



**A CLINICAL STUDY ON THE MANAGEMENT OF MUKHAPAKA WITH SPECIAL
REFERENCE TO STOMATITIS WITH PATOLADI KWATH GANDUSHA**

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ABSTRACT

Oral hygiene plays an important role in every individual. But due to so many vitiating factors like tobacco chewing, smoking, stress, vitamin deficiency, allergic and trauma leading to the vatadi dosha and produce 67 Mukha Rogas. Nearly 20% of the population is suffering with this problem. The estimated point prevalence of oral ulcers worldwide is 4%, with aphthous ulcers being most common, affecting as many as 25% of the population worldwide. Among the Mukharogas “Mukhapaka” comes under Sarvasara Mukharogas. It is considered as Pittaja Nanatmaja and Rakta Pradoshaja Vikara characterized by Vedana Yukta Vrana in the Mukha Kuhara. Mukhapaka is Pittaja Nanatmaja and Rakta Pradoshaja Vikara it once again does the Pitta Prakoopa along with Rakta.

KEYWORDS: Oral hygiene Prakoopa along with Rakta.

INTRODUCTION

In *Nidana Sthana*, *Sushruta* has first time described the *Mukharogas* (diseases affecting the oral cavity) and he has classified the diseases of *Mukha*, *Mukha* is a complex structure formed by the combination of *Ostha* (Lips), *Dantamoola* (Gums), *Danta* (Teeth), *Jihva* (Tongue), *Taalu* (Palate), *Gala* (Throat), and *Sarvasara* (All over *Mukha*).^[1,2]

Stomatitis can be included in one group of the *Mukha Rogas*, known as ‘*Sarvasara Rogas*’.

The aim of any medical science is for the attainment of level of health which enables every individual to lead a happy life socially and economically. In this regard Ayurveda stands first as it is the science which primarily aims at preservation of positive health and correction of ill health.

Oral hygiene plays an important role in every individual. But due to so many vitiating factors like tobacco chewing, smoking, stress, vitamin deficiency, allergic and trauma leading to the *Vatadi Dosha* and produce 67 *Mukha Rogas*. Nearly 20% of the population is suffering with this problem. The estimated point prevalence of oral ulcers worldwide is 4%, with aphthous ulcers being most common, affecting as many as 25% of the population worldwide.^[3]

Among the *Mukha Rogas* “*Mukhapaka*” comes under *Sarvasara Mukha Rogas*. It is included in *Pittaja Nanatmaja*^[4] and *Rakta Pradoshaja vikara*^[5] characterized by *Vedanaayukta Vrana* in the oral cavity. The *lakshanas* of *mukhapaka* can be correlated to a clinical entity —aphthous ulcer (recurrent ulcerative stomatitis) explained in the contemporary medical science, which is also characterized by painful superficial ulcers in the movable mucosa of the mouth with recurrent episodes.^[6]

The *Lakshanas* of *Mukhapaka* such as *Raktavarnayukta Vrana* (Red coloured wound), *Tanu* (Thin), *Toda* (Severe pricking pain), *Daha* (Severe burning sensation), and *Tiktaasyata* (Bitter taste), *Kandu* (Itching)^[7] can be correlated to a clinical entity of Aphthous ulcer (Recurrent ulcerative Stomatitis).^[8] It is characterized by painful, single or multiple shallow hyperaemic ulceration in the oral mucosa, gums, tongue and lips with recurrent episodes.^[9]

Various *dravyas* have been mentioned in the classics for *gandoosha*. Among the *Patoladi Kwath* comprises of *Patola*, *Nimba*, *Jambu*, *Amra* and *Malati Patra* was selected for *Gandoosha* in the present study which is having both *Shamana* and *Ropana* property, and the drugs which are used for this preparation are economic and commonly available and within the reach of common people.^[10]

Stomatitis and its complications are to a large extent preventable by early detection and appropriate treatment and possibly by prevention of disease itself. So it becomes our duty as a physician to discover all measures to prevent and cure these disorders up to the maximum possible level and help the society.^[11]

AIMS AND OBJECTIVES

- 1) To study in detail about *Mukhapaka*
- 2) To study the efficacy of *patoladi kwath Gandoosha* in *mukhapaka*
- 3) To assess the preventive aspect of *patoladi kwath Gandoosha* in recurrent *Mukhapaka*.

