



AMERICAN JOURNAL OF PHARMTECH RESEARCH

Journal home page: <http://www.ajptr.com/>

Clinical evaluation of *Arpooraadi Vati* and *Chitrakaadi Gutika* in management of *Sarvasar Roga (Mukhapaka)* W.S.R. to Aphthous Ulcer

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ABSTRACT

Recurrent Aphthous Ulcer is the most common mouth ulcer disorder; found upto 25% in general population. It causes significant morbidity through pain and interference with eating. Ayurved provides a cure and prevents recurrences. For the present study , 30 patients were registered and treated into single group under the trial of combined effect of two formulations named *Karpooraadi vati* and *Chitrakaadi Gutika* for 15 days. An analysis based on subjective & objective parameters revealed that combination of two formulations provided significant improvement & relief in the patients. No recurrence and side effect were noted during trial and follow up.

Keywords-*Karpooraadi vati, Mukhapaka* ,RAU (Recurrent Aphthous Ulcer), *SarvasarRoga*,.

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Received 03 March 2014, Accepted 09 April 2014

Please cite this article in press as: Sharma A *et al.*, Clinical evaluation of Arpooraadi Vati And Chitrakaadi Gutika in management of sarvasar roga (mukhapaka) w.s.r. to aphthous ulcer. American Journal of PharmTech Research 2014.

INTRODUCTION

*Sarvasar roga*¹ or *Mukapaka* is a disease mentioned by Acharya Sushruta in the chapter of *Mukhrogaanam Nidanam* and characterized by four types. Acharya Charak has described four mukhrogas² and eight types of Mukaroga has mentioned by Acharya Vagbhat³.

An Aphthous ulcer is a type of mouth ulcer which presents as a painful⁴ open sore, inside the mouth, caused by a break in the mucous membrane. SYNONYMS- *Recurrent aphthous stomatitis (RAS)*⁵, canker sores, mouth sores, RAU (Recurrent aphthous ulcer), sutton's disease, ulcerative stomatitis.

AETIOLOGY- Aetiology of aphthous ulcer is unknown, it may be an *autoimmune*⁶ process

AUs can be differentiated from viral ulcers by their frequent recurrence, involvement of movable mucosa and absence of constitutional symptoms like fever, malaise and enlargement of cervical nodes. Precipitating factors include trauma, stress, genetic predisposition, infections, immune deficiency, GI disorders, systemic disorders, hormonal fluctuation, chemical exposures, oral cavity hygiene. The primary disorder appears to be result of activation of cell mediated immune system. Repeated episodes of AU can be indication of immune deficiency and genetic predisposition.

There are 3 main clinical types⁷ of RAUs-

- 1) Aphthous Minor
- 2) 2) Aphthous Major
- 3) 3) Herpetiform ulcers

Arbitrarily the management of *Mukhapaka* can be divided as *Samanya Chikitsa sidhanta*, *Aama chikitsa sidhanta*, *Doshanusar chikitsa sidhanta*.

Aims and objectives:-

To study the *Sarvasar Roga* or *Mukhapaka* according to Ayurvedic concept. To study the *aphthous ulcer* in the light of modern concept and to avail latest information related with research as possible. To study the efficacy of formulation *karpooaraadi vati*⁸ combined with *chitrakaadi gutika*⁹ in the context of Aphthous ulcer. To promote *complete ulcer healing* within the short period of time. To avoid its complication or sequale and to study any side effect of the therapy.

MATERIALS AND METHODS

Selection of cases-

A total number of 30 patients were selected from Shalaky Tantra OPD/IPD, 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.

I Inclusion criteria:-

Patient having ulcer in oral cavity (lasting less than 1 month), Patient presenting with signs and symptoms of Aphthous ulcer (AU as an autoimmune process), age above 5 years irrespective of sex.

II. Exclusion criteria:-

Ulcer formed due to malignancy, seropositive patients, Patient below 5 years of age, Ulcer due to viral infection, secondary bacterial infection, associated symptoms i.e. fever, malaise and tender lymphadenopathy, associated with autoimmune disorders i.e. Bechet's syndrome, Reiter syndrome, IBS, SLE. trauma induced, dermatological origin, drug induced ulcer, ulcer due to nutritional deficiency, Cardiac, diabetic and hypertensive patients.

Assessment Criteria

The efficacy of therapy was assessed on the basis of subjective and objective criteria, for statistical analysis scoring was designed according to the severity of symptoms and signs i.e. pain in affected area, burning sensation, difficulty in chewing/ingestion, excessive salivation, inflammation, degree(size) of ulceration, no. of ulceration and site of ulceration.

Overall effect of therapy adjudged as -

Cured – 100% relief in chief complaint and no recurrence 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.

Objective criteria :

Haematological parameters-Hb%, TLC, DLC, ESR,RBS

Trial Group and Trial drug :-

In single group both *Karpooraadi Vati* and *Chitrakaadi Gutika* were given to the 30 patients as a trial drugs combination.

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

Karpooraadi vati (for sucking/Aachushanarth) - 250 mg tablets -6 times per day.

Chitrakaadi gutika per orally- 500 mg tablets- twice a day with lukewarm water.

