained and radical cure. Since the system and channels are cleansed right at the grass root levels, the medicines administered are absorbed quickly and assimilated faster to give an effective cure.

The result in group-I, cases were also encouraging. This activity is due to the *Pippali* and *Sameerapannaga Rasa*. *Pippali* is widely regarded as a *Rasayana* drug with specific action of GIT and respiratory system. The early experimental studies (I. Vaughn 1953; Zaidi and Mukharji 1965; S.H. Zaidi, G.N. Srivastava et al.1965; C.M. Kansal and C.B. Dube 1980) reveal that the *Sameerapannaga Rasa* found as an effective drug against

spontaneous eosinophilia. *Rasayana* refer to nutrition and natural resistance. Thus *Pippali* enhances the individual immune responsiveness against disease causing pathogens by activating the immune system. Recent studies indicate that *Pippali* possesses a broad spectrum of activity against number of micro-organisms. It improves the quality of *Rasadhatu* and microcirculation at *Pranavaha srotas* level and it's *Teekshna guna* contribute to the removal of *Sroto avarodha*. As this is given with milk, which is rich source of Vitamin 'A' it not only acts as a demulcent and soothing on the corroded bronchial tree but also acts as nee radical scavenger and prevents cell injury.

Sirisha is known for its respiratory effect in Ayurveda. It possesses anti asthmatic activity and its saponins exert mast cell inhibition activity. It is also found to exert Di-Sodium Chromoglycate like action on mast cells and thus effectively combats bronchospasm to facilitate free breathing.

Though the drugs administered in group-I and II possess potent pharmacological action on respiratory system and immune system. Their action is not up to the expected levels a bit impeded. The reason for this could be is the fact that they are given straight away without any patient preparation. As the *Srotas* are obstructed with vitiated *Kapha*, the microcirculatory system has disturbed functioning. This might have led to

decreased absorption and availability of the drug for therapeutic action. The same has exhibited excellent efficacy when given after *Sodhana* therapy.

As said in Ayurveda dyeing of a cloth will be improper without being starched, the therapeutic efficacy of any drug will be incomplete with out *Sodhana*. That's why *Sodhana* therapy not only forms the fundamental basis of treatment and was given prime importance in Ayurveda therapeutics.

Sodhana therapy due to its subtle nature penetrates deep into tissues and brings out physiological changes at grass root levels by eliminating the *doshas*. *Rasayana* therapy promotes nutrition and natural resistance of cells by activating the immune system. It improves microcirculation, facilitates quicker absorption, faster assimilation and increased bioavailability of the drug and also acts in synergism as a catalyst at the disease site for effective, radical and sustained cure.

Thus it is recommended to adopt *Sodhana* therapy measures before initiating drugs.

Acknowledgment

The authors are very grateful to the Director, Central Council for Research in Ayurveda and Siddha, New Delhi for his encouragement and financial insistence.

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हिन्दी सारांश

“तमक श्वास के प्रबंधन में शोधन एवं रसायन का चिकित्सात्मक मूल्यांकन

जी. के. स्वामी और आर. के. स्वामी

तमक श्वास, श्वसन गति के अत्यधिक उच्च या न्यून होने जैसी घटनाओं का स्वरूप है। निदान चिकित्सात्मक परीक्षण में तमक श्वास के 150 रोगियों के तीन वर्ग पर अयुर्वेदीय औषधि योगों का निदान चिकित्सात्मक विवेचन किया गया। प्रथम वर्ग में पिप्ली वर्धमान क्षीरपाक एवं समीरपन्नग रस 60 मि. ग्रा. दिन में तीन बार; द्वितीय वर्ग में शिरीष त्वक क्वाथ 30 मि. लि. हर दिन तीन बार एवं तृतीय वर्ग में शोधन चिकित्सा (रन्नेहन, खेदन, विरेचन) के बाद वर्ग प्रथम एवं द्वितीय वर्ग के साथ किया गया है। चिकित्सा की अवधि 6 सप्ताह तक।

परिणाम चिकित्सीय तौर पर स्वारथ्य और कृत कार्य में सुधार पर निर्धारित किये गये। प्रथम वर्ग के 50 रोगियों में से, 10 रोगियों में पूर्ण लाभ, 2 रोगियों में आंशिक लाभ, 12 रोगियों में अल्प लाभ एवं 4 रोगियों को कोई लाभ प्राप्त नहीं हुआ। द्वितीय वर्ग का 50 रोगियों में से, 6 रोगियों में पूर्ण लाभ, 23 रोगियों में आंशिक लाभ, 15 रोगियों में अल्प लाभ एवं 6 रोगियों को कोई लाभ प्राप्त नहीं हुआ। एवं तृतीय का वर्ग 50 रोगियों से, 18 रोगियों में पूर्ण लाभ, 25 रोगियों में आंशिक लाभ, 5 रोगियों में अल्प लाभ एवं 2 रोगियों को कोई लाभ प्राप्त नहीं हुआ। सांख्यकीय गणना से चिकित्सा का फल तृतीय वर्ग में, प्रथम एवं द्वितीय वर्ग से आधिक लाभप्रद में (पि. < 0.001) पहले दफासे (14 दिन के बाद) ही पाये गये। प्रथम एवं द्वितीय वर्ग का लाभ आखिरी दफा (42 दिन के बाद) महत्वपूर्ण (पि. < 0.001) पाये गये। सांख्यकीय रूप से द्वितीय वर्ग से प्रथम वर्ग का लाभ प्रभावशाली दिखाई दिया।