MATERIALS AND METHODS

Clinical sources

- Patients attending the OPD of Dept. of *Shalakyatantra*, Parul Ayurveda hospital.

Sampling Methods

Clinical trial on a single group was carried out.

Interventions

- The drug selected for the study and the ingredients are as shown in the table.^[5]

Sr no.	Name of Drug	Latin Name	Part Use	Ratio
1	<i>Patola</i>	<i>Trichosanthes dioica</i>	<i>Pallava</i>	1 part
2	<i>Nimba</i>	<i>Azadirachta indica</i>	<i>Pallava</i>	1 part
3	<i>Jambu</i>	<i>Syzygium cumini</i>	<i>Pallava</i>	1 part
4	<i>Amra</i>	<i>Magnifera indica</i>	<i>Pallava</i>	1 part
5	<i>Malti</i>	<i>Jasminum officinale</i>	<i>Pallava</i>	1 part

- Reference: Bhaishajya ratnavalli, Ambikadutt Shashtri, ch:61 Mukharogachikitsa sloka no:84
- The drug will be prepared in the Pharmacy, Parul Institute of Ayurved, Limda Vadodara.

Assessment Criteria

Assessment of the effects of the therapy was done on the improvement in the following signs and symptoms of a disease.

Subjective Parameters

1. *Ruja*
2. *Daha*

Objective Parameters

1. *Rakta varnata* of *vrana*
2. Frequency of attack
3. Number of *vrana*
4. Size
5. Site

Follow up Study

After completion of treatment, all patients were advised to attend O.P.D on 7th, 14th, 21st, 45th day for the follow up study. During their visits the recurrence of the disease was noted.

Inclusion criteria

- Patients complaining acute and recurrent *Mukhapaka*
- Age 15-60 years of both sex
- Ulcer are 1 to 5 in numbers and less than 10mm in size

Exclusion criteria

- Traumatic- Medical, Chemical, Thermal, Factitious Injury, Radiation, Eosinophilic ulcer
- Patients who are contraindicated for *Gandoosha*
- Patient having chronic or carcinoma ulcers in oral cavity.
- *Mukhapaka* due to any other disorders e.g. Syphilis, AIDS, Dengue, Haemorrhagic Fever etc.

The drugs or formulation taken for the study are,

Patoladi Kwath: *Patola, Nimba, Jambu, Amra, Malati navapallava.*

Patoladi Kawath Gandoosha

The ingredients of *Patoladi Kwath Gandoosha* are *Patola, Nimba, Jambu, Amra* and *Malati* which are used for *Gandoosha* 3times in morning for 7 days.

Collection of drugs

All the raw materials were prepared from Parul Ayurved pharmacy.

OBSERVATION

Age: In this clinical study, maximum number of patients i.e. 40.00% belonged to age group of 26-35years, 30.00% patients belonged to 16-25 years age group, 13.00% patients belonged to 36-45and 10.00% patients belonged to 46-55 years age group, 6.7% patients belonged to 56-60 years age group.

Gender: It is evident from table that 66.7 % were female and 33.3% male in this present clinical study conducted on *mukhapaka*.

Locality: Out of 30 patients of *Mukhapaka* in the present clinical study, 40.00% were from rural locality and 60.00 % were from urban locality.

Religion: In this clinical study of 30 patients of Mukhapaka, maximum number of patients i.e. 93.30% patients were Hindu's, whereas 6.7% patients were from Muslim community.

Socio economic status: Out of 30 patients of Mukhapaka in the present clinical study, 36.7% belonged to Poor followed by 53.3% belonged to middle class, 10.00% belonged to upper class.

Occupatin of patient: Out of 30 patients of Mukhapaka in the present clinical study, 33.3% patient were student, 26.7% patient were job, 23.3% patient were house-wife, 6.7% patient were other.

Ahara of the patient: Out of 30 patients of Mukhapaka in the present study, 46.7% were of mixed diet and 53.3% were vegetarians.

