

## ***EFFECT OF AN AYURVEDIC FORMULATION IN THE MANAGEMENT OF PHARYNGITIS***

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### ABSTRACT

The *Mukha* i.e. Oral cavity, works as reflector of the body health by acting as gateway of the alimentary canal and in that way it is considered to be one of the most important part of the *Urdhwa – jatru*. There are enumerable ailments but only few of them are most common in world population affecting the health scenario worldwide. The disease pharyngitis is certainly one of these ailments and may be regarded as most common disease of upper respiratory tract. As an abstract, annexation of proven anti-inflammatory, analgesic, antipyretic, ulcer healing herbal drugs when combined with authentic principles of *Ayurveda* can combat the symptoms effectively and that too in a safe manner and no any side effects are found. As side effects are commonly encountered in modern antibiotic it may be regarded as a treatment to cherish and can substantially ameliorate the quality of life of a pharyngitis patient. Total 30 patients were registered in a single group in the present study and 25 patients completed the trial with *Haritaki Kashaya Kawala* and *Kalaka choorna* for 15 days with weekly evaluation and effects of drug was evaluated. The analysis based on subjective and objective improvements reveals that 4 patients (16%) were cured, 7 (28%) were moderately improved and 14 (56%) patients were markedly improved.

**Keywords:** Pharyngitis, *ekvrinda*, *vrinda*

### INTRODUCTION

The disease pharyngitis can be observed in the domain of *Kantha-/Galgata Pradesh* of *Sap-tayatanas* of *Mukha*<sup>1</sup>. In recent years there has been an economic development, crowding of population, and increase in life expectancy.

These factors have lead to the increased prevalence of the disease pharyngitis.

Since pharynx is a common path way for respiratory and alimentary routes<sup>2</sup>. So this region is highly prone for the infection as the patho-

gens get their way from both nasal and oral routes.

Pharyngitis is one of the most common conditions encountered by the family physician. Pharyngitis has high tendency to reoccur. The reoccurrence of the disease also leads to sense of frustration both to the patients and clinician because no significant treatment regime is available which can effectively combat this ailment. The myriad nature of organisms involved in this disease often complicate the picture. The long duration of treatment by antibiotic in the chronic pharyngitis and limited surgical role, discourages the patient and his involved family members. Patient often feel himself ill, out of the proportion of the disease. A meticulous approach is the need of the time for the prudent approach of this particular disease.

Annexation and confluence of certain indigenous Ayurvedic approach certainly enlighten the obscuring darkness of the disease. *Charaka Sutrasthan* in *Trisothiya*<sup>3</sup> describes when the vitiated *Kapha* is firmly located within the throat; it causes swelling and produces *Galgraha*. Acharya *Sushruta* has described 17 diseases occurring in *Kanthapradesh*<sup>4</sup>. Out of the 17 diseases like *Rohini*, *Ekvrinda*, *Vrinda*, *Shataghani*, and *Galaugha* seems to be representing a particular group of disorders indicating toward inflammatory pathologies. On going through the classical texts and subtle description of *Kanthagatarogas* *Ekvrinda*<sup>5</sup> and *Vrinda* are more compatible with pharyngitis while visualizing on the ground of clinical features.

Present study is planned to evaluate the nature of the disease, course of the disease and man-

agement with the help of some herbal drugs with the hope that these will prove to be more efficacious and least toxic. So keeping this in mind based upon the aetiopathogenesis of *Kanthagataroga*, the drug formulation *Haritaki Kashaya Kawala*<sup>6</sup> with *Madhu* (*As.H.Ut.* 22/55) *Kalaka choorna*<sup>7</sup> (*Ch. Chi.* 26/194-195) which are described in classical texts for *chikitsa* of *Galgatarogas* have been selected for the present study.

The present study ‘**Effect of an Ayurvedic formulation in the management of Pharyngitis**’ has been under taken with aim and objective of studying the effect of both yoga.

#### **Aims and objectives:-**

1. To study the Ayurvedic concept to define the equivalent terminology for pharyngitis.
2. To study the role of Ayurvedic formulation *Kalaka Choorna* and *Haritaki Kashaya Kawala* in Pharyngitis.
3. To study the effectiveness of the selected drugs.
4. To study the side effects or hypersensitivity of the drugs if any.

#### **Materials and methods**

##### **Clinical study**

A total number of 25 patients were selected from *Shalaky Tantra* OPD/IPD of R.G.G.P.G. Ayu. Hospital Paprola, after obtaining their consent. Case study was random and patients were selected irrespective of sex, caste, religion etc. History of all the patients was recorded according to the proforma. All the patients were followed up after commencement of trial.