- Duration of trial - 15 days
Follow up - 2 follow ups at weekly interval.
1 follow up in the last of the month.

Dietary regimen-

The patients were directed to follow dietary restrictions according to the aetiology of *Mukapaka*. Apart from this all patients were restrained from brushing, taking hard and dry eatables, junk and heavy food, sedentary habits like day sleeping, advised to take light, soft, fibrous diet, *gandush*, *pratisaran*, *kawal* and lukewarm water.

Design of study

The study was conducted on 30 diagnosed cases of *Mukhpaka* (Apthous ulcer), out of which 05 patients discontinued the treatment, remaining 25 patients completed the study.

RESULTS AND DISCUSSION

In the present study of 25 patients, maximum number of patients were of age group 11-20 years (44%), were females (64%), Student (60%), belonged to middle class (92%), family history positive (32%), having mixed diet (72%), addiction for tea (72%), moderate appetite (84%), disturbed sleep (64%), affinity towards *madhura rasa* (56%), were of *kaphapittaja* (60%), *Rajasika prakriti* (72%), with *madhyama Satva* (60%).

Majority of patients had *Mandagni* (56%), Bowel habits non satisfactory (92%), *Krura kosta* (88%), were taking *Guru* (100%), *Virrudha* (64%), *Adhyashsna* (40%), had *Avyayama* (100%), *diwaswapna* (52%) as *viharaja nidana*, were suffering from *chinta* (52%), had *Madhyama Abhyavaharana shakti* (68%), and (56%) had *Avara Jarana Shakti*.

Out of 25 patients under trial 100% had pain in affected area, 56% burning sensation, 32% had difficulty in chewing (ingestion), 12% had excessive salivation, 100 had inflammation and ulceration.

Effect of therapy

Percentage relief was found 97.5% in pain in affected area, 100% in burning sensation, 100% in difficulty in chewing, 100% in excessive salivation; 97.5% in inflammation, 96% in size of ulceration, 93.84% in number of ulceration and 93.24% in site of ulceration, no recurrence was noticed after the completion of trial. Result was highly significant statistically in pain in the affected area ($P < 0.001$), burning sensation ($P < 0.001$), difficulty in chewing/ingestion ($P < 0.001$), and significant statistically in excessive salivation ($P < 0.05$). Result was highly significant statistically in inflammation $P < 0.001$, size of ulceration ($P < 0.001$), number of ulceration

($P < 0.001$) and site of ulceration ($P < 0.001$ {Table 1}).

Table 1 Effect of therapy on various parameters & result after statistical methodology

Sr. No.	Symptoms	N	Mean		X (d) ±	% relief	S.D. ±	S.E. ±	't'	P	Result
			B.T.	A.T.							
1.	Pain in the affected area	25	1.6	0.04	1.56	97.5	0.64	0.128	12.5	<0.001	HS
2.	Burning sensation	14	1.7	0	1.7	100	0.4	0.116	14.6	<0.001	HS
3.	Difficulty in chewing/ ingestion	8	1.37	0	1.37	100	0.45	0.16	8.56	<0.001	HS
4.	Excessive salivation	3	1.6	0	1.6	100	0.57	0.33	5	<0.05	S
5.	Inflammation	25	1.6	0.04	1.56	97.5	0.48	0.10	16	<0.001	HS
6.	Degree (size) of ulceration	25	2	0.08	1.92	96	0.55	0.11	16.3	<0.001	HS
7.	No. of ulceration	25	1.96	0.12	1.84	93.84	0.5	0.1	18	<0.001	HS
8.	Site of ulceration	25	1.8	0.12	1.68	93.24	0.54	0.108	15.5	<0.001	HS

Effect on laboratory parameters :-

The result after the treatment was statistically highly significant for Hb% in trial group at the level of $P < 0.001$ and percentage change observed in this parameter after the treatment was 2.1%. Result was statistically significant in TLC ($p < 0.01$) and highly significant in ESR ($p < 0.001$), percentage change was found 0.63% in TLC and 9.2% in ESR after treatment. {Table 2}

Overall effect of therapy-

Out of 25 patients in trial group (88%)22 patients were cured,(4%)1 patient was markedly improved,(8%)2 patient were moderately improved.

The concept of Ama^{10,11} as the initial stage of *dosha dusthi* is worth consideration. A great similarity can be seen in the line of management of Ama and free radicals from Ayurvedic and modern point of view. As told by Acharyas the diseases which occurs in the *mukha Pradesh* are mainly due to vitiation of *kapha dosha*. In *Mukhapaka roga*, the main vitiated doshas are kapha and pitta. These vitiated doshas again interact with vitiated vata doshas which further vitiate rakta. Although the exact aetiology of aphthous ulcer is not known, they are considered to be an autoimmune disease.

Karporaadi vati is having dominance of *katu ras* (26.47%), *Kashaya ras* (23.52%) respectively, *Ruksha guna* (31.03%), *sheeta veerya* (66.66%), *katu vipaka* (64.28%), and *Tridosahar*

(37.5%), *Kaphapittashamak* properties (31.25%) and *Kaphavatashamaka* (18.75%) properties respectively. In addition to this *karpooraadi vati* also have *Raktapittashamaka* (6.25%) and *Pittavatashamaka* (6.25%) properties.