Nidra: Out of 30 patients of Mukhapaka, 66.70% had *ratrijagarana* followed by 33.30% had *diwaswapna*.

Vichara of the patient: Out of 30 patients of Mukhapaka, 53.3% patient have *chinta*, 23.3% patient have *Krodha*, 16.7% patient have *bhaya* and 6.7% patient have *shoka*.

Mala pravrutti: Out of 30 patients of Mukhapaka, 20.00% had passed Normally formed stool and 80.00% *vibandha*.

Vyasan: Out of 30 patients of Mukhapaka in the present study, 60% of patients had tea, 13.30% coffee and 10.00% patients had Smoking and 16.7% patient had *vyasan* of tobacco.

Shareerika Prakruti: Out of 30 patients of Mukhapaka, maximum number of patients i.e. 33.33% was possessing *Pitta Kapha Prakruti*, 23.33% of *Vata Kapha Prakruti* and 43.33% of *Pitta Vata prakriti*.

Ahar Shakti: Out of 30 patients of Mukhapaka, 76.70% of patients had *madhyam ahar Shakti*, 13.30% had *avar ahar Shakti* and 10% of patient had *pravara ahar shakti*.

Vyayama Shakti: Out of 30 patients of Mukhapaka, 70.00% patients were having *Madhyama Vyayama Shakti*, 20.00% were having *Avara Vyayama Shakti* and 10% were having *Pravara Vyayama Shakti*.

Site of vrana: Out of 30 patients of Mukhapaka, 36.70% were site of *vrana* is *jihwa*, 30% were *vrana* at *osta*, 13.3% were *vrana*, 6.7% patient were *vrana* at *taalu* also 6.7% patient were *vrana* at *osta - jihwa* 3.3% patient *vrana* at *osta - taalu* and *Jihwa - taalu*.

Size of vrana: Out of 30 patients of Mukhapaka, 46.7% were patient having 3mm, 30% were having 4mm, 10% patient having 2mm, 6.7% were having 1mm and 5mm size of *vrana*.

Number of vrana: Out of 30 patients of Mukhapaka, 63.30% patient were having *1vrana*, 33.30% patient were having 2 *vrana* and 3.30% patient were having 3 *vrana*.

Examination of tongue: Out of 30 patients of Mukhapaka, 53.30% of patients had *Lipta Jihwa* and 46.70% of patients had *alipta Jihwa*.

Ruja BT: Out of 30 patients, 30% of patients had Mild pain during chewing of food 36.7% Moderate pain during talking and gets relief by topical anesthetics and 33.3% of patients had Severe pain even during rest, No relief by topical anaesthesia.

Daha BT: Out of 30 patients of Mukhapaka, 46.7% of patients having no *daha*, 10% of patients having Moderate - Intolerable, gets relief by cooling agents, 43.33% of patient having Severe - intolerable, no relief by cooling agents.

Raktavarnata of vrana BT: Out of 30 patients of Mukhapaka, 3.3% of patient had no redness, 63.3% of patient had dull red or pink red colour of *vrana* and 33.33% patient had magenta colour *vrana*.

Frequency of attack BT: Out of 30 patients of Mukhapaka, 20% of patient No relapse up-to 28days, 13.3% of patient had One attack every 21 days, 43.3% patient had One attack every 14th days and 23.3% patient had Two or more attacks in 14th days.

Amount of kashaya: Out of 30 patients of Mukhapaka, 60.0% of patient were take 80-90ml, 40.0% of patient have 91-100ml amount of *kashaya*.

Duration of Commencement of Srava: 60% patients had the commencement of *Srava* in *Mukha* within 3-4 min, 30% patients showed secretion within 1-2 min, and 10% patients in 5-6 min.

Appearance of Srava in Mukha, Nasa, Netra: 40% of the patients showed secretion only in *Mukha*, 10% patients in *Mukha* and *Nasa*, 20% patients in *Mukha* and *Netra*, 30% patients showed secretion in all the three i.e. *Mukha, Nasa* and *Netra*.