#### **Criteria for Selection of Patient**

##### **Inclusion criteria**

- i) Patient presenting with signs and symptoms of Pharyngitis.
- ii) Age above 5 years irrespective of sex.

#### **Exclusion criteria**

- a) Patients not willing for the trial
- b) Cases of adenoids and sinusitis
- c) Cases of carcinoma of pharynx
- d) Cases of herpes simplex I and II, herpes zoster, thrush, syphilitic pharyngitis, diphtheroid pharyngitis, HIV-I and II, tubercular pharyngitis, and others specific and complicated cases of pharyngitis.

#### **Method of Study**

After careful examination, 25 patients were selected from the OPD of *Shalaky Tantra* of R. G. G. P. G. Ayu. Hospital, Paprola and treated in single trial group. **Trial group and**

#### **Trial drug:-**

In this group both *Haritaki Kashaya Kawala* with *Madhu* and *Kalaka Choorna* were given to the 30 patients as a trial drugs combination.

#### **Mode of administration and dose of trial drug in trial group -**

*Haritaki Kashaya Kawala* with *Madhu* was given for gargles in a dose of 40ml twice daily *Kalaka Choorna* was given orally 3gm thrice a day with *Madhu*

**Duration of trial -** 15 days

**Follow up -** 2 follow-ups at weekly interval.

1 follow-up in the last of the month.

#### **Criteria for assessment of results:-**

Grading and scoring system was adopted for assessing each symptom before the commencement of trial and after completion of trial.

#### **Statistical analysis:-**

The information gathered regarding demographic data was given in percentage. The scoring of criteria's of assessment was analysed statistically in terms of B.T. (before treatment), A.T. (after treatment), X (B.T.-A.T.), S.D. (Standard deviation), S.E. (Standard Error) and Paired 't' test carried out at the level of  $p < 0.05$  and  $p < 0.001$ .

#### **Overall results were adjusted in terms of percentage relief obtained in symptoms.**

**Cured** – 100% relief in chief complaint and no reoccurrence during follow up study.

**Markedly improved** – >75% relief in chief complaints was recorded as markedly improved.

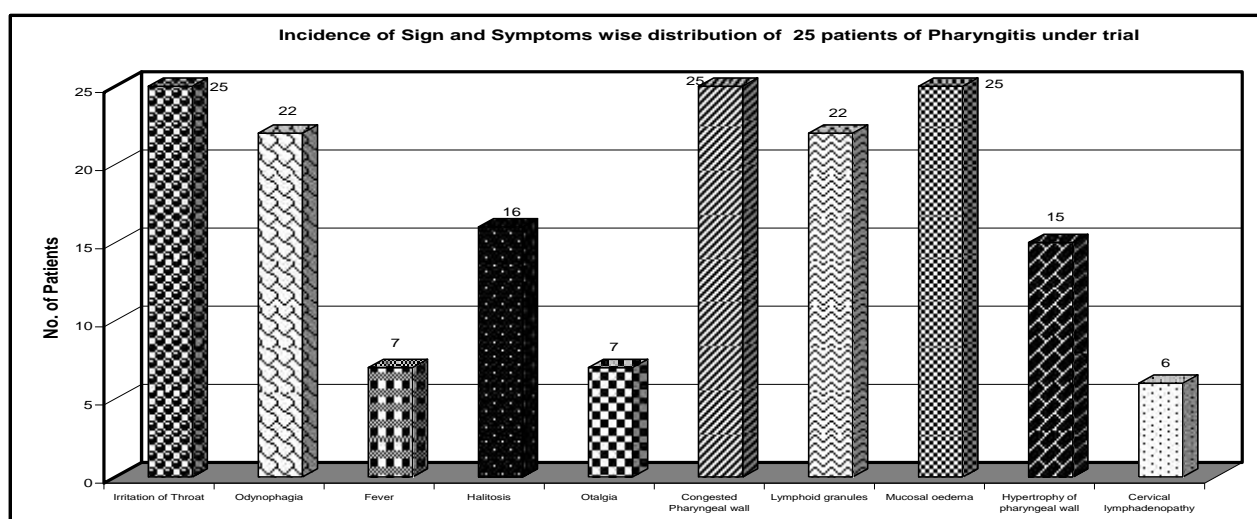
**Moderately improved** – 50%, <75% relief in chief complaints was considered moderately improved.