Whereas *chitrakaadi Gutika* is having dominance of *katu rasa* (55.5%), *Laghu guna* (35.89%), *ushna veerya* (81.2%) and *katu vipaka* (62.5%) properties due to which it is stomachic and improves digestion. It also pacify the vitiation of kapha dosha which is the responsible for the disease resulting in *Aamoutpatti*.

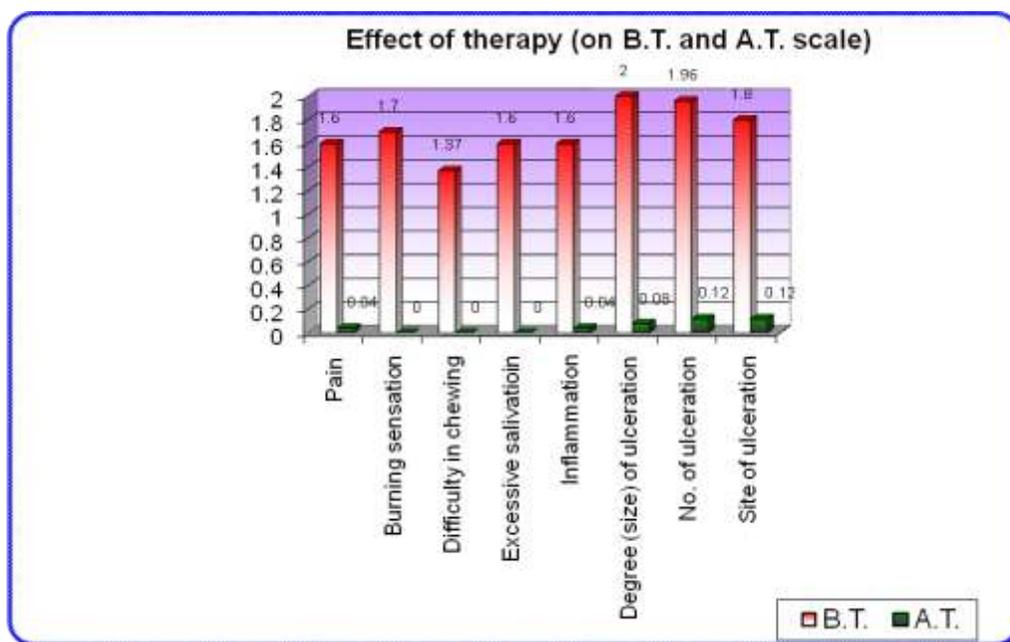


Table 2- Effect of *Karpooraadi vati* and *Chitrakaadi gutika* on Hematological parameters

Sr. No.	Haematological test	Mean		\bar{X} (d)	%	S.D. ±	S.E. ±	‘t’	P	Result
		B.T.	A.T.							
1.	Hb %	11.34	11.58	0.24	2.1%	0.23	0.04	6.25	<0.001	HS
2.	TLC	6952	6908	44	.63%	76.3	15.26	2.8	<0.01	S
3.	ESR	10.84	9.84	1	9.2%	0.70	0.14	7.14	<0.001	HS

N.S.-Not Significant, S-Significant, H.S-Highly significant

Apart from these facts the constituents of combinations also have potentially proven pharmacological actions like *Rakta shodhaka* (blood purifying), *Shothahara* (anti-inflammatory), *Vranaropaka* (ulcer healing), *Vranarodhaka*, *Vedanasthapana* (analgesic), *Daha prashmana* (cooling effect), *Jantughana* (anti microbial), *Shonitsthapana* (haematinic), *Deepan* (stomachic), *Pachana* (Digestive), *Ama doshahara* (metabolic toxin Scavenger or anti-free radicals/antioxident), *Vibhandhajit*, *Rasayana* (immunomodulator), Anti cancerous.

All these properties by acting in a synergistic way may help in reducing signs and symptoms of Aphthous ulcer and by Antioxidant properties removes toxic free radicals (Ama i.e. root cause of

disease), thus creating a favourable environment for fast recovery of Aphthous ulcer (autoimmune disorder) and preventing the recurrence of disease process. All these properties are thus helpful to counteract the various sequences of events responsible for the pathogenesis of Aphthous ulcer.

No toxic or side effects were noticed in any of patient registered for trial and no recurrence was noticed after the completion of trial.

CONCLUSION

Following conclusions can be drawn from current research project- The combination of *karporaadi vati* and *chitrakaadi gutika* is effective formulation for the management of *Mukhpaka* (Aphthous ulcer).The combined therapy promotes complete ulcer healing within short period of time. The trial drugs treat the root cause of disease(i.e.autoimmune process) and prevent its recurrences. The formulation is cheap, effective, easily available contents, purely herbal with a easy method of administration and no side effect. The trial drug have no addictive properties and with no dependence. Therefore it can be concluded that combination of *Karporaadi vati* and *Chitrakaadi gutika* is effective treatment modality and can be used efficiently in the management of *Mukhpaka*(Aphthous ulcer).

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