Diagnosis: Out of 30 patients of Mukhapaka, 50% of patients having *Pittaja mukhapaka*, 30% OF patients having *Vataja mukhapaka* and 20% of patient having *Kaphaja mukhapaka*.

DISCUSSION

Discussion on Observation

Total registered patient were 36. Out of 36 patient 30 patient were completed treatment properly and 06 patient were dropout. Reasons for Dropping out patients: patient were not given follow up regularly.

Age: In this clinical study, maximum number of patients i.e. 70.00% patients belongs to 16-35 years age group, Due to *pittaadikyā* in that age group *pitta* and *rakta dushti* will be caused very easily.

Gender: It is evident from table that 66.7% were female and 33.3% male in this present clinical study conducted on *mukhapaka*. This due to the extra responsibilities, hormonal changes during menstruation and pregnancy leading to more stress and emotional disturbance ultimately leads to metabolic changes.

Marital status of the patient: In this clinical study of 30 patients of *Mukhapaka*, Majority of the patients in the present study were married 66.70%. This only signifies that most of the patients belong to particular age group. The observation regarding the marital status does not show and relationship with the disease.

Occupation of patient: Out of 30 patients of *Mukhapaka* in the present clinical study, 33.3% patient were student and 26.7% patient were job so workers and student were more affected as compared to other occupations. The reason behind this is stress, outside food, improper timing of diet and sleep leads to the derangement of circadian rhythm ultimately affects the metabolism. These strong influencing factors are seen for occurrence of recurrent oral ulcers, which are very common in these individuals.

Ahara of the patient: Out of 30 patients of *Mukhapaka* in the present study, 46.7% were of mixed diet and 53.3% were vegetarians because majority of them being Hindus.

Nidra: Out of 30 patients of *Mukhapaka*, 66.70% had *ratrijagarana* as most of the patients are students who are using mobile phones, which ultimately causes deranged circadian rhythm and metabolic changes leads to *mukhapaka* and 33.30% patients were indulged in *Divasvapna*, which is also considered as one of the *Rakta Prakopaka Hetu* and *Apathya* for *Mukhapaka*.

Vichara of the patient: Out of 30 patients of *Mukhapaka*, 53.3% patient have *chinta*, 23.3% patient have *Krodha*, 16.7% patient have *bhaya* and 6.7% patient have *shoka*. All these *manasika bhava* are caused by the *Rajo guna* which deranges *rakta dhatu* ultimately causes *mukhapaka*.

Mala pravrutti: Out of 30 patients of *Mukhapaka*, 20.00% had passed normally formed stool and 80.00% *vibandha*. Majority of the patients having *vibandha* will have metabolic disturbance ultimately having less absorption may cause *mukhapaka*.

Vyasan: Out of 30 patients of *Mukhapaka* in the present study, 60% of patients had tea, 13.30% coffee and 10.00% patients had Smoking and 16.7% patient had *vyasan* of tobacco. All these habits are considered as

having *Ushna* and *Tikshna* properties which provoke *Pitta* leading to *Mukhapaka*.

Prakruti: Out of 30 patients of *Mukhapaka*, maximum number of patients i.e. 33.33% was possessing *Pitta - Kapha Prakruti*, 23.33% of *Vata - Kapha Prakruti* and 43.33% of *Pitta - Vata prakriti*. Due to the having *pitta prakruti* person are more prone to *pittaja vyadhi*.

Ahar Shakti: Out of 30 patients of *Mukhapaka*, 76.70% of patients had *madhyam ahar Shakti*, 13.30% had *avar ahar Shakti* and 10% of patient had *pravara ahar shakti*. Impaired digestive status may have indirect impact on the disease production in long run by causing deficiency status and affecting tissue metabolism (*Dhatukshaya*). Thus aggravating the disease condition.

Vyayama Shakti: Out of 30 patients of *Mukhapaka*, 70.00% patients were having *Madhyama Vyayama Shakti*, 20.00% were having *Avara Vyayama Shakti* and 10% were having *Pravara Vyayama Shakti*. *Vyayama Shakti* reflects upon the *Dhatu Sarata* and *Samhanana* which are as seen earlier.