**Slightly improved** – >25%, < 50% relief in chief complaints was considered slightly improved.

**Unimproved** – <25% relief in chief complaints was noticed as unchanged or unimproved.

**Table 1:** Incidence of Sign and Symptoms wise distribution of 25 patients of Pharyngitis under trial

Sr. No.	Incidence of Sign and Symptoms	No. of patients	% age
1.	Irritation of Throat	25	100
2.	Odynophagia	22	88
3.	Fever	7	28
4.	Halitosis	16	64
5.	Otalgia	7	28
6.	Congested Pharyngeal wall	25	100
7.	Lymphoid granules	22	88
8.	Mucosal oedema	25	100
9.	Hypertrophy of pharyngeal wall	15	60
10.	Cervical lymphadenopathy	6	24



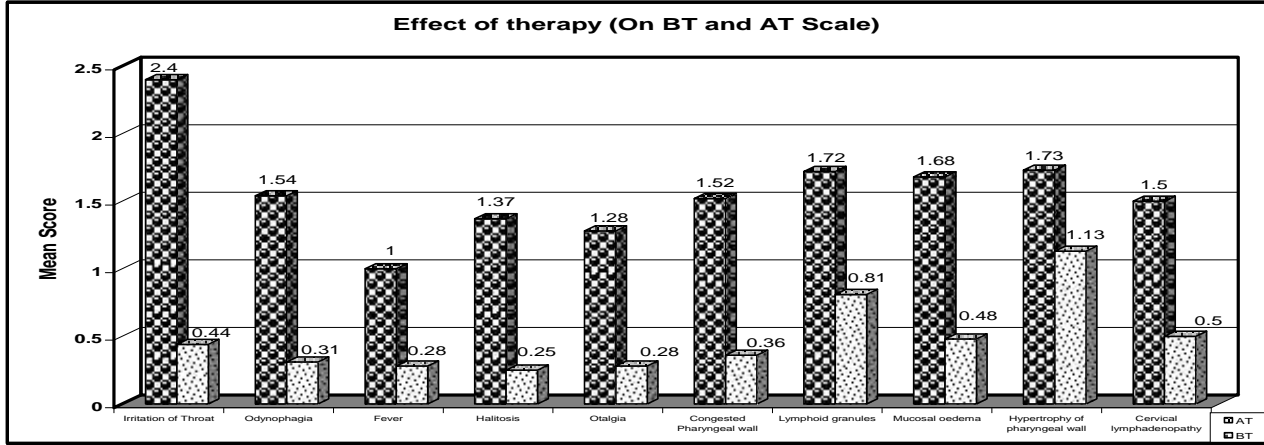
### Effect of therapy

The efficacy of both i.e. *Haritaki Kashaya* as gargles and *Kalaka Churna* orally in 25 patients was adjusted on varied parameters and results were derived after execution of statistical methodology.

**Table 2:** The effect of therapy on criteria assessed has been presented here as under:

Sr. No.	Signs and symptoms	n	Mean		X (d) BT-AT	%age of relief	SD	SE	T	p
			BT	AT						
1.	Irritation of throat	25	2.4	0.44	1.96	81.66	0.53	0.10	18.21	<0.001
2.	Odynophagia	22	1.54	0.31	1.22	79.33	0.43	0.09	12.29	<0.001
3.	Fever	7	1	0.28	0.71	71.46	0.49	0.18	3.82	<0.01
4.	Halitosis	16	1.37	0.25	1.12	82.11	0.34	0.08	13.52	<0.001
5.	Otalgia	7	1.28	0.28	1	77.73	0.57	0.21	4.57	<0.01
6.	Congested pharyngeal	25	1.52	0.36	1.16	76.31	0.37	0.07	15.50	<0.001

	wall									
7.	Lymphoid granules	22	1.72	0.81	0.91	58.55	0.48	0.10	5.93	<0.001
8.	Mucosal oedema	25	1.68	0.48	1.2	71.4	0.57	0.11	10.38	<0.001
9.	Hypertrophy of pharyngeal wall	15	1.73	1.13	0.60	34.68	0.25	0.06	9.03	<0.001
10.	Cervical lymphadenopathy	6	1.5	0.5	1	66.66	0.63	0.25	3.87	P<0.05



- 1. Irritation of Throat:-** The initial score of irritation of throat was 2.4 which was reduced to 0.44 after the treatment. The percentage of relief was 81.66% which is highly significant statistically at the level of  $p < 0.001$  ( $t = 18.21$ ).
- 2. Odynophagia:-**The initial score of odynophagia was 1.54 which was reduced to 0.31 after the treatment. The percentage of relief was 79.33%, which is highly significant statistically at the level of  $p < 0.001$  ( $t = 12.29$ ).
- 3. Fever-**The initial mean score of fever before the treatment was 1 which was reduced to 0.28 after the treatment. The percentage of relief was 71.46% which is significant at the level of  $p < 0.01$  ( $t = 3.82$ ).
- 4. Halitosis-**The initial mean score of halitosis before the treatment was 1.37 which was reduced to 0.25 after the treatment. The percentage of relief was 82.11%

which is highly significant at the level of  $p < 0.001$  ( $t = 13.52$ ).