Site of vrana: Out of 30 patients of *Mukhapaka*, 36.70% were site of *vrana* is *jihwa*, 30% were *vrana* at *osta*, 13.3% were *vrana*, 6.7% patient were *vrana* at *taalu* also 6.7% patient were *vrana* at *osta - jihwa* 3.3% patient *vrana* at *osta - taalu* and *Jihwa - taalu*. It indicates that the parts of oral cavity which are highly movable, soft in structure with mucus membrane are more susceptible for occurrence of *Vrana*.

Examination of tongue: Out of 30 patients of *Mukhapaka*, 53.30% of patients had *sama jihwa*. This indicates these patients were having some kind of *Agnimandhya*.

Amount of kashaya: Out of 30 patients of *Mukhapaka*, 60.0% of patient were take 80 - 90ml, 40.0% of patient have 91 - 100ml amount of *kashaya*. Thus the average quantity of liquid that can be filled in mouth may range from 80 - 100 ml depending upon the size of mouth.

Duration of Commencement of Srava: 60% patients had the commencement of *Srava* in *Mukha* within 3 - 4 min, 30% patients showed secretion within 1 - 2 min, and 10% patients in 5 - 6 min. Based on this observation it can be inferred that average time of initiation of *Srava* ranges from 3 minute to 4 minutes.

Appearance of Srava in Mukha, Nasa, Netra: 40% of the patients showed secretion only in *Mukha*, 10% patients in *Mukha* and *Nasa*, 20% patients in *Mukha* and *Netra*, 30% patients showed secretion in all the three i.e. *Mukha, Nasa* and *Netra*. As per procedure explained in classics one should retain liquid in the mouth till he gets secretion in the *Mukha, Nasa*, and *Netra*.

Diagnosis: Out of 30 patients of *Mukhapaka*, 50% of patients having *Pittaja mukhapaka*, 30% of patients having *Vataja mukhapaka* and 20% of patient having *Kaphaja mukhapaka*.

keeping these points in mind, following tests were used in the present clinical study.

- Friedman's test and wilcoxon test applied for assessment criteria.

RESULT

In the present clinical study, variable were of following types

- Numerical variables
- Ordinal or Categorical variables

If the data is normally distributed and the variables are numerical, parametric tests hold good for such kind of data. On the other hand if the data is not normally distributed and the data is ordinal non-parametric tests holds good. Non-parametric tests also hold well in the cases when data is not normally distributed, sample size is small and the variable is numerical in nature. Hence

Table no: 1: Showing effect of gandoosh on ruja (Friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
Ruja in BT	4.87	30	92.625	4	0.000
Ruja on 7th day	3.03				
Ruja on 14th day	2.40				
Ruja on 21th day	2.40				
Ruja on 45th day	2.30				

Table no. 2: Showing effect of gandoosh on ruja (Wilcoxon signed rank test).

Pairs	Rank	N	MR	SR	Z	P
7 th day Ruja - BT Ruja	NR	26	14.21	14.21	-4.458	0.000
	PR	1	8.50	8.50		
	Ties	3				
	Total	30				
14 th day Ruja - BT Ruja	NR	29	15.00	435.00	-4.787	0.000
	PR	0	.00	.00		
	Ties	1				
	Total	30				
21 st Day Ruja – BT Ruja	NR	29	15.00	435.00	-4.774	0.000
	PR	0	.00	.00		
	Ties	0				
	Total	30				
45 th Ruja - BT Ruja	NR	29	15.00	435.00	-4.787	0.000
	PR	0		.00		
	Ties	0				
	Total	30				

Table no: 3: Showing effect of gandoosh on daha (Friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
Daha in BT	4.00	30	50.660	4	0.000
Daha on 7th day	3.02				
Daha on 14th day	2.77				
Daha on 21th day	2.65				
Daha on 45th day	2.57				

Table no. 4: Showing effect of *gandoosh* on *daha* (Wilcoxon signed rank test).

Pairs	Rank	N	MR	SR	Z	P
7 th day <i>Daha</i> - BT <i>Daha</i>	NR	15	8.00	120.00	-3.460	0.001
	PR	0	.00	.00		
	Ties	15				
	Total	30				
14 th day <i>Daha</i> - BT <i>Daha</i>	NR	15	8.00	120.00	-3.473	0.001
	PR	0	.00	.00		
	Ties	15				
	Total	30				
21 st Day <i>Daha</i> - BT <i>Daha</i>	NR	15	8.00	120.00	-3.520	0.000
	PR	0	.00	.00		
	Ties	15				
	Total	30				
45 th <i>Daha</i> - BT <i>Daha</i>	NR	15	8.00	120.00	-3.508	0.000
	PR	0		.00		
	Ties	15				
	Total	30				

Table no. 5: Showing effect of *gandoosh* on *raktavarnata* of *vrana* (Friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
<i>Raktavarnata</i> of <i>vrana</i> in bt	4.63	30	83.921	4	0.000
<i>Raktavarnata</i> of <i>vrana</i> on 7 th day	2.95				
<i>Raktavarnata</i> of <i>vrana</i> on 14 th day	2.55				
<i>Raktavarnata</i> of <i>vrana</i> on 21 th day	2.48				
<i>Raktavarnata</i> of <i>vrana</i> on 45 th day	2.38				

Table no. 6: Showing effect of *gandoosh* on *raktavarnata* of *vrana* (Wilcoxon signed rank test).

Pairs	Rank	N	MR	SR	Z	P
7 th day <i>Raktavarnata</i> of <i>vrana</i> - BT <i>Raktavarnata</i> of <i>vrana</i>	NR	21	11.00	231.00	-4.291	0.000
	PR	0	.00	.00		
	Ties	9				
	Total	30				
14 th day <i>Raktavarnata</i> of <i>vrana</i> - BT <i>Raktavarnata</i> of <i>vrana</i>	NR	27	14.00	378.00	-4.866	0.000
	PR	0	.00	.00		
	Ties	3				
	Total	30				
21 st Day <i>Raktavarnata</i> of <i>vrana</i> - BT <i>Raktavarnata</i> of <i>vrana</i>	NR	25	13.00	325.00	-4.625	0.000
	PR	0	.00	.00		
	Ties	5				
	Total	30				
45 th <i>Raktavarnata</i> of <i>vrana</i> - BT <i>Raktavarnata</i> of <i>vrana</i>	NR	25	13.00	325.00	-4.667	0.000
	PR	0		.00		
	Ties	5				
	Total	30				

Table no. 7: Showing effect of *gandoosh* on frequency of attack (friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
Frequency of attack in BT	4.45	30	72.457	4	0.000
Frequency of attack on 7 th day	3.47				
Frequency of attack on 14 th day	2.53				
Frequency of attack on 21 th day	2.38				
Frequency of attack on 45 th day	2.17				

Table no: 8: Showing effect of *gandoosh* on frequency of attack (Wilcoxon signed rank test).

Pairs	Rank	N	MR	SR	Z	P
7 th day Frequency of attack - BT Frequency of attack	NR	20	10.50	210.00	-4.300	0.000
	PR	0	.00	.00		
	Ties	10				
	Total	30				
14 th day Frequency of attack - BT Frequency of attack	NR	23	12.00	276.00	-4.311	0.000
	PR	0	.00	.00		
	Ties	7				
	Total	30				
21 st day Frequency of attack - BT Frequency of attack	NR	22	11.50	253.00	-4.350	0.000
	PR	0	.00	.00		
	Ties	8				
	Total	30				
45 th day Frequency of attack - BT Frequency of attack	NR	22	11.50	253.00	-4.243	0.000
	PR	0		.00		
	Ties	8				
	Total	30				

Table no: 9: Showing effect of *gandoosh* on number of *vrana* (Friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
Number of <i>vrana</i> in BT	4.55	30	74.556	4	0.000
Number of <i>vrana</i> on 7 th day	3.10				
Number of <i>vrana</i> on 14 th day	2.55				
Number of <i>vrana</i> on 21 th day	2.50				
Number of <i>vrana</i> on 45 th day	2.30				

Table no: 10: Showing effect of *gandoosh* on number of *vrana* (Wilcoxon signed rank test).