- 5. Otalgia:-**The initial mean score of otalgia before the treatment was 1.28 which was reduced to 0.28 after the treatment. The percentage of relief was 77.73% which is significant at the level of  $p < 0.01$  ( $t = 4.57$ ).
- 6. Congestion over mucosa of Pharyngeal wall:-**The initial mean score of congestion over mucosa of pharyngeal wall before the treatment was 1.52 which was reduced to 0.36 after the treatment. The percentage of relief was 76.31% which is highly significant at the level of  $p < 0.001$  ( $t = 15.50$ ).
- 7. Lymphoid granules on posterior pharyngeal wall-**The initial mean score of lymphoid granules on posterior pharyngeal wall before the treatment was 1.72 which was reduced to 0.81 after the treat-

ment. The percentage of relief was 58.55% which is highly significant at the level of  $p < 0.001$  ( $t = 5.93$ ).

**8. Mucosal oedema:-**The initial mean score of **mucosal oedema** before the treatment was 1.68 which was reduced to 0.48 after the treatment. The percentage of relief was 71.44% which is highly significant at the level of  $p < 0.001$  ( $t = 10.38$ ).

**9. Hypertrophy of lateral bands of pharynx:-**The initial mean score of **hypertro-**

**phy of lateral bands of pharynx** before the treatment was 1.73 which was reduced to 1.13 after the treatment. The percentage of relief was 34.68% which is highly significant at the level of  $p < 0.001$  ( $t = 9.03$ ).

**10. Cervical Lymphadenopathy:-**The initial mean score of **cervical lymphadenopathy** before the treatment was 1.5 which was reduced to 0.5 after the treatment. The percentage of relief was 66.66% which is significant at the level of  $p < 0.05$  ( $t = 3.87$ )

**Table 3:** Overall result of treatment in 25 patients of Pharyngitis under trial

Sr. No.	Assessment	No. of Patients	%age
1.	Cured	4	16
2.	Markedly Improved	7	28
3.	Moderately Improved	14	56
4.	Slightly Improved	0	0
5.	Unimproved	0	0

## DISCUSSION

Inflammatory disorders of pharynx are the most common reason for which patients visit to the otorhinolaryngologist. Pharyngitis is very common disorder in school going children and also common in adults. Both sexes are equally affected.

Spicy and oily food products, multiple varieties of cold foods, atmospheric pollution, crowded, ill ventilated environment and multiple newer organism predisposes and increases the number of patients suffering from pharyngitis. The inflammation of the mucous membrane of the pharynx is termed as pharyngitis<sup>8</sup>. Pain, heat, redness and swelling are the four basic symptoms of inflammation.

The disease pharyngitis can be observed in the domain of *Kantha/Galgata Pradesh* of *saptayatsans* of *Mukha*<sup>9</sup>. An etiological factor of

*Mukharogas*<sup>10</sup> i.e. *aaharaj, viharaj* factors and not following *dincharya* generally predisposes the patient to disease of *Mukha*. Ayurvedic approach certainly enlight the obscuring darkness of the disease. *Acharya Charaka* in *Charaka Sutrasthan* of *Trisothiya* chapter<sup>11</sup> (*Ch.Su.18/22*) describes that vitiated *Kapha* firmly located within the throat causes swelling and produces *Galgraha*. *Acharya Sushruta* says that diseases occurring in the *Kantha-pradesh* are mainly due to vitiation of *Kapha* and *Raktadoshas*<sup>12</sup>. Swelling and redness are due to *Kapha* and *Raktadushti*<sup>13</sup> which causes inflammation in *Galapradesh* and *Mandagni* aggravates these factors. *Acharya Sushruta* has detailed subtle description of 17 types of *Kanthagata Rogas*<sup>14</sup> out of which 9 are nominated as incurable while visualizing in treatment perspective. Out of the 17 diseases like

*Rohini, Ekvrinda, Vrinda, Shataghni* and *Galaugha* seems to be representing an inflammatory pathology and symptoms.