Pairs	Rank	N	MR	SR	Z	P
7 th day Number of <i>vrana</i> - BT Number of <i>vrana</i>	NR	19	10.55	200.50	-3.911	0.000
	PR	1	9.50	.00		
	Ties	10				
	Total	30				
14 th day Number of <i>vrana</i> - BT Number of <i>vrana</i>	NR	27	14.00	378.00	-4.916	0.000
	PR	0	.00	.00		
	Ties	3				
	Total	30				
21 st Day Number of <i>vrana</i> - BT Number of <i>vrana</i>	NR	24	12.50	300.00	-4.564	0.000
	PR	0	.00	.00		
	Ties	6				
	Total	30				
45 th Number of <i>vrana</i> - BT Number of <i>vrana</i>	NR	24	12.00	300.00	-4.613	0.000
	PR	0		.00		
	Ties	6				
	Total	30				

Table no: 11: Showing effect of *gandoosha* on size of *vrana* (friedman's test).

Level	Mean Rank	N	X ²	Df	Asymp.Sig.
Size of <i>vrana</i> in BT	4.65	30	67.777	4	0.000
Size of <i>vrana</i> on 7 th day	2.92				
Size of <i>vrana</i> on 14 th day	2.50				
Size of <i>vrana</i> on 21 th day	2.48				
Size of <i>vrana</i> on 45 th day	2.45				

DISCUSSION ON RESULTS

1) *Ruja* (Pain)

After *Gandoosha* the initial mean score was reduced from 4.87 to 2.30 and $p=0.000$, showing the

improvement was statistically significant. Also result were compared before and after treatment on 7th day, 14th, 21st and 45th day 29 subject were relieved from *ruja* after *Gandoosha*. The efficacy may be due to *Patoladi*

kwath gandoosha having *tikta*, *katu* and *kashaya rasa* and also considered as *shoolahara*, *vedanasthapana vranapachana* and *pittashamaka*. The action of *kashaya rasa* plays an important role in the loss of perception of pain. Hence it reduces *ruja*. It also produces soothing effect there, by minimizing external trauma.

2) *Daha* (Burning Sensation)

After *Gandoosha* the initial mean score was reduced from 4.00 to 2.57 and $p=0.000$ showing an improvement was statistically significant. Also result were compared before and after treatment on 7th day, 14th, 21st and 45th day 15 subject were relived from *ruja* after *Gandoosha*. The efficacy may be due to *Tikta*, *madhura* and *kashaya rasa*, *pitta hara*, *dahaprashamana*, *Sheetaveerya* property of *Patoladikwath gandoosha*. Here also *tikta rasa* plays an important role on the nociceptors (inactivates the perception of pain) there by reduces burning sensation.

3) *Rakta Varnata of Vrana* [Redness]

After *Gandoosha* the initial mean score was reduced from 4.63 to 2.38 and $p=0.000$ showing an improvement was statistically significant. Also result were compared before and after treatment on 7th day 21, 14th day 27, 21st and 45th day 25 subject were relived from *ruja* after *Gandoosha*. The efficacy may be due to be *Tikta*, *Katu* and *kashaya rasa pradhanata*, *pitta shamaka* and *Vranaghna* properties of *Patoladi kwath gandoosha*. By the role of *katu rasa*, the congestion has been reduced by dilatation of vessels (*srotamsi vivrunoti*).

1) Frequency Of Attack

After *Gandoosha* the initial mean score was reduced from 4.45 to 2.17 and $p=0.000$ showing an improvement was statistically significant. Also result were compared before and after treatment on 7th day 20, 14th day 23, 21st and 45th day 22 subject were relived from *ruja* after *Gandoosha*.

The efficacy may be due to one of *karmukata* of *Patoladi kwath gandoosha* i.e. *vranaropaka*. The active extract of *Patoladi kwath gandoosha* having anti-inflammatory property.