The clinical features of *Rohini*<sup>15</sup> in which inflammatory pathologies produces *Mansankura* which obstruct the passage of *Kantha* and *Aashuhara* i.e. patient dies within 3, 4 or 7 days, so on the basis of these properties disease is not compatible to pharyngitis but may be compared with specific type of pharyngitis i.e. diphthericoropharyngitis.

The disease *Shataghni* in which *varti* like eruption occurs which obstruct the passage<sup>16</sup>, where as in pharyngitis there is hemispherical lymphoid appearance and does not obstruct the passage. The disease like *Valaya* and *Balasa*<sup>17</sup> causes progressive obstruction of upper aero digestive tract which indicates benign or malignant growth of pharynx. So these diseases are also excluded when compared with pharyngitis.

The clinical feature of *Galaugha*<sup>18</sup> in which inflammatory pathology produces *shotha* which obstruct the passage of food, water and air. So this disease is also excluded.

So these upper description of *Kanthagatrogas*<sup>19</sup> in which inflammatory pathologies occur on the basis of clinical features are excluded from the list of the diseases to be compared with pharyngitis on the ground of their incurable nature.

*Ekvrinda* and *Vrinda*<sup>20</sup> represent more similarity with symptoms and signs of Pharyngitis

- ❖ **o`UkksUurks·Ur% Üo;Fkq** Lymphoid and mucosal oedema over pharynx
- ❖ **ld.Mq** Itching or irritation in throat
- ❖ **vikD;e'nqxqZ:'p** Non suppurative

soft inflammatory condition

- ❖ **nkg** Burning sensation in throat
- ❖ **Toj** Fever
- ❖ **Rkksn** Pain in throat

While Acharya *Vagabhata* describes only *Vrinda*<sup>21</sup> which indicates cervical lymphadenopathy in acute condition.

**o`Unks o`UkksUurks nkg Tojd`r xyikJoZx%A** (As. Ut. 21/46)

So after observing the symptomatology of *Ekvrinda* and *Vrinda*, *Ekvrinda* is more comparable with chronic pharyngitis and *Vrinda* is acute pharyngitis. *Dalhana* and *Madhava*<sup>22</sup> explains that *Ekvrinda* and *Vrinda* are counted under single *roga* which are stages of same disease. While on treatment part *Ekvrinda* is *sadhya* and *Vrinda* is *asadhya*. So, on the basis of clinical features *Ekvrinda* and *Vrinda* may be taken as pharyngitis.

*Acharya Charaka* and *Kashyapa* have not described *Ekvrinda* and *Vrinda*, *Charaka* description of the *Galgraha* on the basis of etiopathogenesis may be taken while *Kashyapa* description of the *Galgraha* & *Kantasotha* can be compared with pharyngitis when evaluated on the basis of clinical features.

## CONCLUSION

- ❖ 25 patients were taken in the clinical trial. They were studied in detail as.
- ◆ Maximum number of patients were of age group 20-30 (40%), were males (60%), 64% registered patients were married and 34% registered patients were unmarried. All the patients registered were *Hindu*, Maximum number of patients were resident of rural area (72%), students (36%),

belonged to middle class (52%), matriculate (36%) and most of the patients used to take mixed diet. (64%)

- ◆ Majority of the patients were having no addiction. (48%)
- ◆ Majority of patients had *pitta kaphaja prakriti* (60%) with *madhyama satva* (72%), *madhyama sara* (60%) *madhyama samhana* (76%) and *madhyama satmya* (84%)
- ◆ Out of 25 patients under trial 100% had irritation of throat, 88% had odynophagia, 28% had fever, 64% had halitosis, 28% had otalgia, 100% had congestion over mucosa of pharyngeal wall, 88% had lymphoid granulation on posterior pharyngeal wall, 100% had mucosal oedema, 60% had hypertrophy of lateral bands of pharynx, 24% patients had cervical lymphadenopathy.
- ◆ The results showed that therapy provided significant relief in irritation of throat (81.66%), odynophagia (79.33%), fever (71.46%), halitosis (82.11%), otalgia (77.73%), congestion over mucosa of pharyngeal wall (76.31%), lymphoid granules on posterior pharyngeal wall (58.55%), mucosal oedema (71.4%), hypertrophy of lateral bands of pharynx (34.68%) and cervical lymphadenopathy (66.66%) which is also significant statistically.
- ❖ **No adverse effect of both the trial drugs came into light during the course of trial.**

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