2) Number of Vrana

After *Gandoosha* the initial mean score was reduced from 4.55 to 2.30 and $p=0.000$ showing improvement was statistically significant. Also result were compared before and after treatment on 7th day 19, 14th day 27, 21st and 45th day 24 subject were relived from *ruja* after *Gandoosha*. The efficacy may be due to *pitta shamaka*, *sheeta Virya*, *vranapachana* and *Vranaghna* Property of *Patoladi kwath gandoosha*.

3) Size of Vrana

After *Gandusha* the initial mean score was reduced from 4.65 to 2.45 and $p=0.000$ showing improvement was statistically significant. The efficacy may be due to

vranashodhan and *vranaropana* property of *Patoladi kwath Gandoosha*.

Mode of Action of *Patoladi Kwath Gandoosha*

Gandoosha is *Sthanik Chikitsa* and its action can be understood under two headings,

1) Local action 2) Systemic action

1) Local action: *Gandoosha* has many local actions they are as follows

Increases local defence mechanism, enhancing both mechanical and chemical digestion of food that starts in the mouth, removes the metabolic wastes (urea and uric acid), Soothing effect, strengthening of muscles of oral cavity.

Excessive salivary secretion, which predominantly contains water, removes metabolic wastes present in oral cavity. Some of *dravyas* used for *Gandoosha* like *Patoladi* produces soothing effect on lesions like ulcers thus prevents ulcers from physical and chemical injury.

The action of *Gandoosha* and *Kavala* gives proper exercise to the muscles of Cheeks, Tongue, Lips and Soft palate there by increasing the motor functions of these muscles.

Systemic action

Mucosal layer inferior to the tongue (sublingual) is thin and highly vascular enough to permit the rapid absorption of the lipid soluble drugs into systemic circulation. Some of the drugs irritates the oral mucosa (by their chemical nature) and increases vascular permeability. Thus active principles of the drug gets absorbed in systemic circulation. Most of the *Dravyas* given for *Gandoosha* are warm (*Sukoshna*) so raised temperature causes the increased vascular permeability thereby enhancing systemic absorption of drugs.

Effect of *Patoladi kwatha Gandoosha* in *Mukhapaka*

Gandoosha with *Patoladi kwatha* done three times in a day provided significant relief in *ruja* by 52.77%, in *Daha* by 35.75%, in *raktavarnata* of *vrana* by 48.59%, in frequency of attack by 51.23%, in Size of *Vrana* by 47.31%, in number of *Vrana* by 49.45%.

In this study complete relief was found in 63.67% patients, improvement was found in 13.33% patients and 20% patient got recurrence.

RECURRENCE

After stopping *Patoladi kwatha Gandoosha* 20 patient got complete relief but 04 patient got improvement and in 06 patient recurrence was seen with less severity of *ruja*, *daha*, *raktavarnata* as well as size.

This is because of the habits which are not conducive before the tissues regains its normal strength and a slight unwholesome activity is also enough to cause the recurrence before the doshas are completely expelled, So

medicine continued in such cases until there is no more relapse.

CONCLUSION

Nidana explained in Ayurvedic classics seems to be initiating or precipitating *Samprapti* of *Mukhapaka* is not mentioned directly, but the *Samprapti* mentioned for *Mukha Rogas* is considered. As various known, unknown, exogenous, or endogenous etiological factors are involved in the pathological process.

In the present study, the prevalence of *Mukhapaka* is more in females than males, and in second to third decade of life.

The use of local therapy in the form of *Gandoosha* with *Vranashodhana*, *Vranaropana*, *Shothahara*, *Dahashamaka* drugs; constitutes the basic therapeutic approach in resisting most of the symptoms of the *mukhapaka*.

In present study *Ayurvedic* treatment protocol have relief on *ruja*, *daha*, *raktavarnata*, frequency of attack, size of *vrana* and ulceration of mouth and all these are statistically significant.

Patoladi Kwath Gandoosha is effective in relieving the severity of disease, but 63.30% improvement is observed.

Hence the efficacy of *Patoladi Kwatha Gandoosha* in the management of *Mukhapaka* is proved effective.

On the basis of this study, it can be concluded that, *Gandoosha* with *patoladi kwath* provided significant result in reducing signs and symptoms; and also in preventing *Mukhapaka*.

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